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by Edward C. Hill.**

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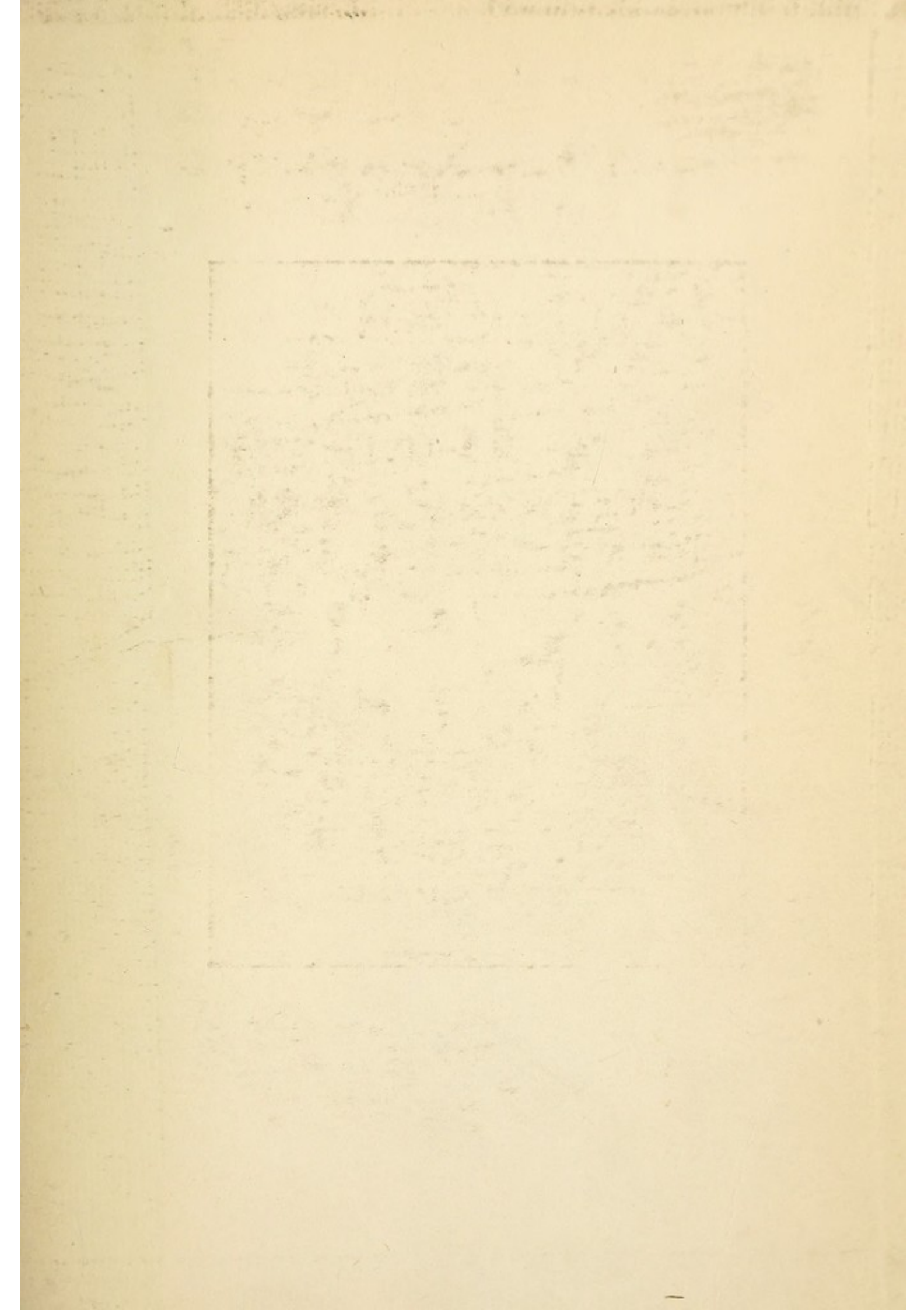
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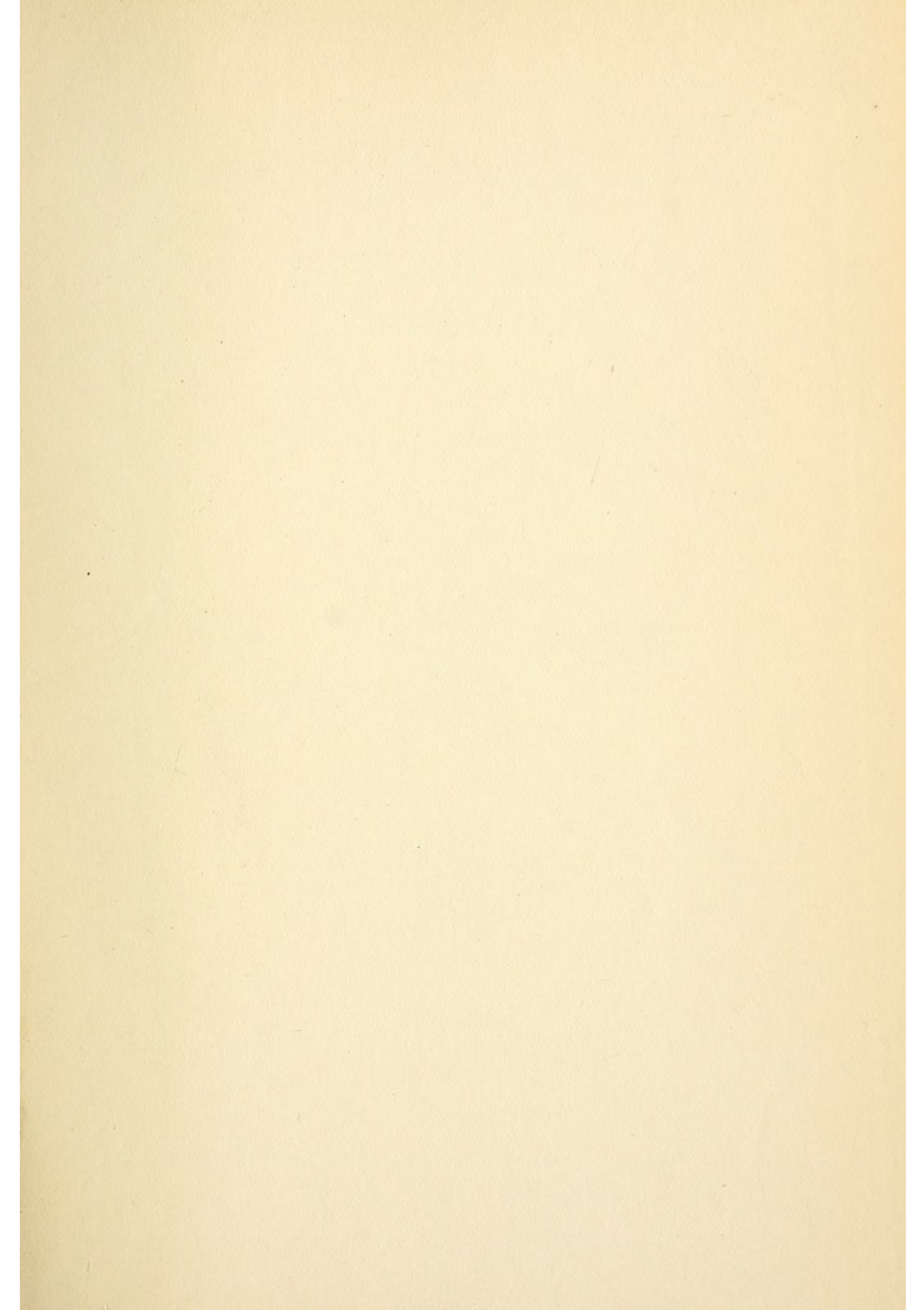






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# *Pain and Its Indications*

AN ANALYTICAL OUTLINE OF DIAGNOSIS  
AND TREATMENT

BY

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It gives me much pleasure to dedi-  
cate this book on  
PAIN  
to my constant friend  
Thomas Hayden Hawkins, A.M., M. D.

A.P. 11 8-17





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## FOREWORD.

To the patient, pain is the most important of symptoms. It is indeed that which most often leads him to seek medical advice. The great variety of causes of regional pains and the consequent difficulty of differentiation and of rational causal treatment, are appreciated by physicians and surgeons. In this reference outline are to be found all sorts of pains, systematically arranged for comparison in a few types and regions, and fully indexed. I trust that my labors in this connection will prove of practical service to my fellow practitioners. With the paragraphs on treatment due credit is given to the authors whose therapeutic ideas I have gleaned. For diagnostic points I am specially indebted to the following authorities: American Text-Book of Surgery, Anders, Bishop, Bosworth, Byford, Church and Peterson, Da Costa, De Schweinitz, Ewald, Garrigues, Gould and Pyle's Cyclopedic, Hare, Head, Hirst, Kyle, Musser, Osler, Pershing, Ranney, Roberts, Sajous, Skene, Tyson, Vierordt, White and Martin.

Denver, February 1, 1904.





## INTRODUCTION.

*Local inflammatory pain.*—Generally severe, constant, throbbing, sticking, cutting, gnawing, radiating along peripheral nerves and increased by firm deep pressure and by movement of part; with heat, redness, swelling and rigidity and diffuse soreness of muscles over affected part, or disturbance of function. Constant aching in muscular pain; dull pain in connective tissues (aching) and mucous membranes (soreness or burning); sharp and stabbing in serous tissues (increased by deep breathing in pleural and peritoneal); tingling and shooting along nerve in neuritis (with herpes and tenderness all along course) and neuralgia (tender points and often local flushing; sometimes due to pressure by growths or scars); burning and itching in local skin lesions; constant, deep, boring in diseases of bones and periosteum—often worse at night; modified by weather in neuralgic, neuritic lithemic or rheumatic pain; paroxysmal, colicky in obstruction of channels.

General pain, soreness and fatigue in toxemia; general aching, sometimes with chill, at onset of acute infections. Pain increased by movement in diseases of bones, joints, muscles and nerves; pain diminished or absent in shock or gangrene.



*Local non-inflammatory pain.*—Generally remittent or intermittent and relieved or not increased by firm, deep pressure; very limited pain, usually functional; rhythmical recurrence in contractile pain (labor pains, distended tubes or bladder.)

*Referred or reflex pains.*—Due to lesions at other points having the same or related nerve supplies; not affected by pressure, but with cutaneous tenderness in same area—constant if dependent on chronic disease elsewhere; pain cuts across ribs in segments of the spinal areas as follows: Heart=1—3 dorsal; lungs=1—5 dorsal, and cervical plexus; stomach=6—9 dorsal (pyloric, 9); liver and gall-bladder=7—10 dorsal and cervical plexus; intestines above rectum=9—12 dorsal; rectum=2—4 sacral; kidneys and ureters=10—12 dorsal and 1 lumbar; bladder=11—12 dorsal and 1 lumbar (overdistention) and 2—4 sacral (neck of bladder; incontinence); prostate=10—11 dorsal, 5 lumbar, 1—3 sacral; epididymis=11—12 dorsal and 1 lumbar; testis=10 dorsal; ovary=10 dorsal; uterus=1 lumbar (contraction) and 2—4 sacral (os uteri); Fallopian tubes=11—12 dorsal. Algo-genesis (persistent or reviving pain on directing attention to it) is common in traumatic neurosis.

*Neuralgic pain.*—Shifting, intermittent, re-



ferred to nerve trunks or to deeper distribution; firm pressure usually relieves; movement may aggravate or not; no characteristic disturbance of function. Intercostal neuralgia is distinguished from organic disease by freezing tender spinous processes with ethyl chlorid spray, when, if neuralgic, the pain, tenderness and muscular contraction all disappear.

*Hysterical pain.*—Usually burning, subject to suggestion, not influenced by rest; zones of pain (often geometric) independent of course of nerves.

*Traumatic pain.*—Specific in character; very intense at first, soon diminishing.

*Pressure pain.*—Constant, uneasy, at seat of causative organic lesion; often radiates along course of affected nerve trunk.

*Nerve supply of head and neck.*—Forehead and vertex=supraorbital; temple and lower jaw=auriculotemporal; over malar bone=malar; middle of cheek=buccal; upper lip=infraorbital; chin=mental; upper occiput=great occipital; lower occiput and upper neck=small occipital; front of neck=superficial cervical; mastoid and post-maxillary region=great auricular; side of neck and post-auricular region=small occipital; lower part of neck=descending cervical.





## CHAPTER I. HEADACHE.

[Two or more forms often combined.]

ORGANIC.—*Severe* (may prevent sleep) and generally *persistent*, but variable, not ceasing with stupor or delirium; often circumscribed, with fulness and throbbing; increased by mental or physical effort, coughing, jarring or stooping, or by percussing over area of lesion if cortical; often apparently causeless vomiting, slow breathing and pulse, vertigo, drowsiness, irritability, spasms, paralysis, optic neuritis.

General treatment.—Try potassium iodid in large doses for some time; morphin with coca wine and dr.i tinct. hyoseyamus or gr.x chloral.—Corning.

*Meningitis*.—Usually constant and boring (often paroxysmal in tubercular) diffuse frontal, occipital, vertical or parietal; in excess of fever; explosive vomiting, photophobia, stiffness of neck; rapid onset in acute; passes into stupor and coma; patient shrieks out during sleep; no gestures as a rule.

Treatment.—Ice bag or ice-cold compresses to head; leeches to mastoid apophyses; wet cups to neck; morphin.—Debove and Douvin.

*Brain Tumors*.—Slow course, paroxysmal and varying—boring, gnawing, splitting, benumbing, local or diffuse; often worse at night; cerebellar



and cortical forms most severe—glioma least; may be local tenderness; often choked disc.

Treatment.—Phenacetin and antipyrin in combination sometimes give great relief.—Mills.

Potassium iodid in full doses sometimes gives marked relief; ice cap; Paquelin cautery for occipital; morphin last resort.—Osler.

*Cerebral Abscess.*—Usually localized, very severe and persistent in acute, worse in early night; patient bores head into pillow; fever and chills, vertigo, mental dullness; history of injury to head or focus of infection, particularly middle ear disease.

Treatment.—Trepine and evacuate.

*Cranial Trauma.*—Concussion, pressure or laceration, or depressed fracture, causing meningitis; pain circumscribed at site of injury or on opposite side of head; history, scalp tenderness and other signs.

Treatment.—Rest, stimulants, warmth to extremities; surgical intervention if indicated.

*Cerebral Syphilis.*—Constant, rushing, frontal or temporal, with somnolence; worse at night; quasiperiodical.

Treatment.—Potassium or sodium iodid gr. xx t. i. d. increasing a grain each day until improvement or iodism; fresh air, appropriate diet, bathing, exercise and rest.—Anders.

*Thrombosis of Cerebral Sinuses.*—Earache and marked edema back of ear if lateral sinus affected



(chronic otorrhea) ; edema of eyelids and face on affected side in cavernous ; epistaxis in superior longitudinal.

Treatment.—Open and cleanse mastoid and lateral sinus ; stop bleeding by plugging with strips of iodoform gauze ; ligate internal jugular vein, wash out and make aseptic. General treatment of pyemia for other forms.—Am. Text-Book of Surgery.

*Cerebral Thrombosis and Softening.*—Dull, continuous, frontal ; vertigo, tingling in fingers, aphasia, loss of memory, gradual paralysis and loss of consciousness.

Treatment.—Stimulants and small doses of digitalis if heart's action weak and irregular ; keep bowels open without active purgation ; potassium iodid freely, with mercury if case is recent, in syphilitic form.—Osler.

*Hydrocephalus.*—Severe headache in acute, moderate or absent in chronic ; vertigo, vomiting, convulsions, paralysis ; enlarged, rounded skull.

Treatment.—Systematic support to exterior of skull as long as possible ; from time to time apply mercurial ointment or oleate of mercury (5 per cent) ; internally iodid of iron and cod-liver oil.—Goodhart.

*Intracranial Aneurism.*—Constant or paroxysmal ; occipital if basal artery ; may be distinct rushing feelings ; rarely objective murmur ; vertigo, epistaxis and tinnitus aurium in miliary.



Treatment.—Ergot for miliary form—Bartholow.

Potassium iodid, nitroglycerin and morphin for ordinary form.

*Disseminated Sclerosis.*—Dull headache from early emotional stage; intention tremor, nystagmus, slow scanning speech.

Treatment.—Coal tar analgesics; warm baths.

*Hereditary Cerebellar Ataxia.*—Reeling gait as if inebriated; intentional choreiform movements; speech hesitating, abrupt, defective.

*Diffuse Encephalitis and Chronic Insanity.*—Headache often localized.

Treatment.—Cold wet pack, using enough blankets to get good reaction and wetting head also.

*Acute Delirium.*—(Bell's Mania.): Rapid, violent outbreaks and wild hallucinations with fever.

Treatment.—Calomel in early stage; cold baths and ice bag to head; hyoscin; stimulate freely later; forced feeding with milk, eggs and broths.—Anders.

*Epilepsy.*—Vertical or occipital; severe, sudden, before and after fits (may take place of fit); nocturnal tongue-biting, vertigo, lassitude, mental confusion.

Treatment.—Pre-convulsive: Diffusible stimulants, especially nitrites and large doses of bro-



mids. Post-convulsive: Strong, hot, black coffee.—Jos. Collins.

*Hydrophobia*.—Throat spasms on attempting to swallow.

Chloroform inhalations for spasm; morphin hypodermically; cocain to throat.—Osler.

ARTERIOSCLEROTIC.—Severe, dull, throbbing, waking patient in early morning; part or whole of head; increased by exertion or excitement; tinnitus, vertigo, slight syncopal attacks; slight mental deterioration; sensation of head being drawn backward; general lowered vitality; *hard pulse; elderly subjects*.

*Brain Syphilis*.—Persistent, usually diffuse; history and scars.

Treatment.—R. Potassii iodidi gr. x; liq. hydrarg. bichlor. m. xxx-lx; tinct. gent. comp. dr. i; aq. cinnam. q. s.: An ounce in water t. i. d. after food.—Day.

*Degenerative Nephritis*.—Frontal or occipital; gastrointestinal crises and other uremic symptoms; albuminuria and casts.

Treatment.—Dilute nitric acid m. xx in water; also pilocarpin injections.—Ralfe.

Citrate of caffenin 1 or 2 gr. in pill; or nitroglycerin 1 or 2 m. 1 per cent sol. in a little water.—Saundby.

Milk and vegetable diet; no alcohol; water freely; woolen underclothing; Turkish bath once



a week; easy, quiet, regular life; avoid exposure to damp cold.—Edwin F. Wilson.

See uremia under toxic.

*Chronic Alcoholism.*—Persistent with tremors.

Treatment.—Withdraw poison; bromids, trional, chloralamid, sulphonal in the dose of not less than 15 gr. to produce sleep; hyoscin hydrobromate, 1/96 gr. to quiet excitement; some means of restraint usually indispensable; abundance of nutritious food; tea and coffee freely; strychnin 1/30 gr. 3 or 4 times a day or quinin.—Tyson.

*Chronic Lead Poisoning.*—Colic with constipation; tremors; wrist-drop.

Treatment.—Iodids in full doses in plenty of water; magnesium sulphate as a hydragogue.

*Senility.*—May be premature; depends on state of arteries.

Treatment.—R. Spt. Chloroformi m. v; liq. ergotæ ext. m. xx-xxx; aq. purae ad oz. i: Take t. i. d.—Day.

ACTIVE HYPEREMIC.—*Pulsating, throbbing, tensive frontal or diffuse; induced by exertion or excitement; increased by lowering head; vertigo, wakefulness; tinnitus, spots before eyes, feeling of fulness and tightness, irritability and depression; subjective throbbing of temporal and carotid arteries; flushed face, injected eyes, heated vertex.*



General Treatment.—Cold applications (Leiter coil or ice cap) to vertex and sinciput; suboccipital cuppings; electrocompression of common carotids; hot foot-baths or sitz-bath, Russian or Turkish bath; artificial epistaxis.—Corning.

Bromids with ergot.

Congestive Headache with Insomnia: R. Chloral hydratis gr. viiss; morphinae hydrobrom. gr.  $\frac{1}{2}$ ; aq. camph. q. s.; dessertspoonful every 2 hours till relieved.—Shoemaker.

*Excitement or Prolonged Mental or Physical Efforts.*—Treatment: R. Strych. sulph. gr.  $\frac{1}{16}$ ; cinchonidin. sulph. gr. ii; syr. limonis et acidi phosphorici dil. aa q. s.: A teaspoonful after eating.—Hamilton.

*"Catching Cold."*—Treatment: Stimulating foot-baths and hot sitz-baths.

Tinct. aconiti m.i in a tablespoonful of water every half hour.—Day.

Salicylates and ordinary diet if fever; otherwise, sodium bicarbonate freely and partial feeding.—Haig.

*Indigestion Reflex.*—Increased intraocular tension and tenderness on upper surface eyeball.

Treatment.—Sodium bicarbonate with bitters before meals.—Brunton.

Atonic: R. Ferri sulph., quin. sulph. aa gr.  $i\frac{1}{4}$ ; sodii arsenit. gr.  $\frac{1}{24}$ ; pulv. rhei et zingiber.



aa gr. i; One pill t. i. d. after meals.—Jos. Collins.

*Suppressed Menstruation or Hemorrhoidal Discharge.*—Treatment: Belladonna or cimicifuga with gelsemium, and hot sitz-bath for menstrual headache; aloes for suppressed hemorrhoidal discharge.

*Plethora.*—Overindulgence; florid aspect; vertigo, tinnitus, spots before eyes.

Treatment.—Change mode of life; aconite, chloral, bromids; active saline cathartics; ergot.—M. L. Goodkind. Oil of eucalyptus, 5 drops every 4 hours.

R. Sodii et potass. tart. dr. ii; potass. bicarb. gr. xx; syr. aurant. dr. iss.; aquae ad oz. iss.: Effervescing draught with 15 gr. citric acid dissolved in a tablespoonful of water early in morning.—Day.

*Climacteric.*—With hot and cold flushes and other nervous symptoms.

Treatment.—Tincture of aconite, a drop every half hour or hour for high arterial tension; wine of colchicum in 5-drop doses for deficient elimination; veratrum viride, m. v-x every hour if needed for severe throbbing pain; potassium bromid dr. ss. for excitement.—A. H. P. Leuf.

Cannabis indica given with uniform good results.—Potter.



*Sunstroke or Heatstroke.*—Persistent; greatly increased by moving head.

Treatment.—Cold affusions to head; cold bath or ice-pack if much fever.

*Cardiac Hypertrophy.*—Enlarged and overacting heart.

Treatment.—Aconite or veratrum viride internally and cold water compresses to cardiac region.

*Exophthalmic Goitre.*—Swelling of thyroid; exophthalmus; tachycardia.

Treatment.—Absolute rest; aconitin 1/200 gr. every 3 or 4 hours if pulse tension high; digitalis in full doses if low blood pressure.—Jos. Collins.

*Acute Alcoholism.*—History; odor of breath; irritable stomach and tremors.

Treatment.—One-half dr. each of rhubarb and magnesia; also arom. spt. ammonia m. viiss., tincture of camphor m. vi, tinct. hyoseyamus m. x, spt. lavender comp. q. s.—dr. i every hour.—A. A. Smith.

*Acute Mania.*—Wild delirium and hallucinations with fever.

Treatment.—Stomach washing and hypernutrition with milk, eggs, broths, or predigested food; mild laxative in morning; paraldehyd in evening; blanket baths; hospital treatment required.—Frank C. Hoyt.

*Drugs.*—Alcohol, tobacco, ammonia, nitrites, nitroglycerin, quinin, salicylates.



PASSIVE HYPEREMIC.—*Dull, heavy, frontal or diffuse, increased by lowering head*; somnolence or stupor; mild delirium at night; cough, cyanosis and other signs of venous obstruction.

General Tonic and Stimulant: R. Tinct. cinch. comp. m. xl; spt. ammon. arom. m. xx: A teaspoonful in a wineglassful of water thrice daily.—Day.

Belladonna most generally useful remedy in nervous and congestive headache.—Wm. Gay.

*Mitral Regurgitation*.—Cardiac murmur and dilatation and dropsy.

Treatment.—Digitalin 1/60 gr. bis die in congestive hemicrania.—Bartholow.

*Constriction of neck by tight clothing*.—Disappears on removal of cause.

*Vasomotor Insufficiency*.—Due to excessive sexualism, chronic alcoholism or arteriosclerosis.

Treatment.—Sluggish Circulation: Caffein the remedy par excellence when vascular tension subnormal—cannabis indica when excessive.—Jos. Collins.

Bright's Disease with Vasomotor Relaxation: Calomel 5 gr. and compound jalap powder given at once, followed every 6 hours by  $\frac{1}{2}$  dr. potassium acetate in a tablespoonful infusion of digitalis.—Thornton.

*Respiratory Disorders*.—Whooping-cough, bron-



chitis, asthma, emphysema, consolidation or atelectasis; playing wind instruments.

*Certain Postures.*

*Pregnancy.*—Treatment: Cream of tartar and other salines to deplete plethora.

*Repeated Epileptic Attacks.*

*Tumor of Neck.*

ANEMIC.—Burning or sore and band-like feeling about forehead and eyes; or clawing sensation at vertex, intensified by temporary effort (throbbing), relieved by lowering head and sometimes by pressure; area of occipital pressure; weakness, giddiness, day-drowsiness, palpitation, photophobia, phonophobia; sometimes subjective systolic murmurs; pale face, drooping eyelids, cold vertex; usually in women.

General Treatment.—Alcohol in moderate quantities; meat, milk, eggs; stimulate appetite with bitters; rest.

More Pronounced Early in Day: Cup of hot tea or ammonia in some form often gives relief. To cure give a pill t. i. d. of  $\frac{1}{4}$  gr. ext. cannabis indica and 2 gr. citrate of iron and ammonium.—Hamilton.

*Anemias.*—Headache on exertion; syncope on slight pressure over carotids.

Treatment.—R. Quin. sulph., ext. aloes aq. aa. gr. i; pulv. capsici et ipecac. aa. gr. ss.; glycerin. q.s.: One pill at midday.—Jos. Collins.



With Vital Depression: R. Ext. nucis vomicae gr. ss.; pil. rhei comp. gr. iii; pulv. capsici gr.  $\frac{1}{4}$ : One pill at midday. Also iron.—Jos. Collins.

Nervous anemic headaches usually relieved by valerian or ammonium valerianate.—Butler.

*Chlorosis*.—Similar to anemias; piercing pain in one spot; peculiar greenish complexion; deficiency of hemoglobin.

Treatment.—Blaud's pill t. i. d. persistently until blood-count is normal.

*Leukemia*.—Hyperleukocytosis and enlarged spleen.

Treatment.—Good food, fresh air, inhalations of oxygen; iron, quinin and large doses of arsenic.—Tyson.

*Hemorrhages*.—Treatment: Menstrual: R. Tinct. cannabis indicae m. xii; ess. menthae pip. m. iv; ammonii bromidi gr. xv; syr. acaciae q. s.: A teaspoonful t. i. d. in water.—Hamilton.

*Cardiac Weakness*.—With palpitation and dyspnea on exertion.

Treatment.—R. Strych. sulph. gr.  $\frac{1}{40}$ ; quinin. et ferri citrat. gr. ii; pulv. digitalis gr. ss.; pulv. hyoscyami gr. i: One pill after each meal.—Hamilton.

Dilated or fatty heart.—A dessertspoonful of infusion digitalis t. i. d.—Day.

Cardiac Tonic.—R. Tinct. digitalis m. v-xx;



mist. camphorae ad oz. i: Take thrice daily.—  
Day.

*Aortic Stenosis and Regurgitation, or Uncompensated Mitral Regurgitation.*—Cardiac murmurs and enlargement and dropsy.

Treatment.—Digitalis, strophanthus, caffeine and other cardiac tonics.

*Brain Exhaustion from Prolonged Mental Effort.*—Treatment: Belladonna of service for headache in young persons, with pain in eyeballs and forehead and a sensation as if orbits were too small for eyeballs.—Hare.

*Advent of Puberty in Girls.*—Treatment: Potassium bromid for attacks; iron, potassium permanganate and ammonium bromid.—Goodhart.

*Hysterical or Imitative.*—Often boring and limited to small area at vertex (clavus), or irregular and increasing to climax; greatly affected by emotion or suggestion and persisting after all physical causes are removed; replaced by pain in other parts of body; hysterical stigmata; imitative headache in emotional, precocious children of neurotic parents.

Treatment.—R. Zinci valer., ferri sulph., ext. rhei, asafetidae aa. gr. i: One pill t. i. d.—Jos. Collins.

Moral treatment; suggestion; tonics, nutrients, good food, gymnastics, bathing and outdoor exercise.—Mills.



Vertical Headache in Women.—Nitric acid internally, 5 drops of the strong acid, well diluted, t. i. d.—Bulkley.

Emotional Cases.—Ignatia useful in monthly or bimonthly clonus with sensation of weight at back of head.—Wm. Gay.

NEURASTHENIC.—*Disagreeable local sensations* (tightness or looseness of scalp, lightness or heaviness, helmet sensation) rather than actual pain; usually continuous and intractable (does not interfere with sleep), aggravated by excitement or mental and physical exertion, and by pressure, but unaffected by suggestion; commonly geometric and mainly occipital (sometimes frontal or vertical) with neck weariness; begins in morning, wearing off toward evening; often associated with asthenopia, vertigo, sensations of burning or cold, or tender muscles and creaking vertebral articulations; subjects of nerve exhaustion. Sunday or postponed headache common in school children and bookkeepers. Traumatic may follow injuries to head which do not produce surgical conditions. "Habitual" headache a congenital or degenerative form of neurasthenia. Worry a strong predisposing factor.

Treatment.—Hair being thoroughly wet, a light wire-gauze helmet, lined with some soft conducting material, is fitted as accurately as possible to head and attached to plus pole, with anode at pit



of stomach—current of 5 to 50 m. a.—beware of sudden interruptions.—Rockwell.

Apply water at 80°-50° to chest, abdomen and back from hollow hand of attendant, combined with friction during application and after if need be. Rest or more physical exercise.—Jos. Collins.

R. Ext. cannabis indicae gr. 1/6; zinci phosphidi gr. 1/10; acidi arsenosi gr. 1/30: One pill twice daily for some time.—Lucking.

Potassium bromid 20 to 40 grains t. i. d. with strychnin; rest, proper diet, systematically graduated exercise, mental discipline, outdoor life, baths, adequate sleep.—Patrick.

Autotoxemic.—Avoid tea, coffee, alcoholics and coarse vegetables; take water very freely; calomel and podophyllin to stimulate liver; intestinal antiseptics after meals; hot bath for 3 minutes on rising, followed by cool sponging for ¼ minute; relax before and after meals.—Starr.

Low Vascular Tension: R. Caffeinae cit. gr. v; sodii brom., sodii bicarb., acidi tart. aa. gr. x. Or, R. Caffeinae salic. gr. i; ammon. salic., phenol salic. aa. gr. v: One capsule every 3 or 4 hours.—Collins.

Or, R. Caffeinae purae gr. ss.-iss.; phenacetini gr. v: Repeat in an hour if necessary.—Jos. Collins.

Or, R. Ammon. carb. gr. vi; tinct. sumbul m.



xii; spt. lavand. m. xv; elixir ammon. valer. q. s.:  
A dessertspoonful every 3 hours.—Jos. Collins.

With Sleeplessness: Full warm baths (96°-102°) just before retiring; add 1 or 2 oz. of pine-needle extract.—Jos. Collins.

General Debility: Syrup of iron and calcium lactophosphate dr. 1 or 2 in a wineglassful of water twice a day after food.—Day.

Idiopathic: Cold water treatment; general faradization or franklinization; home gymnastics; travel, change of climate.—Hirt.

Habitual: R. Ammonii chloridi (bromid if much ovarian pain) gr. iii; ext. hydrastis fl. (non-alcoholic), ext. viburni op. fl. aa. m. x; elix. simp. q. s.: A teaspoonful t. i. d.—Jos. Collins.

Daily or Continuous: Croton-Chloral 5 gr. every 3 hours.—Ringer.

Nervous: Zinc oxid 2 to 5 gr. in pills t. i. d. after meals.—Hammond.

MIGRAINOUS (“Nervous”).—Severe, steady, pulsating, throbbing, periodic (increasingly frequent) and usually *unilateral* (anterior frontal, temporal or parietal), with nausea and hyperacid vomiting, vertigo, drowsiness, photophobia, spots before eyes, hemianopsia, paresthesiae (“pins and needles,” numbness), chilliness or aphasia; dilated or contracted pupil and hot flushing or cold pallor of affected side; pain often markedly increased by slight pressure and by exertion—re-



lieved by stimulants; rarely oculomotor paralysis. Inception nearly always under 20 years.

Neurotic constitution (usually women, often hereditary), frequently excited by anemia, digestive disturbances, mental strain, dysmenorrhea and other uterine and ovarian affections, ametropic eye-strain or decayed teeth; also a symptom of tabes, general paresis, brain tumor and early stage of secondary syphilis and after alcoholic debauches; sedentary life and school-work predispose.

Treatment.—Arsenic often cures dull, throbbing pain in one brow.—Ringer.

Stomach washing at outset may cut short attack.

Twenty drops dilute nitromuriatic acid well diluted before meals, and 2 to 5 gr. sodium salicylate after meals.—Haig.

Caffein citrate 1 or 2 gr. every half hour, sometimes aborts attack if given early.—Mills.

Prophylaxis.—Continued prolonged administration during intervals of ext. cannabis indica in physiologic doses—beginning with 1/10 gr. t. i. d.—H. C. Wood.

Prodromal Stage.—Phenacetin, antipyrin or caffein often relieve; tinct. opii deod. m. xx and potassium bromid gr. xlv almost invariably relieve without narcotism or vomiting.—H. C. Wood.

During Attack.—Absolute rest; 10 gr. each of



salol and phenacetin and 2 gr. caffein salicylate with hot milk or hot water and whisky, to be repeated once only in 3 hours if necessary. If face is flushed give a capsule containing 2 gr. each of camphor, menthol salicylate and caffein salicylate; if pallor, amyl nitrite inhalations relieve.—Jos. Collins.

Bromids in 10 to 30 gr. doses followed by hypodermic of morphin  $\frac{1}{3}$  to  $\frac{1}{6}$  gr. in congestive form; ice or hot water bag.—Corning.

R. Spt. eth. comp., elixir lupulini, tinct. ammon. valer. aa. dr. i-ii: Take in water every 15 or 20 minutes.—Shoemaker.

Lie down unless hyperemic (sit or walk); caffein, guarana or cannabis indica at onset to abort—or menthol or oleate of aconitin applied to brow of affected side; lithium bromid 15 gr. every hour; rubber bandage around head; ice bag on forehead, or hot water bag to occiput and hot mustard foot bath.—Wharton Sinkler.

Sodium salicylate in 15-20 gr. doses. May be given in tea.—Ringer.

Sick headache with Light-Colored Diarrhea.—Mercuric chlorid,  $\frac{1}{100}$  gr. t. i. d.—Ringer.

Sick Headache.—First give an emetic, then 15 gr. chloral every hour till sleep is produced.—Harvey L. Byrd.

Migraine with Vasomotor Relaxation and Cold Extremities.—R. Atropinae sulph. gr.  $\frac{1}{120}$ ;



ext. cannabis ind. gr.  $\frac{1}{3}$ ; ext. nucis vomicae gr. ss.: One pill every 4 hours till dryness of mouth or dilatation of pupils.—Thornton.

Eye-Strain.—Full doses of strychnin or nuxvomica of service.—Hare.

Migraine.—Rest in bed in darkened room; stomach lavage with hot water or drinking large amounts of hot water; after this a saline cathartic or a teaspoonful or two of Carlsbad salts, aided if need be by a hot soap and water enema; anti-pyrin, acetanilid, caffeine, salicylates or ergot may be tried; mild galvanic current to head and static sparks sometimes of benefit; remove all possible sources of reflex irritation, and exclude from diet red meats and all easily fermented articles; cannabis indica long continued to tolerance most successful drug—may be combined with arsenic or in case of a gouty diathesis with ammonium salicylate; sodium phosphate or Rochelle salt before breakfast also of service; avoid excessive mental and physical strain and lead regular outdoor life.—Potts.

TOXEMIC.—Dull and heavy (pressure or throbbing) or sharp, *frontal* or occipital, more or less habitual and variable in location; usually afebrile (often sudden, high fever and vomiting in children); distinctive symptoms in other organs preceding nervous manifestations.

General treatment.—Give at night 15 to 30 gr.



sodium salicylate with 10 to 30 gr. potassium bromid and a half dram of aromatic spirit of ammonia; when salicylate given regularly it may be advisable to combine with it a little iron.—Brunton.

*Gastrointestinal Autointoxication.*—Persistent, confused, apathetic, lower frontal or occipital; pulsating, with full, slow pulse, if due to digitalis-like toxin; flushed face and hot, dry skin from belladonna-like toxin; pallor, faintness and feeble pulse from aconite-like toxin; headache nearly always worse in morning, relieved by vomiting, purging and hot foot-baths; coated tongue, foul breath; often pain in back, nausea, eructations and constipation; sometimes diminished vision, mental confusion, staggering; headache may be brought on by certain foods; headache throbbing, pulsating in acute indigestion, much worse on sudden movements.

*Treatment.*—Palliative: Remove source of poison by emesis or lavage; cathartic or colon flushing; diluent drinks; relieve pain by small doses of bromids combined with caffein, or by cautious use of phenacetin, or in very severe cases by a small dose of morphin hypodermically.—Frank Billings.

*Curative.*—Application of laws of hygiene modified to suit individual case; selected diet for each individual; free use of pure water as a



diluent drink; recreation in form of physical exercise or physical rest; correct irregular habits of sleep and time of taking food and exercise; withdraw tobacco, tea, coffee and alcoholic drinks; lavage of stomach when necessary; overcome constipation by hygienic measures, if possible without drugs; restorative tonics and abundant, simple diet for malnutrition and anemia.—Frank Billings.

With Flatulence and Pyrosis.—R. Sodii bicarb., bismuthi subgal., pulv. acaciae aa. gr. ii; liq. ammon. anisi m. iv; aquam q. s.: A dessertspoonful before meals, repeated in 3 hours if necessary.—Jos. Collins.

Gastric Dilation.—Stomach washing; hot water before each meal.

Chronic Dyspepsia.—R. Ferri sulph., quinin. sulph. aa. gr. i  $\frac{1}{4}$ ; pulv. rhei et zing. aa. gr. i: One pill t. i. d. after meals.—Collins.

*Constipation.*—Diffuse, frontal.

Treatment.—Calomel  $\frac{1}{6}$  gr. and sodium bicarbonate 2 gr. every  $\frac{1}{2}$  hour, followed by seidlitz powder.—Thornton.

Chronic Fecal Retention in Sigmoid Flexure.—Complete evacuation of sigmoid by continuous irrigation, followed by faradism, one electrode applied externally and one internally.—Herschell.

*Sluggish Liver.*—Dyspepsia and plethora.

Treatment.—R. Magnesii sulph. dr. ss.; sodii



bicarb. dr. iv; liq. tarax. dr. i; tinct. zingib. m. x; aquae ad oz. i: Mix with 20 gr. tartaric acid (previously dissolved) and take early mornings.—Day.

Biliousness.—R. Podophylli gr. ss.; pil. hydrarg. gr. i; ext. hyoscyami gr. ii: One pill every night.—Day.

Bilious Sick Headache.—R. Podophylli res. gr.  $\frac{1}{4}$ ; tinct. zingib. m. xv; alcohol q. s.: A teaspoonful in a wineglass of water every night at bedtime, or every second, third or fourth night as required.—Dobell.

R. Euonymin gr. ii with ext. hyoscyamus at bedtime, followed in morning by an aperient water.—Rutherford.

*Lithemia*.—Frontal, often unilateral, worse mornings; vertigo, flashes of light or dark spots before eyes and ringing of ears.

Treatment.—Vegetable diet with milk; avoid meats, especially young flesh, herrings, eggs, meat soups, tea, coffee and cocoa; moderate exercise; mercuric iodid followed by or alternated with salicylates.—Haig.

R. Lithii citrat. gr. v; potassii bicarb, gr. xx; tinct. aurantii m. xxx; aquam. q. s.: A tablespoonful in a half glass of water t. i. d.—Day.

Effervescent sodium phosphate.—A teaspoonful in water an hour before breakfast.

R. Vini sem. colch. m. viiss.; potassii acetat. gr.



xii; tinct. cimicif. m. viii; aquam menth. pip. q. s.: Teaspoonful every 4 hours.—Hamilton.

Bilious Headache.—Fel bovis 1 or 2 gr. with 1 m. oil of wintergreen in pill each evening at bedtime.—C. K. Fleming.

*Uremia*.—Dull, severe, bursting, frontal, temporal or occipital, extending down neck; worse mornings; drowsiness, spots before eyes, persistent nausea and vomiting, or serous diarrheal attacks; albuminuria and casts; often first symptom of nephritis.

Treatment.—Caffein citrate 1 or 2 gr. in pill, or 1 or 2 m. 1 per cent sol. nitroglycerin in a little water.—Saundby.

R. Potassii citrat. gr. x; tinct. hyos. m. x; spt. eth. nit. m. x; infusum scoparii q. s.: A table-spoonful t. i. d.—Jos. Collins.

Saline purgatives and copious sweating with hot bath; tinct. iron usually indicated also.

*Lack of Outdoor Exercise*.—Morning fatigue, drowsiness, vertigo.

*Diabetes*.—Dull or violent neuralgic; glycosuria, polydipsia.

Treatment.—R. Lithii cit. gr. v; potassi bicarb. gr. xx; tinct. aurantii m. xxx; aquae q. s.: A tablespoonful in a half tumbler of water t. i. d.—Day.



*Chronic Alcoholism.*—Persistent, with tremors and morning nausea.

Treatment of Inebriety.—Stop habit; strychnin 1/30 gr. 4 times a day with cinchona and other tonics; Turkish or hot air baths with free massage; free elimination.—Crothers.

*Abuse of Tobacco.*—Violent, bursting, persistent.

*Plumbism.*—Dull and heavy, often extending over entire cranium, or neuralgic; colic, tremors, wrist-drop, blue line on gums.

Treatment.—Remove cause; potassium iodid and magnesium sulphate in full doses.

*Opium Habit.*—Floating sensations, nausea and vomiting; relieved by another dose.

Treatment.—Napellin 5 gr. daily for pains on withdrawal morphin.—M. Rodet.

*Chloral Habit.*—Usually frontal and blinding, with persistent drowsiness and silly excitability.

*Excessive Tea-Drinking.*—Neurasthenia, insomnia, vasomotor insufficiency.

*Hydrargyrisism.*—Ptyalism; tremors aggravated by motion and followed by paralysis.

Treatment.—Remove cause; full doses of iodids in plenty of water.

*Chronic Copper Poisoning.*—Coppery taste and history of occupation or food poisoning.

*Arsenism.*—Feeling of suffusion; conjunctivitis, edema of lids, gastrointestinal irritation.



Treatment.—Remove cause; iodids and purgatives.

*Corrosive and Irritant Poisons Generally.*—Sudden onset after taking food, drink or drugs; pain in stomach, vomiting, purging, local signs in mouth and throat.

*Jaundice.*

*Paroxysmal Hemoglobinuria.*—With nausea, vomiting, persistent yawning and icteroid, reddish urine.

*Acromegaly.*—Severe, intermittent or continuous, usually occipital or cervical; prognathism; mental dullness.

Treatment.—Phenacetin, antipyrin, antikamnia; pituitary extract (6 or 12 grains daily).

*Addison's Disease.*—Anemia, vertigo, prostration, pigmentation.

Treatment.—Extract of suprarenal capsules.

*Carbon Dioxid Poisoning.*—Heaviness, anemia, vertigo; common in school children.

*Sewer Gas Poisoning.*—With drowsiness, nausea, vomiting, pains in and paralysis of extremities.

*Iodism.*—Characteristic feeling of suffusion in forehead.

*Nitroglycerin, Salicylates, Quinin.*—With tinnitus.

*Phosphaturia.*—Lower occiput; melancholia.



Treatment.—Dilute nitromuriatic acid m. iii-v after each meal.

*Secondary Syphilis.*—Neuralgic, limited to temple; recurs regularly every evening.

Treatment.—Push yellow iodid of mercury or gray powder till gums are slightly touched.

*Chronic Malarial Infection.*—Violent and periodic, lasting about as long as ordinary paroxysm of febrile malaria; may be similar attacks in spine, sides of chest, abdomen and pelvis.

Treatment.—Ergot a specific—a dram of fluid extract, to be repeated in 2 hours if first dose fails to relieve.—W. H. Thomson.

*Exophthalmic Goitre.*—Throbbing, pulsating, frontal and vertical; aggravated by anything that increases heart-action.

Treatment.—Absolute rest; aconitin 1/200 gr. every 3 or 4 hours if pulse-tension high—digitalis in full doses if low blood-pressure.—Jos. Collins.

*Headache Following Infections.*—Treatment: R. Opii gr. 1/40; zinci phosphidi gr. ¼: One pill t. i. d. Also this tonic: R. Ferri et ammonii cit. gr. iiss.; liq. potassii ars. m. iiss.; syr. zingib. m. xv; infusum calumbae q. s.: A dessertspoonful after meals.—Jos. Collins.

**FEBRILE.**—Dull, severe, deep-seated, usually frontal—very rarely one-sided; appears with fever and malaise and disappears with delirium.



*Typhoid*.—Early, protracted, throbbing, frontal or occipital, with dullness of hearing.

Treatment.—Cold bath or pack; ice-cap to head; morphin hypodermically if necessary.—Osler.

Very hot sponging often relieves when cold has failed.—Dyce Duckworth.

General Soreness, Malaise and Headache: R. Hydrarg. chlor. mit. gr. ss.; sodii bicarb. gr. i; pulv. ipecac, gr.  $\frac{1}{8}$ ; salol gr. i: One powder every three hours until decided bowel action.—Daniel E. Hughes.

*Typhus*.—Severe, heavy, prodromal, in forehead and temples with pain in back and limbs.

Treatment.—Cold to head; in young and strong a few leeches to temple, and chloral with or without bromids.—Hughes.

*Influenza*.—Dull, continuous, periodic supra-orbital aching (with photophobia), increased by pressure or stooping; severe backache and limb pains.

Treatment.—Hot water sponging of face, temples and neck.—Ringer.

Fluid extract of ergot in dram doses every 3 hours if necessary, a specific—better borne by stomach when combined with a dram of elixir of cinchona. It also assuages post-influenzal pains in thorax, abdomen, sacrum or pelvis.—W. H. Thomson.



R. Antikamniae gr. ii; quin. sulph. gr. ii; salol gr. i: One tablet every 2 hours.—V. W. Gayle.

*Cerebrospinal Meningitis*.—Sudden, very severe, with stiff neck muscles and photophobia.

Treatment.—Opium alternating with bromids.—Da Costa.

Cold compresses to head and spine for hours at a time.

*Smallpox*.—Decreases with appearance of eruption; severe backache.

Treatment.—Ice-bag or cold water coil to head.

*Scarlet Fever and Measles*.—More or less violent before eruption.

Treatment.—Unload bowels; put feet in hot mustard water (one tablespoonful to the bath), or apply a mustard plaster (1 part to 4 or 6 of flour) to nape of neck; potassium bromid or elixir valerianate ammonium.—Louis Starr.

*Malaria*.—Sometimes "brow-ague" or occipital pain; periodic paroxysms of fever, chill and sweat.

Treatment.—Quinin sulphate 10-20 gr. 3 hours before expected attack; if pain continues to recur give 5 drops each of liq. potass. ars. and tincture of belladonna t. i. d. after meals, increasing arsenic 1 drop each day till arsenical edema is produced.—A. A. Smith.

*Pneumonia*.—Sometimes like meningitis; often lasts till crisis.



Treatment.—Ice-cap; coal-tar antipyretics cautiously.

*Ulcerative Endocarditis*.—Septic fever, prostration; usually from puerperal wound.

Treatment.—Stimulants and eliminants.

*Relapsing Fever*.—Usually frontal, darting and throbbing.

Treatment.—Cold or gradually cooled bath; small doses of phenacetin or acetanilid, guarding the heart.—Anders.

*Simple Continued Fever*.—Frontal headache and apparently idiopathic fever.

Treatment.—Clear bowels with calomel and soda followed by salts.

*Anterior Poliomyelitis*.—Sudden slight fever and pain in limbs followed by flaccid paralysis; children.

Treatment.—Salicylates; warm local applications.—Archibald Church.

NEURITIC.—Mild but annoying—much influenced by treatment; tenderness to pressure over exposed nerve ends and trunks; pain increased on moving scalp.

Treatment.—Salophen, one-half to 1 dram daily in capsules.

*Rheumatic or Gouty*.—Continuous, hot, burning, sharp pains in occipital or frontal region; increased by wrinkling scalp, often relieved by full meal; much bilateral tenderness of scalp or



skull muscles (usually relieved by firm, constant pressure); pains much affected by changes in weather; often aching teeth and gums, giddiness, lithuria.

Treatment.—Salicylates with small doses of bromids and iodids.—Mills.

Oil of eucalyptus very useful in some forms.—Hare.

R. Potassii iodidi, ammonii chloridi aa. gr. viiss.; infusum humuli q. s.: A tablespoonful 4 times a day.—A. A. Smith.

Gouty.—R. Vini colch. sem. m. xv; lithii brom. gr. xx; syr. zing. m. xx; aquae cinnam. q. s.: A tablespoonful in a glass of Vichy every 4 hours.—A. A. Smith.

Gouty.—R. Sodii salic. gr. xv; glycerini dr. i; olei gaulth. m.  $1\frac{1}{4}$ ; tinct. ferri chlor. m. xv; acidi cit. gr.  $\frac{5}{8}$ ; liq. ammon. citrat. q. s.: Dessertspoonful in water 2 to 4 times a day.—Cohen.

Uric Acid Headache.—Inhalations of oxygen gas; prohibit nuclein-containing foods.—A. C. Croftan.

Myalgia Due to Bruise or Cold.—Ammonium chlorid in 10 to 20 gr. dose in solution with extract of licorice.—Hare.

SYPHILITIC.—Deep, intense, chiefly *nocturnal* and diffused or occipital (secondary stage), unless due to gumma (usually frontal or occipital) or pachymeningitis (localized in small area or in-



volving entire occipital or cervical region); may be small, very sensitive cranial nodes; concomitant rise of temperature; often difficulty of speech, vertigo, slight dementia, nocturnal delirium, temporary ptosis or strabismus, scars or other evidences of syphilis; brilliant effect of specific treatment; gumma, endarteritis or meningitis; may be formication and numbness of extremities.

Treatment.—Potassium iodid saturated solution; begin with 20 drops well diluted t. i. d., increasing 1 drop each day to 60; after 2 weeks if need be use mercurial inunctions also.

Calomel gr. 1/60 every hour for 10 or 12 doses.—Trousseau.

OSTEOALGETIC.—Deep, steady, dull, sometimes boring, more or less circumscribed; pain and marked local tenderness increased or evoked by deep pressure and usually worse at night; often slight edema of scalp and sometimes rigidity of neck muscles; cranial periostitis or caries from injury, syphilis, typhoid fever, tuberculosis, otitis, mastoiditis, etc.

Treatment.—Specific remedies for syphilitic cases; counter-irritation and surgical measures for others.

OCULAR.—Supraorbital or post-orbital, sometimes radiating to back of neck or referred to ver-



tex or temple; local eye symptoms; debility and change in mode of life predispose.

*Eye-strain*.—Brought on by prolonged use of eyes for near work; blurred vision and pain in ocular muscles, lids or conjunctiva; rest to eyes and atropin relieve; often neuralgic occipital pain and painful area of scalp, as if "hair had been slept on the wrong way."

*Ametropia*.—Especially hypermetropic astigmatism; pain unilateral in anisometropia.

*Treatment*.—Fitting of proper glasses under a mydriatic.

Instillation of atropin into eyes for a week or two of great service when headache dependent on spasm of ciliary muscle.—Gay.

*Muscular Asthenopia*.—Pain over insertion of affected muscle; inability to gaze long at an object; blurred vision; headache usually occipital, sometimes migrainous.

*Treatment*.—Correction of refractive errors; gymnastic exercises with prisms; partial or complete tenotomies.—De Schweinitz.

When glasses fail to relieve drop 1 per cent solution homatropin hydrobromate into eyes at bedtime.—Adolph Bronner.

*Heterophoria*.—Correct refractive error, giving lenses without decentering a fair trial before altering their centers or using prisms; tenotomy a last resort—complete with rather free cutting



of capsule on both sides, except as to vertical muscles.—Melville Black.

*Imperfect Accommodation.*—Usually in middle or old age.

Treatment.—Properly fitted spectacles.

*Neurasthenic Asthenopia.*—Easy fatigue of visual power; sudden attacks of obscured vision and procession of scotomas; nervous depression.

Treatment.—Rest-cure; tonics; graduated exercise; correction of ametropia.—De Schweinitz.

Full doses of strychnin or nux vomica of service.—Hare.

*Conjunctivitis.*—Burning pain in reddened eyes, often radiating to temples; injected vessels larger toward periphery and movable on sclera.

Treatment.—Thorough washing with 3 per cent boric acid solution; instil liquid petroleum. Instil a drop of 1:10,000 adrenalin chlorid as often as needed.—Jackson.

*Iritis.*—Sharp, deep-seated eye pain or neuralgic brow pain radiating to neighboring parts; sluggish, immobile, often irregular pupil, discolored iris and pericorneal injection; patient points to eye and then up forehead to inner side of nose or malar process.

Treatment.—Atropin sulphate gr. iv ad oz. i water—one drop in the eye 2 to 4 times a day.—Swanzy.

*Glaucoma.*—Violent, sharp, shooting, unilateral



pains with focus in eyeball or at supraorbital notch; nausea and vomiting; rainbows around lights, dimmed vision, increased intraocular tension; often reverse gesture to that of iritis.

Treatment.—*Iridectomy*; daily instillation of eserin for months.

*Foreign Bodies in Cornea*.—Best perceived by oblique illumination.

Treatment.—Remove body and wash eye with boric acid solution.

*Keratitis*.—Marked photophobia and lachrymation; corneal ulceration and opacity.

*Peripheral Choroiditis*.—Pain begins on waking.

*Retinitis*.—Metamorphopsia; diminished transparency of retina.

*Corneal Ulcer*.—Instillation of fluorescin reveals obscure lesions.

Treatment.—A few doses of quinin sometimes relieves pain promptly and effects a cure when local treatment has failed.—Minner.

Asthenopic Pain in Eyeballs from Chronic Metritis.—Douche of cold water (fountain syringe with rose spray nozzle) for 5 minutes t. i. d. against closed eyes.—Garrigues.

*Orbital Disease*.—Exophthalmus; immobile eyeball.

*Optic Neuritis*.—Especially retrobulbar.

NASOPHARYNGEAL.—Dull, boring, frontal or



diffused or localized at root of nose; increased or provoked by touching seat of disease (usually middle turbinate) with a probe; more or less continuous with exacerbations; often worse in early morning.

*Coryza*.—Dull, persistent, just beneath eyebrows; stuffy feeling.

Treatment.—A tablet every 2, 4, or 6 hours each containing  $1/12$  gr. morphin,  $1/600$  gr. atropin and  $1/6$  gr. caffenin; spray nose and throat with 3 per cent sol. camphor-menthol in lavolin or benzoinol 3 or 4 times a day.—Bishop.

*Nasal Stenosis*.—Pain may be persistent in distinctly neurotic subjects.

Treatment.—Electrocautery to remove hypertrophies; knife, saw or drill for osseous or cartilaginous growths; hot or cold snare, scissors, chemical caustics, etc., for fibrous growths.—Bishop.

*Frontal Sinusitis*.—Local and frontal pain; usually severe and persistent (may be regularly periodic); unilateral nasal discharge; often yields to quinin or antipyrin.

Treatment.—Saline cathartics; try to keep nostrils open and secure free drainage; ice may abort inflammation if seen early; hot water bags externally, early blood-letting; spraying with Seiler's solution; cocain in extreme cases followed with aqueous ext. suprarenal glands; probing into



frontal sinus and removal of polyps, granulations, etc.—Swain.

*Enlarged Pharyngeal Tonsils.*—Recurrent, occipital.

*Follicular Tonsillitis.*—Diffuse, often persistent.

Treatment—Salophen 5 to 10 gr. every 2 hours.

*Obstruction of Eustachian Tube.*—With partial deafness and ringing in ears.

Treatment.—Insufflation by politzerization or by Valsalva's method after cleansing throat.

*Adenoid Vegetations.*—Dull hearing; open-mouthed, vacant expression.

Treatment.—Cocainize or anesthetize and remove growth with fingernail or suitable curet; cod-liver oil and syrup of iodid of iron.

*Ethmoiditis.*—Usually neuralgic, frontal or intraorbital; swelling on orbital surface of nose and discharge; sphenoidal disease similar.

Treatment.—Curetment of diseased tissue and free drainage.

MISCELLANEOUS REFLEX. — Treatment. — R.: Potassii cyanidi, gr. x-xx; aquae laurocerasi, oz. iv.; moisten compress with solution and apply to seat of pain for  $\frac{1}{4}$  to  $\frac{1}{2}$  hour.—Trousseau.

*Uterine.*—Sometimes deep orbital pain, with dull headache, worse on rising in morning. When due to posterior displacements and cervical lacerations usually neuralgic, upper occipital and often



associated with tenderness on pressure in cervical region and with "weak back."

Treatment.—Saturated solution of camphor in eau de Cologne rubbed on head.—Ringer.

*Menstruation.*—Pain severe, often through eyeballs.

Treatment.—Cimicifuga in nervous and hysterical women; pulsatilla also useful when patient chilly.

*Menstrual Hemicrania.*—Tinct. gelsemium, 2-3 drops every 2-4 hours.—Dujardin-Beaumetz.

Tinct. belladonna 3 m. every 3 hours for pain over brow and in eyeballs, due to uterine or gastric disturbances in young women.—Ringer.

*Ovarian.*—Occipital or vertical, with pain or tenderness in ovarian region.

Treatment.—R.: Ammonii brom., gr. xv; ext. hydrastis, fl. m. x.; tinct. gent. co., m. xxx; aquae, q. s.: A dessertspoonful t. i. d.—Sinkler.

*Menopause.*—Treatment. — Cannabis indica given with uniformly good results.—Potter. R.: Sodii arsenat., gr. 1/15; ext. cannabis ind., gr. 1/6; ext. belladon., gr. 1/4: One pill twice daily.—Collins.

A tablet containing 10 gr. potas. brom. and 1/48 gr. sodium arsenate every 4 hours till relieved.—Thornton.

*Vesical.*—Vertical or occipital, with bladder symptoms.

Treatment.—Vesical sedatives and antiseptics.

*Caries of Teeth.*—Frontal or temporal, on affected side—persistent with exacerbations.

*Middle Ear Disease.*—Mastoid, or temporal and occipital; usually old-standing suppuration in attic; sometimes cholesteatoma.

*Gastro-Intestinal Irritation.*—Frontal or diffuse, with abdominal symptoms.

Treatment.—Regulation of diet and long continued use of sodium phosphate for bilious sick headache.—Bartholow.

With Flatulence and Acidity.—R.: Sodii bicarb., bismuthi subcarb., pulv. acaciae, aa. gr. viii; spt. ammon. arom., m. xv; syr. zingib., m. xx; aquae., q. s.: One oz. t. i. d.  $\frac{1}{2}$  hour before eating.—Day.

With Atonic Dyspepsia.—R.: Ferri sulph., quin. sulph., aa. gr.  $1\frac{1}{4}$ ; sodii arsenitis, gr.  $\frac{1}{24}$ ; pulv. rhei., pulv. zing., aa. gr.  $\frac{5}{6}$ : One pill t. i. d. after meals.—Collins.

Dinner Pill.—R.: Pulv. myrrhae et zing., aa. gr.  $\frac{3}{4}$ ; pil. aloes, gr. ss.; ext. anthem., gr. iss.; olei caryoph., m.  $\frac{1}{4}$ : One or two before midday meal.—Day.

*Genital Disorders.*—Irregular, variable.

*Angioneurotic Edema.*—Sometimes excruciating.

Treatment.—Phenacetin, antipyrin, antikamnia, acetanilid.



TRAUMATIC.—Usually intractable.

Treatment.—Bromids and iodids.

ADOLESCENT.—Rapid growth (usually frontal with pain in joints, periostoses and hypertrophy of heart); intellectual activity; digestive troubles (1 to 3 hours after eating too much or too fast); nervous habit (premonitory of future neuropathies, epilepsy or hysteria); anemia; gouty or rheumatic diathesis (hereditary; neuralgia or arthralgia; myalgia; phosphaturia, oxaluria, lithuria, may simulate meningitis).

Treatment.—Muscular repose, tonics, liberal diet, phosphate of lime for too rapid growth; moderate or cease intellectual activity and use lukewarm baths; for digestive type regulate hygiene and diet; give bitter tonics before and warm drinks after eating; nervous cases require baths, walking, massage and for epilepsy valerian, belladonna and bromids; for arthritic children moderate diet, open-air exercise, vapor baths with friction, laxatives, alkalies, sodium salicylate (dose 4 or 5 gr.) and tinct. colchicum (10-15 drops daily).—Simon.

## CHAPTER II.

### CEPHALIC NEURALGIA.

*General Character.*—Often limited to one spot of head or face; sharp and paroxysmal; darting from spot to spot.

*Symptoms.*—Paroxysmal, variable, sharp, shooting, shifting, persistent pain, following linear course of nerves and branches; nearly always unilateral; usually relieved by firm, steady pressure or hot applications; tender pressure points at exit foramina; often local sweating, blushing or muscular twitchings; suffused eye and edema of lid in ophthalmic.

*General Treatment.*—Antikamnia, phenacetin, acetanilid (3 to 8 gr.), or antipyrin (8 to 12 gr.) with 2 gr. caffein citrate every 30 minutes.

Ammonium chlorid 15 to 25 gr. t. i. d.—Taylor.

Butyl chloral hydrate 5 gr. with 1-200 gr. gelsemin.—Murrell.

Faradic brush—strong cutaneous faradization—often very satisfactory.—Hirt.

Ext. belladonna 1-5 gr. every hour till dizzy, then lessen dose and continue for several days.—Trousseau.

Hypodermic injection into seat of pain of 1-20 to 1-6 gr. morphin with 1-20 as much atropin, or of  $\frac{1}{2}$  to 1 gr. cocain, or 1-60 to 1-30 gr. gelsemin.—Gowers.



R. Aconitinae 1-160 to 1-60 gr.; glycerini, alcoholis aa. m. iv; aq. menth, pip. q. s.: A teaspoonful t. i. d. before meals carefully increased.—Seguin.

Oil of peppermint painted over part.

Oleate of morphin (1 or 2 gr. to dram) an excellent application.—Ringer.

Valerianate of zinc or ammonium in 20 gr. doses.

R. Morphinae sulph. gr. xx; camphor-chloral dr. ii: For local application to painful spots.—Shoemaker.

R. Liq. sodii arseniat. m. iss.; ext. hoang-nan fl. m. iss.; elixir gent. ferrat. q. s.: A teaspoonful in water after meals.—Shoemaker.

Phenacetin gr. v and lupulin gr. v in capsule every hour or two.—Shoemaker.

R. Abstracti aconiti gr. 1-5; quin. bisulph. gr. iii; piperini gr.  $\frac{1}{4}$ : One pill every 2 hours till relieved, then every 4 hours as long as needed.—Shoemaker.

Prolonged local medication of affected nerve branches by means of 5-per-cent cocain solution applied on positive sponge electrodes after puncturing skin with Corning's needles—3 to 6 cells of current for 10 to 20 minutes; prolong local action of drug by means of elastic strap encircling head and holding in place a T-shaped block of wood pressing upon a piece of fine wire gauze; more



cocain, chloroform, aconite, etc. may be injected. Or cocain may be applied for a few hours externally through metal nipple of India-rubber membrane covering area from which epidermis has been removed with vesicating collodion and glued firmly around this area.—Corning.

Morphin or atropin subcutaneously in region of nerve; gradually increased local massage; small quantity of ungu. veratriae rubbed in over seat of pain; galvanization with plus pole over point of exit of nerve, minus pole over superior ganglia of cervical sympathetic—10 cells for 5 to 8 minutes.—Bartholow.

Codliver oil; change of air; excision of nerve; aquapuncture; ether spray; thermocautery or local heat in any form.

Persistent Neuralgia.—Washed castor oil in 1 or 2-ounce doses every morning before breakfast until pain is relieved—take in a tumbler with 2 or 3 tablespoonfuls of foaming ale or with essence of anise.—Moyer.

Gross Pill.—Quin. sulph. gr. ii; morph. sulph. gr. 1-20; strychnin gr. 1-30; arsenious acid gr. 1-120; ext. aconiti gr. ss.: One 3 or 4 times daily.

Baltimore Liniment.—Chloroform and tinct. aconite aa. dr. ii; liniment of soap oz. iii: Apply to affected part.

*Occipital*.—Energetic counter-irritation; local



bleeding; galvanism; moist or dry heat; antipyrin or phenacetin.—Hirt.

*Trigeminal*.—Ether spray applied over affected part until thin, white layer forms on skin.—Hamm.

Freeze parts with ether or rhigolene spray or apply solution of 10 gr. menthol to the ounce of alcohol.—Thornton.

Neuralgia Persisting After Cause is Removed.—R. Phosphori gr. 1-32; alcohol q. s. ut ft. sol.; spt. menthae vir. m. i; glycerin q. s.: A teaspoonful after eating, to be increased.—Allen McLane Hamilton.

Obstinate Cases of Tic Douloureux.—Hypodermic injections of strychnin 1-30 grain rapidly increased to 1-6 or  $\frac{1}{4}$  grain daily until slight toxic symptoms supervene; rest in bed, for weeks if need be, very important; diet liquid or semi-liquid—diluent fluids should be freely imbibed; massive doses of potassium iodid and iron as a tonic.—Dana.

In cases resisting ordinary treatment, try nerve section, neurectomy, evulsion, nerve stretching or removal of Gasserian ganglion.—De Schweinitz.

*Exposure to Cold*.—Usually trigeminal, rarely occipital.

Treatment.—Nitroglycerin gives relief in many instances.—Bartholow.

*Disease of Middle Ear or External Auditory Canal*.—Trigeminal and cervical.



*Enlarged Cervical Glands.*—Great auricular or small occipital nerve.

Treatment.—Excision of offending glands.

*Intracranial Growths.*—Usually one branch of trigeminus.

*Chronic Malaria.*—Periodic, supraorbital “brow ague;” sometimes preceded by slight chill or malaise.

Treatment.—A dram of f. e. ergot every 2 hours with the same quantity of elixir of cinchona.—Thomson.

Quinin aided by arsenic.

Salicylic acid if quinin has failed.—Butler.

*Morbid Growths in Upper Jaw and Parotid Region.*—Neuralgia may be first symptom.

*Nervous Exhaustion.*

Treatment.—Phosphorus very useful in convalescence from acute fevers.—Hare.

*Overwork.*

Treatment.—Equal parts of elixir of phosphorus (N. F.) and elixir of cinchona calisaya: One or 2 teaspoonfuls every 3 hours.—Shoemaker.

*Anemia.*—First division or auriculo-temporal.—Temporary improvement from stimulants and recumbency; worse during movement or menstruation; pallor and blood changes.

Treatment.—Iron (m. 20 to 40 of tincture or 20 gr. of saccharated carbonate bis or ter die)



Treatment.—Blister beneath occiput or behind ear; treat ear disease.

*Dental Caries.*—Trigeminal, radiating from decayed tooth; if lesion is internal, tooth appears dark ashy gray instead of bright pink by transmitted electric light; pointing finger tip passes up side of face to 1 inch below sagittal suture.

Other causes of dental neuralgia are pulpitis, pyorrhea, recession of gums, substances under gums, malposition of teeth, dying of pulp, pulpstones, exostosis, pericementitis, periosteal thickening, secondary dentine in pulp chamber, unerupted or impacted teeth, diseased antrum or catarrhal conditions.

Treatment.—Hot alkaline fluids to wash mouth and volatile oils or carbolic acid in hollow tooth help to relieve pain; proper filling cures; extract if tooth is dead (septic outside inflammation; surrounding parts tender; local temperature raised). Five to 10 drops of fluid exts. gelsemium and cannabis indica at 2-hour intervals.—S. H. Creighton.

Gelsemium in non-inflammatory cases.—Ringer.

*Injury to Cord.*—Cervical neuralgia if high up.

Treatment.—Absolute rest and opiates.

*Cervical Caries or Cancer.*—Occipital neuralgia and other pressure symptoms.

Treatment.—Fixation apparatus for caries; operation or opiates for cancer.



and strychnin—the latter may be used hypodermically.—Anstie.

R. Ext. belladonna gr.  $\frac{1}{4}$ ; quin. sulph. gr. iss.; ferri sulph. exsic, gr. ss.; strych. sulph. gr. 1-60; acidi arseniosi gr. 1-40; oleores. pip. m. ss.: A pill t. i d.—Shoemaker.

*Impaired Nutrition.*

Treatment.—Pilulae phosphori gr. 1-100 every 4 hours.—Butler.

R. Zinci phosphidi gr. 1-10; ext. nucis vomicae gr.  $\frac{1}{4}$ : One pill every 3 or 4 hours.—Shoemaker.

Fresh air, rest, full nutritious diet; small quantities of alcohol at meals.

Debilitated Children (8 to 12 years).—R. Ferri et potassii tart. gr. iv; tinct. cinch. co. q. s.: A teaspoonful 4 times a day.—J. Lewis Smith.

*Tuberculosis.*

Treatment.—Codliver oil.

R. Guaiacol gr. 75; methyl salicylat. gr. 75; ext. belladonnae gr. 3; ext. opii gr.  $3\frac{3}{4}$ ; vaselin et lanolin aa. dr. 4: Apply small quantity without rubbing and cover with cotton.—Capitan.

*Lithemia.*—Pain preceded by drowsiness; lithuria; patients perspire easily and are subject to catarrh.

Treatment.—Turkish or vapor baths; potassium iodid; salophen.

*Gout.*—Family and personal history; irritable temper; rich food and red meat.



Treatment.—*Cimicifuga*, *cannabis indica* and *gelsemium*; strictly vegetable diet; salicylates and *colchicum*.

Ammonium chlorid dr. ss. several times a day.  
—Ringer.

*Influenza*.—Dull, aching, intractable, ophthalmic or occipital.

Treatment.—Aconitin gr. 1-200 to 1-100 in hot water on an empty stomach, repeated every 4 hours if needed.

Blister over supraorbital nerve in severe cases.

*Severe Acute Indigestion*.—Occipital and supraorbital.

Treatment.—Clear out stomach; antikamnia and salol.

*Chronic Nephritis*.—Supraorbital, dental or occipital, often with cramps in muscles of extremities.

Treatment.—Potassium bitartrate, sodium or magnesium sulphate, Rochelle salts; vapor sweat baths.

*Diabetes*.—Symmetric; usually third division; worse with increase of sugar; neuralgia elsewhere in body.

Treatment.—Cut off carbohydrates from diet.

*Senile Atheroma*.—With hard, tense pulse.

Treatment.—Full doses of nitroglycerin administered simultaneously with full doses of strychnin or *nux vomica*.—Hare.



*Syphilis*.—Boring, worse at night, may be periodic; local tenderness the rule; supraorbital in orbital periostitis, with squint, diplopia and restriction of eyeball movements.

Treatment.—Large doses of potassium iodid after meals in milk or water.

*Locomotor Ataxia*.—Sudden, very severe crises at long intervals of shooting, stabbing pains not confined to one nerve-trunk; loss of knee-jerk and defective pupillary reaction to light.

Treatment.—Acetanilid, antikamnia, phenacetin, antipyrin, warm baths.

*Chronic Plumbism and Hydrargyris*.—With tremors and paralysis.

Treatment.—Remove cause; full doses of potassium iodid in a glass of milk or water after meals.

*Chronic Alcoholism*.—Often associated with peripheral neuritis.

Treatment.—Rest, strychnin, antipyrin and phenacetin.—E. D. Fisher.

*Epileptiform Neuralgia*.—Very sudden and severe attacks, usually lasting less than a minute; recurrent, intractable; may be spasm of face.

*Functional Irritability of Nervous System*.—Wandering neuralgic pains and restlessness.

Treatment.—Strychnin the remedy.—Bartholow.

*Pelvic Disorders*.



Treatment.—R. Zinci valer. gr. i; ext. gentianae gr. i; ext. nucis vomicae gr.  $\frac{1}{4}$ : One pill 3 or 4 times a day.—Bartholow.

*Pregnancy.*

Treatment.—Emulsion of codliver or olive oil; complete rest, systematic feeding and tonics—arsenic, quinin, iron (sulphate or double citrate or tartrate) combined with bitter tonics; menthol or iodine locally.—E. P. Davis.

*Pericarditis and Diaphragmatic Pleurisy.*—Phrenic nerve in neck.

*Wounds and Cicatrices Pressing on Nerve.*—Pain usually does not begin for some weeks or months.

Treatment.—Dissect out and remove scar.

*Reflex from Disease or Injury Elsewhere.*—Neuralgia limited to 5th has been caused by trauma to ulnar or occipital nerve.

*Occupations.*—Such as carrying heavy weights on head and neck.

*Ocular Neuralgia.*—From ametropia, anemia or rheumatism.

Treatment.—Ten per cent solution of muriate of quinin instilled every 15 minutes if need be.—Markoff.

Correct any error of refraction under a mydriatic.

*Acute Gout of Tenon's Capsule.*—Pain severe,



often with edema of conjunctiva, photophobia and phosphenes; uricacidemia.

Treatment.—Salicylates or salophen.

*Iritis*.—Radiating pains over distribution of two upper branches of 5th nerve.

Treatment.—Keep pupil dilated with atropin; treat cause (rheumatism, syphilis, etc.).

*Glaucoma*.—Violent ocular and supraorbital pain, with dimmed vision and increased intra-ocular tension.

Treatment.—Broad iridectomy; instillation of eserin in chronic cases.

*Cephalic Myalgia*.—Tender points at origin, insertion and in course of certain muscles (fronto-occipital, sternomastoid, temporal, upper mastoid); sometimes produced by unnatural positions during sleep.

Treatment.—Slight pressure and kneading, followed by more energetic massage.—Hirt.

*Suppurative Ethmoiditis*.—Pain referred to root of nose and back of eye and temporal region; discharge like that of antral suppuration; may be bulging prominence between eye and root of nose, and eyeball may protrude abnormally.

Treatment.—Cleanse nostril thoroughly and frequently by means of syringe and warm antiseptic wash; correct nasal irregularities and remove obstruction to free drainage; dry diseased surface with pledgets of cotton and apply 50-per-



cent ointment of ichthyol in lanolin by means of pledgets of cotton allowed to remain in contact from 1 to 3 hours at a time; injection of pyoktanin solution 1:500 serviceable in cases of only moderate severity; intractable cases demand free opening of cavity and radical removal of disease.—Kyle.

## CHAPTER III.

### PAIN IN THE EAR AND NOSE.

#### OTALGIA.

For Immediate Relief.—Wash out canal and drop in 4 drops of warmed 1-per-cent sol. atropin.—Sexton.

*Decayed Teeth.*—On affected side—generally a lower molar, which may be free of pain.

Treatment.—Filling or pulling or local treatment of sensitive pulp.

*Obstruction of Eustachian Tube.*—Clicking sounds; fulness in ear, impaired hearing; may be due to mumps.

Treatment.—Cleanse nose and throat and use Valsalvian method carefully, or close mouth and blow into nose.

*Acute Otitis Media.*—From cold or extension of pharyngitis; very painful, tense, throbbing; ringing in ears; redness and bulging of tympanic membrane.

Treatment.—Dry, hot applications (salt bag or hot-water bag); nasal alkaline spray; politzerization; mild sudorifics and aperients.—Burnett.

To abort, fill canal with 12-per-cent solution of carbolic acid in glycerin.—A. H. Andrews.

A few drops of warmed 4-per-cent solution of



cocain dropped into ear every 2 or 3 hours in early stage; leeches to tragus; perforate membrane when pus has formed and drain with iodoform gauze.

*Inflammation of Meatus.*—Local signs.

Treatment.—Leeches to tragus or scarification of cartilaginous meatus ( $\frac{3}{4}$  to 1 inch incisions) followed by hot-water douche.—Jennings.

*Furuncle of Meatus.*—Circumscribed tender swelling.

Treatment.—Free early incision; for severe pain instill a tablespoonful in a wineglassful of warm water of the following: liq. plumbi, liq. morphinae aa. oz. i, aquae oz. x; to prevent return of boil apply twice a day on cartilaginous portion after acute symptoms subside, ointment of mercuric nitrate 1 part to 8 each of oil of almond and vaselin.—Jennings.

*Neuralgia.*—Sharp, shooting, intermittent; no local signs.

Treatment.—Hot-water bag to ear.

Phenacetin 5 gr. every hour till severe pain ceases.—Thornton.

*Collection of Wax.*—Shown by simple inspection.

Treatment.—Soften with warm glycerin or solution of baking soda and douche freely with hot water to remove wax.



*Nocturnal Recurrent Earache of Small Children.*

Treatment.—Atropin sulphate 1 gr. to the ounce of water—5 drops warmed and dropped into ear (seldom needs repeating).—McIlvane.

*Earache with Nervous Excitement.*

Treatment.—Tinct. anemon. praten. 1-10 to  $\frac{1}{3}$  drop in water as necessary.—Sexton.

*Lingual Ulcer, Abscess or Cancer.*—Sharp, lancinating pain in temporal region and extending to ear.

*Mastoiditis.*—Pain and tenderness in mastoid, becoming severe and persistent with tenderness on pressure; redness and edematous swelling; fluctuation if abscess forms; temp. normal to  $103^{\circ}$ —fluctuating with rapid, thready pulse if lateral sinus involved.

Treatment.—Rest in bed; light diet; free evacuation of bowels with calomel and saline; free incision of drum membrane if congestion and bulging; irrigate ear with hot antiseptic solution several times a day; continuous application of cold by means of Leiter coil or Bishop ice-bag for 24 to 48 hours; if swelling and tenderness continue, surgical measures should be instituted at once.—Wm. C. Bane.

*Inflammation of Epiglottis and Upper Larynx.*—Laryngeal tuberculosis (severe pain radiating to or referred to ear, aggravated by swallowing or



pressure on larynx); laryngeal carcinoma with ulceration (lancinating aural pain).

*Minor Causes.*—Ulcer of pharynx or upper esophagus; thoracic aneurysm; cold, anemia, neurasthenia, syphilis (sometimes violent non-inflammatory paroxysms in mastoid region), malaria, sexual disorders; irritation of Gasserian ganglion or 5th nerve; caries of bone; brain tumors; prolonged stimulation of auditory nerve (piano-players).

Treatment of Non-Inflammatory Otalgia.—Iron for anemia; quinin and amyl nitrite for periodic malarial otalgia and tic douloureux; full doses of potassium iodid for syphilis. Tinct. of belladonna in 5 m. doses, or atropin (5 drops of a 1-per-cent solution several times daily) has proved efficacious in chronic cases. Galvanism (anode on ear and cathode on back of neck) occasionally useful when other means have failed. A blister over mastoid sometimes gives relief. When pain affects entire aural region and is increased by pressure beneath tragus, massage may cure promptly.—Hovell.

#### NASAL PAIN.

Smarting or burning at root of nose in acute rhinitis and post-nasal catarrh; diffuse and indefinite in dry catarrh and diphtheria; severe from foreign body (gradual increase if a vegetable), glanders or primary syphilis; radiates to ear

if Eustachian tube is involved; cheek pain in antral disease; severe pain in side of nose often first symptom in iritis or irritation of ciliary nerves.

Treatment.—Spray of adrenalin chlorid (1:10,000 or stronger) for nasal and sinus inflammations.



**CHAPTER IV.****PAIN IN THE MOUTH AND THROAT.**

## TOOTHACHE OR ODONTALGIA.

[Cold drinks make worse if pulp not decayed—pack or fill; hot drinks make worse if pulp decayed—open up or pull.]

*Caries.*—R. Creasoti m. vi; tinct. iodi dr. i; liq. plumbi subacet. dr. i; chloroformi, tinct. opii aa. dr. ss.: Apply gently on softest cotton wool to pulp and brush same on surrounding gum.—Garretson.

Wash out with warm solution of baking soda and put in a bit of cotton wet with carbolic acid or oil of cloves or chloroform.

*Pyorrhœa Alveolaris.*—Suppuration around and at roots of teeth.

Treatment.—Open abscess freely and irrigate with mild antiseptic; Lugol's solution or diluted tinct. iodine with tannic acid useful to reduce granulations.

*Catching Cold.*

Treatment.—Sodium salicylate 15 gr. with 15 m. tinct. belladonna every 4 hours if first dose fails to relieve.—Fred. Coles.

*After-Pains from Extraction.*—Retention of pyogenic membrane; expansion of osseous walls; fracture of alveolus; sundering of maxillary process and alveolus, with laceration of tissues; re-



tention of root and spiculae; necrosis of wall and septum of non-antagonized tooth; perforation of alveolus from pus.

Treatment.—Remove foreign substances with curet or burr under local anesthesia; local use of sedative antiseptics.—Charles B. Isaacson.

#### SORE MOUTH AND THROAT.

*Catarrhal Stomatitis.*—Erythema of mucous membrane of mouth limited to gums, or general; mucous glands prominent, yielding on pressure a drop of mucus; acid and irritant buccal over-secretion.

Treatment.—Mel boracis with alum, or alum alone in powder, or 6 per cent (saturated solution) potassium chlorate, or equal parts of iron and glycerin.—Tyson.

A dram of borax to a half ounce each of water and glycerin; apply locally p. r. n.—J. Lewis Smith.

Prophylactic in Nursing Babes.—R. Sodii borat. dr. ii; f. e. pinus canad., glycerini aa. oz. ss.; aquæ rosæ oz. iii. Wash mouth morning and evening.—Love.

*Apthous Stomatitis.*—(Thrush, Follicular or Vesicular Stomatitis.)—Small number of discrete, slightly raised, superficial, small, roundish, very tender “canker ulcers” (following herpetic vesicles), with yellowish-white depressed bases and bright red margins—simultaneous or in crops;



mostly on inner side of lips and cheeks and edges of tongue; over-secretion of mucus and acid and irritating saliva.

Treatment.—Glycerin and Monsel's solution, equal parts painted on ulcers, rinsing mouth afterwards.—Beale.

Thrush.—Solution of 1 dr. borax in 2 dr. glycerin and 6 dr. water, applied thoroughly 4 or 5 times daily and continued for a week after disappearance of affection.—Thornton.

*Ulcerative Stomatitis* (Stomacace).—Excessive blood-stained salivation; gums red, swollen and spongy, sloughing and bleeding readily; deep and ragged ulcers mostly along gums, with bases covered with closely adherent grayish-white membrane; breath horribly foul.

Treatment.—Potassium chlorate 10 gr. t. i. d. to a child—twice as much for an adult—also locally as a mouth wash; potassium permanganate mouth wash if much fetor, with silver nitrate to ulcers.—Osler.

Infants.—Swab with water acidulated with a few drops of acetic acid, then paint with 1 part borax in 8 of glycerin.—Garrigues.

*Mycotic Stomatitis* (Thrush or Sprue).—Numerous slightly raised pearly white painless spots, beginning on tongue and coalescing into gray-white membrane, spreading to other parts of mouth and throat—readily removed without causing



bleeding or ulceration; microscope reveals saccharomyces or oidium albicans.

Treatment.—Bicarbonate or biborate of sodium; glycerin, soda and water; potassium chlorate; listerine; calomel, gr. 1-12 for babies every 2 hours.—N. Wiest.

*Bednar's Aphthae*.—Atrophic white spots on hard palate of nursing infants; no significance.

*Mercurial Stomatitis*.—Gums extremely tender; ptyalism; breath fetid; may be ulceration of mucosa, loosened teeth or even necrosis of jaw.

Treatment.—Suspend administration of drug; simple mouth-wash for mild cases; potassium chlorate internally, and to rinse mouth in more severe cases; open bowels freely; hot bath every evening; plenty of alkaline mineral waters; atropin sometimes serviceable, 1-100 gr. twice a day; iodine also recommended.—Osler.

*Gangrenous Stomatitis*.—Insidious formation from small hard nodule, then ichorous vesicle, of black-edged sloughing ulcer with brawny red induration of gums or cheek—spreads rapidly and may perforate cheek or invade bones of jaw; ichorous blood-stained oral discharge mixed with shreds of gangrenous tissue; breath intolerable; great prostration; septic diarrhea; lethargy or delirium; fever often high.

Treatment.—Burn with lunar caustic and pack in bismuth and alum every 3 hours, using car-



bolie acid or potassium permanganate as a mouth-wash.—J. Lewis Smith.

*Membranous Stomatitis.*—From true diphtheria or excessive use of strong mouth-washes; false membrane (Klebs-Loeffler bacilli in true diphtheria); strongly fetid breath; salivation; may be severe hemorrhages.

*Foot and Mouth Disease.*—Vesicles and ulcers on edges of tongue and inside of lips; affected milk yellowish-white, bitter and nauseous.

Treatment.—Same as for aphthous stomatitis.

*Mucous Patches.*—Circumscribed, slightly raised, whitish serpiginous very tender spots; ham-colored eruptions on skin.

Treatment.—Ten per cent solution of chromic oxid locally; mercury internally.

*Acute Glossitis.*—Tongue tender and painful and much swollen; coating of thick soft yellowish-white fur; may be cracked or ulcerated in infectious cases; speech impossible.

Treatment.—Tinct. aconite m. i-iii every half hour or hour for fever; constant application of ice or persistent use of hot water for enlargement; if these do not relieve promptly, scarify deeply; open abscesses and give quinin; tracheotomy if suffocation imminent.—Hughes.

*Chronic Superficial Glossitis.*—Pricking sensation or soreness; tongue enlarged with more or less reddened edges; often smooth, shiny, ovoid



patches separated by deep furrows; excoriations and superficial ulcers.

Treatment.—Blandest diet and absolute abstinence from causal irritants; Seiler's tablets in solution; chromic acid or silver nitrate, 5 or 10 gr. to ounce of glycerin or honey, applied once or twice daily by gentle brushing; general tonics.—Anders.

*Glossitis Desiccans.*—Gradual development of a number of deep fissures and indentations, giving an uneven, ragged look; excoriations and ulcers.

Treatment.—Potassium iodid gr. ii increased to gr. v t. i. d. in a half pint of water after meals; adding sometimes syrup of ginger and liquor cinchonae.—Beale.

Fissures of Tongue.—Local application of a mixture of 1 part carbolic acid, 3 tincture of iodine and 10 glycerin.

*Acute Inflammation of Lingual Tonsil.*—Excessive secretion and constant tendency to clear throat; pain about hyoid and shooting to ear on swallowing in phlegmonous variety; throat-ache on use of voice; may be harassing cough; laryngoscope shows elevation and secretion at base of tongue.

Correct dyspepsia and dyscrasiae; gentle purgation; gargle after each meal with 8 gr. alum and 4 gr. tannic acid in 2 oz. water; apply every



day with cotton on curved applicator zinc sulpho-carbolate (6-10 gr. to oz.) or 2 to 5 per cent zinc chlorid solution till symptoms are relieved; or apply equal parts of comp. tinct. benzoin and 50 per cent boroglycerid, or tincture of iodine twice daily; incise abscess at once; treat mycosis (yellowish mold-like projection under tonsil) with 6 per cent zinc chlorid solution or pure iodine or 2 per cent formalin solution or actual galvanocautery.—Kyle.

*Ranula*.—Soft semitranslucent swelling at one side of frenum—covered with dilated veins and contains clear, glairy, mucoid fluid; from obstruction and dilatation of gland ducts.

Treatment.—Hypodermic injection of 1/6 gr. pilocarpin hydrochlorate.—S. Harnsberger.

*Edema of Uvula*.—Painful distortion.

Treatment.—Multiple puncture with small sharp-pointed bistoury or double-cutting aspirating needle; follow with spray of ice water; daily cleansing with alkaline solution and application of tannin 3 to 5 gr. to ounce of water.—Kyle.

*Scorbutus*.—Swollen, bleeding gums; hemorrhages elsewhere; mostly in artificially fed infants.

Treatment.—Two or 3 lemons or oranges daily; liberal quantities of potatoes, water-cress, raw cabbage, lettuce, sauerkraut, meat juice, egg-white, milk; potassium chlorate for ulcers; 2 per



cent tannin on cotton swab for swollen gums.—  
Anders.

Infantile.—Proper feeding from wet nurse or with unboiled cow's milk.

*Angina Ludovici.*—Marked pain and difficulty in speaking, chewing and swallowing; may be dangerous laryngeal dyspnea from edema; usually fever—often typhoid or septic; acute circumscribed woody swelling in region of submaxillary glands and cellular tissue of floor of mouth—(most marked below one jaw) and front of neck, and hard swelling of tongue; streptococcus infection.

Treatment.—Sustain strength; prompt surgical interference at beginning of suppuration or gangrene; tracheotomy if asphyxia threatens life.—  
Anders.

*Actinomyces.*—Toothache, dysphagia and difficulty in opening jaw; swelling at angle of jaw quickly passing into suppuration; opens and discharges little yellow masses (ray fungus under microscope); may extend downward or upward.

Treatment.—Removal of parts involved and disinfection with acid-sublimate solution.—  
Anders.

*Hypertrophy of Faucial Tonsils.*—Lymphatic diathesis; disturbed sleep and nightmare; mouth-breathing, especially at night with snoring; vacant expression; "mushy" voice; enlargement of



gland easily recognized; abnormal adhesions, cheesy particles, impacted mucus, concretions, mycosis and crypts easily discerned with aid of probe and tenaculum.

Treatment.—Tonsillotomy a radical cure.

Introduce forefinger, protected by rubber cot, as far as possible behind tonsil and rub 15 or 20 times around it and then up and down.—Kantorowicz.

*Foreign Body in Tonsil.*—Ineffectual swallowing; may be hidden behind projecting portion.

*Tonsillar Calculi.*—Feeling of rough body; follow frequent attacks of quinsy.

Depress tongue and remove with curet; destroy secreting surface of tonsillar crypts with 50 per cent solution of trichloroacetic acid on cotton carrier.—H. W. Whitaker.

*Hydatid of Tonsil.*—Clear cysts containing characteristic echinococcus hooklets.

*Cancer of Tonsil.*—Pain very severe, but no general symptoms.

Treatment.—Complete eradication through mouth by thermocautery or galvanocautery or with scalpel and dry dissector—or by incision through neck.—Kyle.

*Diphtheria.*—Slight pain; tough, dirty dusky-gray pseudomembrane spreading continuously and uniformly from tonsils over half arches—very adherent—can be torn off only in strips, leav-



ing bleeding erosion and reforming in 12 to 24 hours unless prevented by antitoxin; fibrinous exudate contains Klebs-Loeffler bacilli; moderate fever or may be subnormal temperature; prostration.

Treatment.—Isolate in well ventilated room with little furniture at 65° F.; impregnate air of room with steam containing eucalyptol, carbolic acid or lime water; keep patient quiet in bed and feed with spoon or feeding cup; for first few days beef-tea, milk, (may be frozen) yolk of raw eggs or broths every 2 or 3 hours with orangeade or lemonade—as soon as membrane has cleared add fish, fresh vegetables and rice pudding; apply Loeffler's solution (toluol 36, absolute alcohol 60, liquor ferri sesquichlor. 4 parts) every 2 hours to membrane and surrounding tissues (20 gr. menthol to ounce may be added for pain); spray throat (or nose) with equal parts hydrogen peroxid, aqueous ext. hamamelis and cinnamon water; ice bags or Leiter's coil to neck; calomel internally  $1/12$  to  $1/6$  gr. with 1 or 2 gr. sodium bicarbonate every hour till bowels move freely; tincture of chloride of iron in 4 or 5 drop doses hourly to a child of 3; early injection of concentrated standardized antitoxic serum under skin of intrascapular region or lateral abdominal wall (cover spot with absorbent cotton)—500 units as a protective, 1,000 to 1,500 units in suspected



cases, 2,000 units in well marked cases; repeat in 6 hours if case no better—give 3,000 units if worse—if much better wait 12 hours and repeat 3,000, or if worse give 3,000 or 4,000—then again repeat every 6 or 12 hours; brandy or whisky when strength begins to fail; ytrychnia nitrate, digitalis or aromatic spirit ammonia if cardiac or respiratory failure threatens.—Kyle.

Spray throat with 50 per cent solution hydrogen peroxid; apply with mop a mixture of 4 dr. potassium chlorate, 2-4 gr. carbolic acid, 1 oz. tinct. myrrh and 2 oz. infusion of cinchona.—Hughes.

*Pseudodiphtheria*.—Exudation of scarlatina and other debilitating infectious diseases; high fever and intensely red pharynx in scarlatina.

Treatment.—Guaiacol diluted one-half with glycerin and applied with cotton on holder in early stage; spray hydrozone into throat every few hours; 3 per cent camphor-menthol spray after cleansing.—Bishop.

Scarlatinal Angina.—Tinct. ferri chloridi 1 part in 8 parts of glycerin and 7 parts of water:  $\frac{1}{2}$  to 1 teaspoonful undiluted every 2 hours according to age; also externally ice or cold or hot compresses; dissolve small pellets of ice in mouth; spray of Dobell's solution.—Daniel E. Hughes.

*Mycoses of Tonsil*.—More or less pain and discomfort; fungi stain bluish-red with iodopotassic iodid solution; healthy persons.



Treatment.—Curet, spray with hydrozone or 1:10,000 mercuric chlorid solution and cauterize half a dozen points at each sitting with galvanocautery under cocain.—Bishop.

*Acute Catarrhal Tonsillitis.*—Acute pain radiating to ear and angle of jaw; tonsil and soft palate red and swollen—dry and glazed at first but soon coated with thin layer of mucopus readily removed by brushing, gargling or hawking; fetid breath and nasal twang.

Treatment.—Aconite when temperature high,  $\frac{1}{2}$  to 1 drop every  $\frac{1}{4}$  hour for 2 hours, then every hour.—Ringer.

R. Tinct. calendulae dr.i; sod. bibor. dr.ii; ext. hamamel fl.dr.iii; glycerin dr.iv; aquam rosae ad oz. iii: spray sensitive parts every hour or two.—Love.

*Follicular Tonsillitis.*—Chill at onset; high fever and rapid pulse for a few days; moderately sore throat and painful deglutition; severe and wide-spread muscular pains, especially in small of back; tonsils slightly swollen; small, yellowish-gray, soft pultaceous points exuding from mouths of crypts, sometimes coalescent but limited to tonsil and easily removed without bleeding, leaving a smooth surface; breath of a sweet, sickening odor; tonsils enlarged and irregular in chronic form, and contain fetid, yellowish pellets in crypts.



Treatment.—Early and thorough application of a mixture of guaiacol 10, menthol 1 and olive oil 10 parts.

Tinct. ferri chlor. m.viii with 22 m. glycerin every hour for an adult.—Bosworth.

Salophen or sodium salicylate in full doses.

*Rheumatic or Gouty Tonsillitis.*—Repeated attacks of catarrhal, cryptic or parenchymatous inflammation; family history or rheumatic or gouty diathesis; lithuria.

Treatment.—Exercise to point of fatigue; anti-lithemic diet; for constipation granular effervescent phosphate of sodium, a tablespoonful in a glass of cold water 1 to 3 times a day—preferably first thing in morning and on retiring; podophyllum  $1/8$  gr. before each meal for sluggish intestines of sedentary habits; dilute hydrochloric acid 6 to 10 drops in water through a glass tube after each meal to stimulate digestion; during acute attack give every 4 hours a capsule containing  $2\ 1/2$  gr. salol, 3 gr. each of phenacetin and sodium benzoate and  $1/40$  gr. strychnin nitrate; in chronic cases push alkaline treatment (5 or 10 gr. sodium benzoate or lithium bicarbonate every three hours) or alternate every 10 days with dilute hydrochloric acid; warm baths or Turkish baths twice a week unless heart complications contraindicate.—Kyle.



*Influenzal Tonsillitis.*—Moderate sore throat with great depression.

Treatment.—Hydrogen peroxid frequently to ulcers; guaiacol diluted with as much glycerin (most useful when temperature is high) as a local application; 4 per cent solution of potassium bromid grateful as gargle or spray; coarse spray of 3 per cent solution camphor-menthol.—Bishop.

*Herpetic Tonsillitis.*—Repeated crops of minute vesicles, often coalescing into blebs and rupturing in 24 to 48 hours, leaving minute whitish ulcers; pharynx and tonsils very red and painful; high fever, chills, rheumatic pains and general malaise.

Treatment.—Local application 2 or 3 times daily of equal parts comp. tinct. benzoin and 50 per cent boroglycerid, or a warm gargle of 10 gr. chloral hydrate with 1 dr. glycerin to an ounce of water; calomel  $\frac{1}{10}$  gr. and sodium bicarbonate 1 gr. every hour for 8 or 10 doses, followed by Rochelle salts to free purgation; for fever and headache a capsule every 3 hours of quinin bromid 3 gr., phenacetin 3 gr. and salol  $2 \frac{1}{2}$  gr.—Kyle.

*Caseous Tonsillitis.*—Pockets in lower part of tonsil where secretions and food particles accumulate; repeated attacks of sore throat, pricking sensation in tonsil and occasional discharge of



caseous foul-smelling "peas"; may form a peculiar grayish-white gelatinous nodule or a calculus of lime salts.

Treatment.—Slit pockets from top to bottom with hook blade and mop out carefully with carbolic acid solution, or curet thoroughly—opening may need to be repeated.—Kyle.

*Cysts of Tonsil.*—From inflammation or use of caustics; sensation of foreign body, lump in throat, irritation and desire to cough; gray or slightly yellow blister-like projection.

Treatment.—Cocainize and open freely with knife; if contents thick and cheesy, force out with blade of tongue depressor; scarify entire inner surface of cyst with galvanocautery.—Coakley.

*Peritonsillar Abscess (Quinsy).*—Ushered in by chill, continuous fever, rapid pulse, pain in bones, severe headache; constant gnawing or boring pain, usually on one side (referred to fauces and radiates to ear) and much aggravated by swallowing—becomes sharp and lancinating and later deep and throbbing; marked dyspnea; salivation and ineffectual hawking of thick, viscid mucus; great prostration; unilateral as a rule; tonsil smooth, firm, dusky-red or edematous; asymmetric swelling of distorted fauces, containing pus about 4th or 5th day; half open mouth (patient cannot open it wide); fetid breath and



coated tongue; voice thick and muffled; rheumatic patients.

Treatment.—R. Sodii salic. gr.xx; syr. acaciae m.xx; aq. cinnam. q.s.: A dessertspoonful every 3 hours.—Easby.

A teaspoonful of ammoniated tincture guaiac in a half glass of milk 3 or 4 times daily in early stage.—Sajous.

R. Tinct. aconiti rad. m.i; tinct. ferri chlor. m.iv; sodii chloratis gr.iv; glycerini m. xxiv; aquam q.s.: A teaspoonful every hour, to be swallowed slowly and left as long as possible in contact with fauces.—A. H. Smith.

Ice bag over tonsil to prevent abscess; when pus forms incise where abscess points (usually near arch of anterior faucial pillar) with cutting edge of knife toward median line.—Bishop.

*Faucial Tuberculosis.*—Sharp, lancinating pain aggravated by swallowing; chilly sensations, high hectic fever; discrete or grayish-white spots about size of mustard seed, breaking down in a few days into slowly spreading, pale gray, irregular shallow ulcers, flush with surface and covered with scanty, ropy mucus; mucous membrane pallid gray and somewhat muddy (marked hyperemia in lupus with almost total absence of secretion and sombre, dusky ulcer); voice thick and articulation impaired.

Treatment.—Creasote, iodid of iron and cod-



liver oil; general hygienic and dietetic measures; local applications of potassium chlorate, carbolic acid inhalations or other disinfectants after cauterization with galvanocautery; dusting with iodoform and touching with silver nitrate also recommended.—J. Ewing Mears.

*Faucial Syphilis.*—Usually a secondary syndrome; therapeutic test.

*Chancre.*—Constant lancinating pain; enlargement of tonsil; lesion wider than genital; grayish granular surface covered with thick mucus; induration of submaxillary and cervical glands of affected side.

*Treatment.*—Systematic<sup>o</sup> cleansing with alkaline sprays; apply on cotton a solution of potassium permanganate, silver nitrate, lead acetate or zinc chlorid—or dust on iodoform, iodol or aristol.—Price—Brown.

*Erythema.*—Dark red or faint purple coloration, confined to soft palate and fauces and sharply demarcated at junction of hard and soft palate.

*Treatment.*—Mercurous iodid, gray powder or corrosive sublimate pushed to physiologic limit.

*Mucous Patches.*—Round or serpiginous, glazed, whitish, acutely sensitive superficial ulcers.

*Treatment.*—Local application of 25 per cent solution chromic acid.—Shoemaker.

Cleanse with coarse spray of Seiler's or Dobell's



solution, then touch lesions with tincture of iodine on cotton carrier; cleanse and dry ulcers with absorbent cotton and powder with aristol or nosophen; mixed treatment in secondary and tertiary stage.—Bishop.

*Gumma*.—Usually unilateral, non-inflammatory, rounded or irregular, hard, dense, slightly tender swelling; mucous membrane paler than normal; swelling tends quickly to form deep, painful ulcer, with sharp-cut, excavated edges and well marked areola—overlying thick, ropy pus and necrotic tissue.

Treatment.—Potassium iodid gr. xx or xxx after meals in a glass of milk or water.

*Acute Catarrhal Pharyngitis*.—"Scratchy feeling" in throat, which is sensitive, and pain on swallowing; diffuse bright red hyperemia of all parts of lower throat, or lateral streaks of redness; uvula swollen and edematous; slight serous or seromucous secretion after 24 hours.

Treatment.—Atropin  $\frac{1}{400}$  gr. and morphin  $\frac{1}{8}$  gr. in early stage—3 to 6 times in first 2 days;  $\frac{1}{2}$  dr. or more of sodium phosphate; steam inhalations from tea-pot containing 1 pint hot water and 10 drops camphor-menthol (wrap napkin around nozzle); lozenges containing each 1 gr. ammonium chlorid, 5 m. each of paregoric, comp. syrup of squills and syrup of tolu, and 3 gr. extract of licorice.—Bishop.



R. Potassii chlorat. gr. x; acidi hydrochlor. dil. m. ix; tinct. aconiti m. ii; tinct. belladonnae m. iii; infusum rhois glab. q. s.: Tablespoonful every 3 hours.—Shoemaker.

Troches of ext. eucalypti gr. 1; sodii borat. gr.  $\frac{1}{3}$ ; pulv. pimentae gr.  $\frac{1}{4}$ ; ext. glycyrrhizae gr. v.—Bosworth.

*Simple Chronic Pharyngitis.*—Constant sense of dry discomfort, scratching or rawness in pharynx, which is sensitive and irritable; mucous secretion “hawked up” in morning, often with nausea or vomiting; relaxed mucous membrane and marked diffuse venous congestion (deep red, beefy, angry, raw-looking); tongue often heavily furred; breath foul and sour; often from chronic gastritis, particularly the alcoholic form; mucous membrane coated with mucus when disorder due to nasopharyngitis—dry and glazed when due to hypertrophic rhinitis.

Treatment.—Glycerol tannin locally with brush; etiologic treatment.

Silver nitrate solution 40 gr. to ounce applied daily with cotton on holder, taking care to let none drip into larynx.—Sajous.

*Acute Follicular Pharyngitis.*—(Cryptic, Lacunar.)—Dry, pricking sensation or severe pain and swelling; enlarged follicles.

Treatment.—After thorough cleansing reduce 2 or 3 follicles at each sitting with galvanocautery,



using 4 per cent solution eucalyptol in lavolin twice a day as spray.—Bishop.

*Chronic Follicular Pharyngitis.*—Dull, aching, semineuralgic pain and tenderness diffused over back of throat and aggravated by movements of same; constant desire to hawk and spit; vocal weakness; dry cough; symptoms vary greatly with nervous tone and with weather; mucous membrane generally healthy looking, but sprinkled with bright red masses, like bird-shot in size and shape, discrete or grouped within plaques and ridges; tough mucus in small areas; may be superficial ulceration and enlargement of superficial veins; lymphatic diathesis.

Treatment.—Same as acute. See above.

*Traumatic or Occupation Pharyngitis.*—Wounds, foreign bodies, dust, vapors or caustic substances.

Treatment.—Removal of exciting cause; frequent multiple punctures under antiseptic precautions for threatened edema; to relieve pain from scalds and burns smear freely with carbolized vaselin, to which is added 4 gr. menthol to the ounce (improved by combining with equal parts 50 per cent boroglycerid and comp. tinct. ben-zoin); cold externally; morphin internally and by insufflation with stearate of zinc 2 or 3 times daily; after acute symptoms pass, cleanse thor-



oughly with bland alkaline antiseptic washes.—  
Kyle.

*Atrophic Pharyngitis.*—(Pharyngitis Sicca.)  
Final stage of other forms; constant dryness,  
burning and tickling in throat; smooth, shining,  
glazed atrophic appearance; dysphagia; hacking,  
rasping cough; dry, rough secretion covering  
highly inflamed or pale thin areas.

'Treatment.—Pilocarpin hydrochlorate  $\frac{1}{8}$  gr. in  
a half dram each of glycerin and water t. i. d.—  
Sajous.

R. Ergotinae gr. xx; tinct. iodi dr. i; glycerin  
ad oz. i: To be applied to pharynx twice a day  
with camel-hair brush.—Wm. Aitken.

R. Acidi carbol. gr. x; tinct. iodi, tinct. aloes,  
tinct. opii aa. gtt. x; glycerin q. s. ad oz. i: Use  
as spray several times a day. In young persons  
of scrofulous diathesis arsenic iodid in 1-200 to  
1-100 gr. dose one of the best remedies, especially  
if anemia is present.—Kent O. Folz.

*Chronic Lithemic or Rheumatic Pharyngitis.*  
—Constant sensitiveness with continual hacking  
and clearing of throat on account of accumulated  
secretion; patient easily affected by atmospheric  
changes; altered voice; subjective symptoms often  
greatly in excess of local signs; marked redness  
of mucous membrane and extreme pain and stiff-  
ness in surrounding tissues; often gives place to  
torticollis, lumbago, etc.



Treatment.—Turkish baths; drink large quantities of water; lithium citrate 3 to 6 gr. every 2 hours, or 5 gr. 1 to 3 times a day—Kyle.

Iodin a satisfactory treatment.—Monmarson.

Acute Cases.—R. Acidi salicyl gr. vi; sodii bicarb. gr. iv; elixir gaulth. m. viii; glycerini m. vi; aquam q.s.: A teaspoonful in water every 2 to 4 hours.—Bishop.

*Neuralgia of Pharynx.*—Characteristic paroxysmal pains.

Treatment.—Local sedative applications and etiologic treatment; for temporary relief use anti-kamnia, antipyrin or acetanilid.

*Neurotic Hyperesthesia of Pharynx.*—Extreme sensitiveness of throat; no physical signs; neurotic subjects; sometimes apparently causeless feeling of pin or foreign body.

Treatment.—Local application of 10 per cent solution carbolic acid in glycerin; also home treatment with spray of 3 per cent camphor-menthol in lavolin.—Bishop.

Potassium bromid internally and inhalations of same drug 20 gr. to ounce; cocain or eucain 4-10 per cent; sucking of ice for 15 minutes; troches of slippery elm for hypersensitiveness of acute inflammation.—Kyle.

*Tabetic Pharyngeal Crises.*—Sudden pain, congested face, profuse sweating, dysphagia.



Treatment.—Antipyrin, acetanilid, antikamnia, phenacetin or morphin.

*Gastrointestinal Disorders.*—May be great tenesmus in throat, and rarely serious laryngeal spasms.

*Pharyngeal Tuberculosis.*—Distressing pain, especially on speaking and swallowing; pale granular or ragged, superficial ill-defined ulcers covered with scanty mucous secretion; constitutional symptoms and pulmonary signs.

Treatment.—Galvanocautery of greatest service both for cure and palliation; curet, lactic acid, iodoform, menthol inhalations sometimes satisfactory; cocain spray and iodoform and morphin insufflations valuable for home treatment; anti-syphilitic medication (especially mercury) in mixed cases; general treatment should not be neglected, and much attention should be paid to catarrhal affections of upper air tract and to proper hygiene and disinfection of mouth.—Levy.

Phthisical Sore Throat.—R. Potassii chlorat. gr. i; glycerini m. viii; morph. hydrochlor. gr. 1/20; syr. aurantii q. s.: A teaspoonful occasionally.—Shoemaker.

Phthisical Congestion of Pharynx.—Fluid extract of ergot, 20 m. t. i. d.—J. Howe Adams.

Painful Throat of Tuberculosis Without Ulceration.—Lozenges of antipyrin 3 gr., cocain  $\frac{1}{4}$  gr.—Levy.



Tubercle of Pharynx.—Spray of morphin sulphate gr. iv; acidi tannici, acidi carbol. aa. gr. xxx; glycerini, aquæ dest. aa. oz. ss.—Ingals.

*Hemorrhagic Pharyngitis*.—Very small, dull red, slightly edematous hemorrhagic areas; occasional blood-stained expectoration; usually follows eruptive fevers.

Treatment.—Correct constipation and constitutional diathesis; repeated gargle of hot water; local application of 3 to 6 per cent alumnol solution or sulphocarbolate of zinc 5 or 10 gr. to ounce of water.—Kyle.

*Gangrenous Pharyngitis* (Putrid Sore Throat).—Localized superficial necrosis following infectious catarrhal inflammation; frightfully fetid breath; early fever, marked prostration and mental depression.

Treatment.—Stimulate secretion and aid elimination; cleanse affected areas repeatedly and thoroughly with disinfectant and antiseptic solutions (2 to 5 drops of carbolic acid to ounce); for stench spray with potassium permanganate solution, followed by hydrogen peroxid.—Kyle.

*Infective Pharyngitis* (Suppurative or Ulcerative Sore Throat).—Very small ulcers, often coated with shaggy membrane; throat extremely sensitive, especially on swallowing; slight fever; breath very offensive; frequent in physicians, nurses and hospital attendants.



Treatment.—Free purgation followed by continued use of small doses of calomel and sodium bicarbonate; tinct. ferri chloridi internally 10 to 30 drops every 2 hours; frequent cleansing with warm alkaline gargle; touch ulcerated areas with 3 per cent zinc chlorid solution or with nitric acid 20 drops to ounce of water; Mackenzie's carbolic acid throat tablets, one dissolved in mouth every hour or two, or local application of benzoinol containing to each ounce 4 gr. menthol, 4 gtt. sandalwood oil and 2 drops oil of eucalyptus; early application of ice-water cloth (covered with dry cloth) around neck, followed by hot applications later; tonics.—Kyle.

*Croupous Pharyngitis* ("Erysipelas of Throat").—False membrane; no ulcer on stripping; streptococcus pyogenes; common in laboratory workers and persons exposed to infections.

Treatment.—Thoroughly cleanse mucous membrane with alkaline solution, followed by equal parts 15 volume solution hydrogen peroxid, aqueous extract hamamelis and cinnamon water; dry membrane and apply with cotton applicator (removing any excess of fluid) Loeffler's solution (toluol 36, absolute alcohol 60, liquor ferri chloridi 4 parts) or pure guaiacol; then paint throat with equal parts of comp. tinct. benzoin and 50 per cent boroglycerid, or if pain severe with camphor (gr. i) and menthol (gr. iv) in



liquid albolene (oz. i); spray or gargle of hot water to relieve congestion and stimulate circulation; if membrane tends to reform repeat application of Loeffler's solution or guaiacol; thorough cleansing of intestinal tract.—Kyle.

*Herpes of Pharynx.*—Sudden, severe smarting pain in throat radiating toward ears; dysphagia; discrete round or oval patches, mostly vesicular, but soon excoriations covered with thin, yellow-white, readily removed fibrinous false membrane; spontaneous disappearance and sudden recurrence.

Treatment.—Free purgation with magnesium sulphate or magnesium citrate, and continued use of sodium succinate 10 gr. after meals; promote elimination; locally a gargle of 10 gr. chloral hydrate, 1 dr. glycerin and 2 oz. water; tablets of slippery elm slowly dissolved in mouth for dryness.—Kyle.

*Retropharyngeal Abscess.*—Fluctuating prominence of posterior wall; dysphagia, dyspnea, profound septic infection; sequel of glandular or vertebral disease, usually in children.

Treatment.—Ice to prevent pus formation; if pus forms make small but sufficient opening under cocain with trocar or guarded bistoury.

*Cancer of Pharynx.*—Very painful after ulceration; microscopic diagnosis of tumor particles.

Treatment.—Injections into growth by means of Windler or Pravaz syringe of 30 to 50 per cent



alcohol—5 drops at first, increased gradually to 30 or 40 minims.

*Pharyngomycosis*.—Little if any pain; small, white or yellow projecting and adherent growths composed of *leptothrix buccalis*, on upper pharyngeal space and tonsils.

Treatment.—Remove fungi, and spray with undiluted hydrozone or mercuric chlorid 1-10,000; cocainize each spot and cauterize a half dozen at one sitting.—Bishop.

Pyoktanin in 25 per cent solution rubbed into masses twice or thrice weekly.—Year Book of Nose, Throat and Ear.

#### LARYNGEAL PAIN.

(Increased by pressure, swallowing or speaking; hoarseness and cough.)

*Acute Laryngitis*.—Cutting, tickling, burning; mucous membrane symmetrically swollen, bright red and sometimes streaked with mucus.

Treatment.—Calomel and saline purge at outset; in very early stage give a capsule containing  $2\frac{1}{2}$  gr. phenacetin, 5 gr. salol and  $\frac{1}{24}$  gr. apomorphin every 4 hours; locally a spray of aqueous solution of suprarenal extract (5 gr. to 2 dr., allow to stand 12 hours, then filter). Later mildly stimulant expectorants; locally tincture of ferric chlorid 20 m. per oz. of water. As disease progresses it may be necessary to make local applica-



tions of silver nitrate 10 to 20 gr. per oz., by means of cotton applicator. Limit use of voice as much as possible.—Levy.

*Simple Chronic Laryngitis.*—Slight soreness and tickling aggravated by use of voice; symmetric swelling and slight redness of mucous membrane.

Treatment.—Remove cause, whether nasal, diathetic or digestive. Locally, after thorough cleansing with Dobell's solution, apply silver nitrate solution, beginning first 10 gr. to the ounce, and increasing to 40 or 50 grains where considerable thickening. Attention to local and general hygiene.—Levy.

*Laryngeal Tuberculosis.*—Often early paresthesia, later severe pain, most marked on swallowing; pale, broad, shallow, ragged, ill-defined ulcers; usually accompanying pulmonary phthisis.

Treatment.—Hourly inhalations of a 4 per cent solution of menthol in albolene.—Knight.

Orthoform ( $\frac{1}{8}$  gr.) lozenges (marshmallow or fruit jelly) far back on tongue 5 minutes before each meal.—Solis-Cohen.

Insufflations of a mixture of 20 gr. cocain, 2 dr. iodoform and 1 dr. of stearate of zinc.—Coakley.

Local application of guaiacol, full strength or diluted with an equal part of glycerin.—Coghill.

Cocain lozenges  $\frac{1}{4}$  gr. each dissolved slowly in mouth 10 minutes before meals; also 3 to 5 per cent cocain spray; to cure rub with lactic acid,



sometimes curetting first, and supplement with insufflations of iodoform.—Levy.

*Cancer of Larynx.*—Severe pain extending to ears if much ulceration; irregular nodular infiltrating mass or deep, ragged, bleeding ulcer.

Treatment.—Curative: Early radical extirpation. Palliative: Dust parts with cocainized iodol (1 per cent cocain) or with morphin powder, or spray frequently with 5-10 per cent cocain solution; inject minute quantites of formaldehyd (1:1000-1:500) around border of tumor.—Kyle.

*Tabetic Laryngeal Crises.*—Sudden attacks of dry cough, pain and dyspnea; loss of knee-jerk and ataxia.

Treatment.—Nitrite of amyl or nitroglycerin; local application of cocain.—Gowers.

#### PAIN IN THE NECK.

*Parotitis.*—Swelling of parotid and dull pain at angle of jaw, much increased by mastication; specific infection or putrefaction in mouth.

Treatment.—Equal parts of tincture belladonna, tinct. aconite and tinct. opium applied several times daily over swelling with finger tips or camel-hair pencil; strict oral cleanliness.—Trouchet.

Epidemic (Mumps): Rest in bed; laxatives; light liquid diet; cold compresses or pad of cotton wadding covered with oiled silk; leeches if red and tender.—Osler.



*Cervical Adenitis.*—Swollen, tender lymphatic glands; infection through throat or mouth.

Treatment.—Rub in equal parts of laudanum, fluid extract arnica and soap liniment.—Shoemaker.

Mercuric chlorid  $1/60$  gr. every 2 hours in acute inflammation of submaxillary and sublingual glands.—Bartholow.

Calcium sulphid  $1/10$  gr. every hour or two for hard, swollen glands behind angle of jaw with deep-seated suppuration.—Ringer.

Syrup of iodid of iron 5 to 40 m. well diluted after meals.—Bartholow.

Oleate of mercury and morphin (gr. i ad dr. i) in obstinate cases.—Ringer.

*Spasmodic Torticollis.*—Wry-neck and painful, tender sternomastoid, especially on movement.

Treatment.—Iron with a hot flat-iron through flannel.—Anders.

Strong infusion of capsicum applied on lint, covered with gutta-percha.—Ringer.

*Cervical Caries of Spine.*—Local tenderness and deformity; pain increased by turning or pressing on head.

Treatment.—Recumbent posture in bed, with head and neck fixed by a sand-bag on each side; extension from chin and occiput or lower limbs or both, in bad cases; cod-liver oil, phosphates, iodid of iron.—Am. Text-Book of Surgery.



*Onset of Acute Infections.*—With headache, backache, malaise, chill, fever.

*Obscure Rheumatic Symptoms.*—Neurasthenia, anemia, debility, slight fever, disturbances of abdominal organs, lymphangitis; tenderness from mastoid process down neck or over upper scapular region.

Treatment.—Spray tonsils with zinc sulphocarbolate 4 gr. to ounce of water; or insufflate 3 to 5 gr. each of salol and sodium bicarbonate.—Wade.

*Pericarditis.*—Neuralgic pain in phrenic nerve; friction sound or increased area of dullness.

Treatment.—Tincture of aconite  $\frac{1}{2}$  to 1 drop every  $\frac{1}{4}$  hour for 2 hours, then every hour or two.—Ringer.

*Diaphragmatic Pleurisy.*—Sharp pain around lower edge of ribs and neuralgic pain in phrenic nerve.

Treatment.—Leeches; hypodermic of morphin; Paquelin cautery lightly but freely applied; blisters; rest in bed.—Osler.

*Displacement or Hernia of Muscle.*—Follows sudden twisting; may be soft localized swelling.

Treatment.—Replace by massage and manipulation.

*False or True Angina Pectoris and Aortic Lesions.*—Usually with precordial distress and pain running down inner side of left arm.

Treatment.—Equal parts of spt. etheris comp., elixir lupulin and ammoniated tinct. valerian. Two teaspoonfuls in water every 15 or 20 minutes.—Shoemaker.

*Hepatic Disease.*—Dull pain over right shoulder and lower part of neck.

Treatment.—Sodium phosphate.

*Tracheitis and Tracheal Ulcers.*—Constant localized pain and soreness.

Treatment.—Frequent steam inhalations impregnated with carbolic acid or creosote or turpentine or pine oil and paregoric.—N. S. Davis, Jr.

*Neuralgia, Herpes Zoster, Rheumatoid Arthritis of Cervical Vertebrae.*



## CHAPTER V.

### CHEST PAIN.

#### EXTRAPRECORDIAL CHIEFLY.

*Pleurodynia*.—Severe burning and tingling “stitch in side,” aggravated by cough or deep inspiration; afebrile, bilateral or unilateral; sensitive muscles on palpation; deep breathing does not excite cough; hand pressed firmly against side.

Treatment.—Hot poultices and fomentations; belladonna and aconite applications; massage; vapor or Turkish bath; galvanism or faradism; potassium citrate, acetate or tartrate in full doses with potassium iodid in dose of 5 to 7 grains; salicylic acid in 15 or 20 gr. dose.—Fredk. Taylor.

*Myalgia*.—Diffuse soreness, relieved by uniform pressure, markedly aggravated on bringing affected muscles into action; due to coughing, strain, rheumatism or debility.

Treatment.—Equal parts of camphor-menthol and chloral hydrate, painted on with camel-hair pencil once a day.—Solis-Cohen.

Salophen, salicylates or potassium iodid for rheumatic form. Ammonium bromid gr. x-xx 3 or 4 times a day.—Eshner.

Flannel band tied around chest lessens painful concussions of violent coughing spells.—Knopf.

*Aponeurotic Rheumatism*.—Diffused, shifting



and irregular, with muscular soreness; usually from exposure to cold, particularly in gouty or rheumatic subjects.

Treatment.—Often cured at once by application of well-made mustard plaster for 20 minutes.

*Intercostal Neuralgia.*—Sharp, darting, stinging or burning, intermittent pain along intercostal nerves on either side; superficial tender point near spine, at outer edge of scapula, and near costochondral junction; no fever; sometimes herpes zoster.

Treatment.—Liquid air spray to spinal end of nerve. Touch very painful spots along intercostal nerves with a 1/30 solution of morphin sulphate in tinct. iodin.—Cheron.

Inject along side of affected nerve 15-60 m. of 6 parts guaiacol in 10 of chloroform. Strapping of chest. Quinin and occasional mercurial purge. Iron, quinin, arsenic; fresh air, generous diet; belladonna plaster, or chloroform liniment 3 parts with belladonna liniment 1 part sprinkled on lint or flannel backed by oiled silk.—Powell.

Strychnin for wandering neuralgic pains from functional nervous irritability.—Bartholow.

Phthisical: Hot water compresses frequently repeated, or mustard plasters, small blisters, dry cupping or ignipuncture; morphin hypoderms as a last resort.—Knopf.

*Inframammary Neuralgia.*—Sharp, shooting,



paroxysmal pain beneath one nipple, often extending to axilla and running down arm—marked superficial tenderness; common in anemic young women; may accompany overwork, leucorrhœa, pregnancy, superlactation, ovaritis, cervical laceration, chronic endometritis, lithemia or thoracic aneurism.

Treatment.—Tinct. gelsemium m. iii in syrup and water 3 to 5 times daily a half hour before eating or 3 hours after.

*Dyspepsia*.—Diffusible, radiating pains.

Treatment.—Treat cause; tonics; good hygiene; change of air; soothing applications; ordinary antineuralgics.

*Mastodynia* (“Irritable Breast”).—A form of intercostal neuralgia due to injury, cracked or shrunken nipples or tumors pressing on nerves.

Treatment.—Remove cause.

*Phrenic Neuralgia*.—Pain chiefly at lower part of thorax on a line with insertion of diaphragm, and here may be painful points on deep pressure; full inspiration painful; great sensitiveness on coughing or other sudden depression of diaphragm.

Treatment.—Aconitin (Duquesnel’s) gr. 1/160 in 4 m. each of glycerin and alcohol and 52 m. peppermint water 3 or 4 times a day.—Seguin.

*Pleuritis*.—Sharp, stabbing pain (indicated by finger tips), usually basal, shooting along intercostal spaces; increased by cough or deep breath-



ing—may be referred to abdomen; entire side sometimes tender, but no cutaneous tenderness; slight cough and fever and respiratory friction sounds.

Treatment.—Rest in bed; fluid diet; leeches, hot poultices or blister to affected side; Dover's powder or morphin hypodermically.—Powell.

Strap affected side with overlapping strips of adhesive plaster. Rub affected side with a solution of half a dram each of iodine and potassium iodide in 2 oz. of water.—Niemeyer.

Local applications of guaiacol or of this and oil of gaultheria made in an ointment (10 m. of each with 5 gr. menthol and 2 m. mustard oil to the dram, in equal parts cerate and wool-fat.)—Solis-Cohen.

Early administration of  $\frac{1}{4}$  gr. morphin hypodermically, keeping patient under influence of sufficient doses during acute stages; coal tar antipyretics (phenacetin, kryofin, antipyrin, acetanilid) may be given also, 5 to 10 gr. every 2 or 3 hours; quinin if malaria complicates; for the fever  $\frac{1}{2}$  m. tinct. aconite and 8 m. spt. eth. nitrosi in 2 dr. liq. potassii cit. and syrup of tolu.—Butler.

*Diaphragmatic Pleurisy.*—Sharp, costo-xiphoidal pain, much increased by deep breathing; respiratory friction sounds; tender points over end of tenth rib and diaphragm and in posterior triangle of neck.



Treatment.—Morphin sulphate gr.  $\frac{1}{4}$  and quinin sulphate gr. xv-xx in one dose to abort incipient pleurisy.—Bartholow.

*Gouty or Diabetic Neuritis.*—Burning pain along affected nerves, which are tender throughout course.

Treatment.—Morphin or hot applications of lead water and laudanum often required; salicylates and antipyrin if fever.—Osler.

*Locomotor Ataxia.*—Neuralgic axillary pain.

Treatment.—Acetanilid, antipyrin, phenacetin, antikamnia.

Fluid extract ergot, a dram 3 or 4 times a day with bromids in early stage;  $\frac{1}{2}$  to 2 gr. doses codein.—Hammond.

*Herpes Zoster.*—Severe neuralgic pain; characteristic vesicular eruption over shoulder and upper chest.

Treatment.—Coal tar anodynes alone or with bromids; morphin if pain severe; weak galvanic current once or twice a day over affected areas; collodion or antiseptic dusting powder in mild cases—may contain a few grains of opium—and area should be covered with absorbent cotton and a bandage.—Schamberg.

Cocain salve containing 1 per cent of drug.—Bleuler.

*Pulmonary Tuberculosis.*—Constantly recurring unilateral pleuritic pain or persistent dull sore-

ness, particularly near apex; cough, emaciation, localized signs.

Treatment.—Rub on a mixture of 10 m. croton oil, 1 oz. soap liniment and  $\frac{1}{2}$  oz. laudanum.—Cooper.

Pleuritic: Compound iodine ointment or strapping of side. Neuralgic: Guaiacol 1 part in 10 of olive oil, locally or hypodermically.—Moissy.

Paint affected area with equal parts of guaiacol and glycerin.—Yonge.

*Dorsal Caries*.—Bilateral neuralgia corresponding with segment of cord involved; spinal tenderness and careful, rigid attitude.

Treatment.—Recumbent posture in bed until consolidation takes place; extension from above or from below, or both in bad cases; cod-liver oil, phosphates and iodide of iron.—Am. Text-Book of Surgery.

*Acute Myelitis*.—Girdle pain at upper level of lesion; paraplegia.

Treatment.—Actual cautery at white heat to skin at each side of spine (ether spray as anesthetic); large doses of ergot.—Hammond.

*Bronchitis*.—Often substernal soreness and tenderness; also myalgia around lower edge of ribs from coughing.

Treatment.—Turpentine stupe or camphorated oil applied 2 or 3 times a day. Hot fomentations



of capsicum, a half teaspoonful to a quart, in bronchopneumonia of children.—Dickey.

*Pneumonia*.—Dull pain, usually near one nipple; high fever, rapid respiration, crepitant rales or bronchial breathing.

Treatment.—Ice-bag or hot poultices or leeches or blister to side; morphin hypodermically if required.

*Enlarged Bronchial Glands*.—Enlarged cervical glands; anemia; asthmatic attacks without bronchial symptoms; may be localized dullness.

Treatment.—Most favorable hygienic conditions; best of food; cod-liver oil and iodid of iron.—Tyson.

*Periostitis*.—Steady, deep, boring pain; costochondral articulations swollen and very tender; from tuberculosis, aneurism, cancer, typhoid or syphilis (nodes on clavicles, sternum or ribs).

Treatment.—Compound tincture of iodin; if fluctuation or sinus, open up and remove dead bone. Tubercular with Nodes: Syrup iodid of iron, 15 drops in water or milk after meals.—Thornton.

*Pointing Empyema*.—Localized inflammatory pain, soon followed by local swelling, heat, redness and edema.

Treatment.—Simple incision, resection of rib or siphonage.

*Abscess of Chest Wall.*—Local swelling, heat, redness, fluctuation.

Treatment.—Open and secure free drainage.

*Fracture of Ribs.*—Pain evoked by pressure locally or on sternum; crepitus.

Treatment.—Immobilize chest with broad band of adhesive plaster.

*Abscess of Lung.*—Pain in side; profuse purulent expectoration.

Treatment.—Open and drain if superficial.

*Cancer of Lung.*—Steady pain in side; currant jelly clots and cachexia.

Treatment.—Opiates usually required.

*Pulmonary Apoplexy.*—Sudden, severe pain with dyspnea, florid expectoration and circumscribed dullness.

Treatment.—Rest, anodynes and treatment of primary cause.

*Acute Miliary Tuberculosis.*—Hyperpnea, cyanosis, repeated chills, fever and diffuse chest signs.

Treatment.—Three to 5 gr. phenacetin; also anodynes; supporting food and stimulants.—Tyson.

*Pleural Neoplasms.*—Constant severe pain; physical signs of growth.

Treatment.—Operation or opiates.

*Pneumothorax.*—Sudden, intense, with dyspnea, amphoric resonance and diminished breath sounds



on one side; usually from running, jumping, rapid mounting, loud singing or blow on chest.

Treatment.—Cold water compresses or ice-bags; rest in bed, liquid diet and stimulants.—Knopf.

Morphin subcutaneously; hot poultices or fomentations frequently applied; paracentesis if distention extreme.—Taylor.

*Sore Nipples.*—Use nipple shield; boric acid lotion before and after nursing; white of egg; alcohol; cacao butter; lunar caustic to cracks.

*Acute Mastitis.*—Pain in breast, shooting into axilla; local redness, heat and swelling; fluctuation if pus forms.

Treatment.—Fomentations of ammonium carbonate 20 gr. to pint of boiling water for threatened mammary abscess.—Ringer.

Radial incision, irrigation with hydrogen peroxid and free drainage as soon as pus forms.

Pregnancy or Lactation.—Firm strapping with many-tailed bandage; lead and opium or lead and belladonna lotion; saline aperients; iron, quinin and mineral acids, especially if toward end of suckling; wean.—Bryant.

Women Not Pregnant or Nursing.—Application of cold by ice-bag or Leiter's coil.—Bryant.

Puberty.—Warm lead lotion with or without opium (5 gr. of extract to ounce of lotion), fol-



lowed by local application of ext. belladonna diluted with glycerin.—Bryant.

Infants.—Apply a pad of absorbent cotton dipped in warm lead lotion, protecting breast afterward with cotton-wool.—Bryant.

*Chronic Interstitial Mastitis.*—Most common about menopause; pain often neuralgic and made worse by handling and at menstrual period; indurated, but not stony nodules.

Treatment.—Small doses of potassium iodid with liquor potassæ well diluted; correct menstrual irregularities; tonics, particularly iron; protect breast from all irritation and cover it with a well-shaped belladonna plaster.—Gould and Pyle's *Cyclopedia*.

*Cancer of Breast.*—Pain often late—radiates into axilla, where glands are enlarged; adherent tumor.

Treatment.—Remove tumor thoroughly, and also axillary glands if tumor is cancerous.

Ointment of 1 dr. alc. ext. conium, 5 gr. menthol, 10 gr. alc. ext. belladonna and  $\frac{1}{2}$  oz. each of lanolin and zinc oxid ointment.—Shoemaker.

Suprarenal extract, 10 per cent solution applied locally 2 or 3 times daily in advanced stages.—E. A. Peters.

Pain of Cancer.—Irradiation often gives almost instant relief.



*Vesical Stone.*—Referred pain at apex.

Treatment.—R. Potassii brom. gr. xx; tinct. hyos. m. xxx; tinct. lupuli dr. i; mist. camphorae oz. i. Draught at bedtime.—Fothergill.

PRECORDIAL CHIEFLY.

Pain of organic cardiac disease commonly after exertion; functional when patient quiet.

*Flatulent Dyspepsia.*—Indistinct aching and soreness after meals, with belching and feeling of fullness.

Treatment.—Charcoal and bismuth tablets.

R. Pulv. capsici gr. ii; ext. nucis vomicæ gr. 1/7; ext. pancreatis gr. iii. A capsule after meals.—Shoemaker.

*Neuritis and Neuralgia.*—Sharp, shooting, intermittent pain; anemia or heart fatigue, gout, atheroma, syphilis, alcohol, malaria or rheumatism.

Treatment.—See above under extraprecordial pain.

R. Zinci phosphidi gr. 1/10; ext. nucis vomicæ gr. ¼. One pill every 3 or 4 hours.—Shoemaker.

*Anemias.*—Often severe pain after exertion, with pallor and palpitation.

Treatment.—Iron with belladonna for wandering pains.—Waugh.

Young Girls at Puberty.—Pil. ferri carb. (Vallet), one after meals.—Robinson.

*Gastralgia (Cardialgia).*—Sudden, severe, ap-



parently causeless pain radiating from epigastrium.

Treatment.—See under abdominal pain.

R. Liq. chlorof. aq. sat. dr. ss; aq. aurant. flor. m. xxvi; tinct. anisi stell. m. iv. A teaspoonful every  $\frac{1}{4}$  hour.—Dujardin-Beaumetz.

*Nervous Debility*.—Often attended by a dull, more or less constant pain about heart.

*Neurovascular Spasm* (False Angina Pectoris).—Vasomotor angina pectoris of central origin; painful sensation of cardiac distention, often radiating down left arm—spontaneous, insidious, often nocturnal; may follow exposure to cold; common in neurasthenic women.

Treatment.—Correct digestive disturbances and regulate diet.

Amyl nitrite by inhalation; antipyrin or potassium bromid; ether or ethyl chlorid vapor to pericardium; 1 dr. each of comp. spt. of ether and tinctures of valerian, digitalis and belladonna—a teaspoonful at beginning of attack.—Norbury.

*Lithemia*.—Often dull pain about heart, or pseudo-angina pectoris; lithuria, vertigo, bilious attacks.

Treatment.—Blue pill followed by saline to move bowels freely; avoid alcoholics and excess of proteid foods and fats and sweets; salophen or salicylates for a few days to relieve.

*True Angina Pectoris*.—Abrupt onset, usually



after exertion, or vise-like cardiac anguish, lasting but a minute or so, and radiating to back, axilla, occiput and down left arm; feeling of impending death; usually in men above 40; disease of coronary artery or heart muscle.

Treatment.—Amyl nitrite m. iii-v in perles or by mouth, combined with tinct. capsicum in peppermint water; if pain not quickly relieved, inject  $\frac{1}{4}$  gr. morphin and repeat in  $\frac{1}{2}$  or  $\frac{3}{4}$  hour if need be; if paroxysm very severe, inhale chloroform from handkerchief or sponge in bottle. Give potassium iodid for 2 to 4 years, 10-15 gr. t. i. d., stopping occasionally for a week; fresh nitroglycerin 1/100 gr. t. i. d., gradually increasing to 4 or 5 times this amount; arsenic sometimes very valuable, alone or in combination with iron and strychnin.—Osler.

Coronary Angina of Arteriosclerosis.—Saturated solution potassium iodid 5 drops in milk after meals until symptoms yield or iodism occurs.—Vierordt.

*Fatty Heart.*—Occasional anginal and pseudo-apoplectiform attacks; pulse often very slow; short breath on exertion; may be Cheyne-Stokes breathing.

Treatment.—Strychnin arsenite 1/100-1/30 gr. every 4 hours; comp. spt. ether  $\frac{1}{2}$  or 1 dram in water for acute attacks.



*Fibroid Heart.*—Chest pains, breathlessness, vertigo; arteriosclerotic signs elsewhere.

Treatment.—R. Lithii brom. gr. xx; spt. glonoini m. i; liq. potassii cit. q. s. A tablespoonful 4 times daily, diluted.—Hughes.

Myocardial Degeneration.—Tinct. digitalis m. x, with ammonium carbonate gr. iiss. 3 or 4 times a day; can be continued for a long period.—A. V. Meigs.

*Aortic Valvular Disease.*—Sharp pain, usually located at base of heart, radiating into neck and down left arm; aggravated by exertion.

Treatment.—Potassium iodid 5 to 10 gr. t. i. d. or nitroglycerin; small blisters.—Osler.

Regurgitation.—Amyl nitrite or erythrol tetranitrate, 1/100-1/30 gr. every 4 hours.

Equal parts of tinctures of strophanthus, digitalis and nux vomica: 20-30 drops of mixture t. i. d.—Thornton.

*Cardiac Dilatation.*—Cardiac asthma; dropsy of the feet; enlarged heart; usually valvular defect—mitral most common.

Treatment.—Fresh air, moderate exercise, massage, iron, nitroglycerin; begin with 1 dr. infusion digitalis 4 times a day for 2 or 3 days, then change permanently to ½ gr. of powder t. i. d.; avoid milk and restrict other fluids.—Thomson.

Dangerous Stages.—Strychnin 1/30 gr. hypodermically every 3 or 4 hours or oftener for a short



time, or digitalis 1/60 gr. in same manner.—Tyson.

*Acute Cardiac Dilation.*—"Stitch in side" after sudden prolonged efforts or cold baths.

Treatment.—Caffein, camphor, aromatic spirit of ammonia, digitalis, strychnin.

*Rheumatic Cardiac Hypertrophy.*—Indistinct pain about heart, which is enlarged and overacting.

Treatment.—Belladonna with compound spirit of ether.—Thomson.

*Palpitation.*—Anemia or exophthalmic goitre.

Treatment.—Ice-bag to cardiac region; morphin hypodermically; large doses potassium bromid; tinct. valer. eth. m. xx-xxx t. i. d.; liq. kali arsenic, aq. amyg. amar., aa. m. v. t. i. d. after meals.—Eichhorst.

*Overuse of Tobacco.*—Aching or anginose pain, palpitation, irregular or intermittent pulse.

*"Irritable Heart" of Overexertion.*—Soldiers, peddlers, collectors, etc.

Treatment.—Rest in recumbent posture; tinct. digitalis m. x t. i. d. if no hypertrophy; tinct. aconite in 3 to 6 m. doses if much hypertrophy; combination of digitalis and aconite if little hypertrophy and much irritability.—Da Costa.

*Senile Heart.*

Treatment.—Nativelle's digitalin (digitoxin)  $\frac{1}{4}$  mgm. daily at bedtime.—Balfour.

*Endocarditis.*—Slight precordial or epigastric



pain; excited heart action and systolic blowing murmur; patient points to xiphoid and up neck or into left arm.

Treatment.—Dover's powder and phenacetin as sedatives. Rest in bed for several months in rheumatic cases if cardiac pain and frequent pulse persist.—Chas. G. Jennings.

A small blister (2 by 3 inches) over affected valve; rest in bed; light diet; treat rheumatism.—Taylor.

Ulcerative.—Salol gr. x t. i. d., or sodium sulphocarbolate gr. xx in 2 dr. wintergreen water every 4 hours.—Thornton.

*Pericarditis*.—Dull, aching or sharp, lancinating pain, sometimes shooting to lower sternum, shoulder and down left arm; may be increased on inspiration; sometimes epigastric or precordial tenderness on pressure.

Treatment.—Blister over region of heart.—Butler.

Opium short of narcotism; poultices or large, hot anodyne applications locally; digitalis unless extensive adhesions.—Floyd M. Crandall.

Leeches, wet cups, blisters or apply ice for 2 hours.—Debove and Gouvin.

*Acute Myocarditis*.—Oppression or aching; accompanies infectious fevers; sudden heart failure.

Treatment.—Ice-bag over heart or blisters followed by fomentations.



*Post-Influenzal Cardiac Pain.*—Phenacetin, antipyrin, morphin hypodermically to relieve; sodium iodid (5 to 10 gr.) with ammonia, and later with arsenic, for prolonged administration.—Sansom.

*Chronic Myocarditis.*—Same as myocardial degeneration.

Treatment.—Tinct. piscidia erythrina m. xx-xl twice a day for continuous cardiac pain.

*Cardiac or Coronary Thrombosis and Embolism.*—Transfixing, indescribable suffering, with syncope and collapse.

Treatment.—Measures to meet symptomatic indications.—Anders.

*Thoracic Aneurysm.*—Pain usually deep-seated, paroxysmal, lancinating; often radiates into neck or down left arm.

Treatment.—Free bleeding; potassium iodid; morphin in final stage; ice-cap or belladonna plaster when sac grows large and appears externally.—Osler.

Elastic support passing over shoulder and under arm of opposite side; milk diet; absolute rest; phenacetin, antipyrin, acetanilid or antikamnia.

*Atheroma or Distention of Aorta.*—Pain in latter case usually after effort.

Treatment.—Sodium nitrite; bromids with foot-bath, sitz-bath or full bath; or a capsule con-



taining cocain, camphor and very little powdered opium.—Jos. Collins.

*Aneurysm or Tumor at Base of Heart.*—Pain paroxysmal, sharp, lancinating, anginose—with expansile impulse and thrill in aneurysm—with bulging and dullness on percussion in both.

*Rupture of Aorta.*—Sudden, severe, tearing pain, radiating to shoulder, back, neck or abdomen; dyspnea, shock, collapse.

*Aortitis.*—Severe paroxysms in aortic area; aortic systolic murmur.

Treatment.—Nitroglycerin; potassium iodid in small doses. Tincture of iodin, blisters, wet cups; morphin hypodermically; chloral, exalgin, anti-pyrin.—Debove and Gouvin.

*Cardiac Rupture.*—Sudden, excruciating pain, continuing severe with nausea, vomiting and fainting.

Treatment.—Complete rest in horizontal posture; full doses of morphin hypodermically; ice-bag locally; warmth to extremities, nitroglycerin.—Anders.

*Pneumopericardium.*—Peculiar splashing and churning sounds over heart.

Treatment.—Opiates, leeches, blisters, cupping, ice-bag.

*Cardiac Epilepsy.*—Paroxysm of unconsciousness followed by acute pain about heart; sometimes local spasms.



Treatment.—Strychnin, digitalis, strophanthus, nitrites; camphor or caffein; subcutaneous injection of physiologic salt solution.

*Locomotor Ataxia.*—Sudden, severe cardiac crises like angina pectoris; ataxia and pupillary symptoms.

Treatment.—Coal tar analgesics.

*Tight Lacing. Left Brachial Neuritis.*—Pain in axilla and above clavicle, radiating to region of heart; persistent tenderness of nerve plexus; disturbed heart action; gouty subjects above 50.

Treatment.—Salophen, 5 to 10 gr. every 2 hours.

*Reflex from Uterine Disease.*

*Palpitation and Hysteria.*—Sharp pain under mamma.

#### SUBSTERNAL.

*Bronchitis.*—Diffuse soreness, tightness, rawness and oppression; whole hand laid on sternum and then passed over and across chest.

Treatment.—Turpentine stupe or camphorated oil rubbed on several times daily.

*Acute Aortitis.*—Pain constant, diffuse, rending, with terrible exacerbations.

Treatment.—Amyl nitrite or nitroglycerin; ice-bag over part.

*Gastric Disorders.*—With flatulence, eructations and pain in stomach.

*Mediastinitis.*—Constant, throbbing pain, deep-seated and severe; pressure symptoms.



Treatment.—Trepphine sternum and explore carefully with hollow needle; if pus be found, open, wash out and drain cavity.—Am. Text-Book of Surgery.

*Phrenic Neuralgia.*—Constantly painful point in midline of sternum at level of 4th or 5th sternochondral articulation.

*Xiphoid Rheumatism.*—Dyspnea and severe epigastric pain, much increased by pressure over lower part of sternum; may be local swelling.

Treatment.—Blister externally; salicylates internally.—Hirtz and Roustan.

*Mediastinal Cancer.*—Severe, deep-seated, continuous, lancinating pain; cachexia and physical signs of growth.

Treatment.—Opium or morphin.

R. Acidi carbol. gr. 1/5; glycerini m. vi; tinct. gelsem, m. vi; tinct. opii camph. m. xxiv; aquæ m. xxiv. A teaspoonful before each regular meal and at bedtime.—N. S. Davis.

*Aortic Aneurysm.*—Sharp, paroxysmal pain with murmur and thrill.

Treatment.—Potassium iodid 15 to 30 gr. 3 or 4 times a day.—Bartholow.

Support with elastic bandage in suitable cases.—Osler.

*Esophageal Affections.*—Pain increased by swallowing or sounding.

*Bronchiectasis.*—Severe substernal constriction



in acute attacks; profuse fetid expectoration and signs of bronchial dilation.

Treatment.—Inhalations of 1 to 3 per cent carbolic acid or 1-1000 thymol; terebene m. v-x in capsules every 4 hours; creosote m. i increased to m. vi t. i. d. persistently; intrathoracic injection of disinfectants; if dilation situated superficially, open freely and drain thoroughly.—Anders.

*Pertussis*.—Pain from straining cough.

Treatment.—Control cough; hemlock ointment applied to chest.

R. Phenacetini gr.  $\frac{1}{4}$ ; spt. vini rect. m. iv; elixir erythrox. m. xv; glycerin q. s. A half dram every hour or two for a child.—Shoemaker.

*Enlarged Bronchial Glands*.—Dry cough and localized dullness; children chiefly.

Treatment.—Syrup of iodid of iron, hypophosphites and cod-liver oil.

*Syphilis*.—Pain worse at night; periostitis with nodes.

Treatment.—R. Potassii iodidi gr. x; hydrarg. chlor. corros. gr.  $\frac{1}{32}$ ; syr. sarsap. comp. m. xv; aquam q. s.: A teaspoonful in water after meals. Or inunctions of mercurial ointment.—Thornton.

*Cardiac Dilation*.—Diffuse substernal and precordial pain; enlarged, weakened heart.

Treatment.—Amyl nitrite inhalations; nitroglycerin or sodium nitrite; digitalis, caffeine, strophanthus.

## CHAPTER VI.

### BACKACHE.

SPINAL.—Accompanies symmetric superficial thoracic or abdominal pains in diseases of cord; may be restricted to locality of lesion in diseases of meninges or vertebræ.

*Pott's Disease.*—Persistent, fixed, local and radiating, symmetric, peripheral “stinging” neuralgic pains—occiput, arms or sciatic nerves—greatly increased by jarring spinal column, disappearing on removing intervertebral pressure, as by laying over knees; rigid attitude, limping gait, “angular curvature.”

Treatment.—Fresh air, good food, cod-liver oil and arsenic; rest and support to spine by braces and bandages to prevent paraplegia; rest and active extension for weeks or months (preferably by Mitchell's spine chair) after paralysis has taken place.—Osler.

Plaster of Paris jacket, with jury-mast if in upper dorsal or cervical region.

*Sprains of Spinal Column.*—Sudden, from trauma, usually in adults; speedy recovery under appropriate treatment.

Treatment.—Aconite liniment well rubbed in.—Brunton.

Rest in bed; hot fomentations; hot water or



vapor baths or douches; friction toward head; stimulating liniments containing camphor, ammonia or turpentine; ironing, acupuncture, galvanism; menthol-camphor.—Von Ziemssen.

Alternate cold and warm douche, over sacrum, each 8 to 10 seconds for 8 or 10 minutes.—Moulin.

*Spinal Concussion* (Erichsen's Disease).—Pain in back (occipital often in morning), especially on movement; tenderness chiefly in interscapular and lumbar regions; girdle or half-girdle sensation; paresthesia, hyperesthesia or anesthesia; rigidly upright or forward-bent back.

Treatment.—Lotion of lead water and laudanum; leeches if pain persistent.—Aitken.

Stimulants and restoratives at first; massage, electricity, hydropathy, rest-cure for traumatic neurosis; treatment of inflammatory symptoms same as for myelitis.—Lyman.

*Neuromimesis* ("Spinal Irritation," Hysterical, Neurasthenic, Hyperesthetic Spine).—Pain may be intense—shifts position, but is most frequent at 2 or 3 L.—aggravated by upright posture if anemic; young growing girls and neurotics; may follow moderate trauma—traumatic neurosis.

Treatment.—Massage and hydrotherapy for neurasthenic cases.

Moderate galvanic current (5 to 10 m. a.) to spine, stable ascending or descending.—Clevenger.



Belladonna preparations locally.—Ringer.

General electrization with feet on minus pole (metal plate wrapped in flannel)—weak current, not longer than 15 minutes.—Von Ziemssen.

Traumatic Lesions of Cord: Absolute rest for days or weeks; mercury if inflammation of membranes or inflammatory effusion outside the cord compressing it; in later stages, repeated applications of mild actual cautery on each side of spine opposite affected region; trephining if displacement of bones or compression by fractured fragments; for resulting spinal pain and tenderness use actual cautery, blisters, iodine or repeated sinapisms—also cannabis indica, cocaine or morphine cautiously.—Gowers.

*Locomotor Ataxia*.—"Lightning-like" paroxysms of pain radiating from shoulder to buttocks.

Treatment.—Antipyrin, antikannia, acetanilid, hyoscin, morphine; warm baths.

*Lateral Curvature*.—Constant pain in one shoulder and back, with muscular weakness and winging of scapula.

Treatment.—Correct wrong postures; tonics; out-door exercise; swinging by hands from trapeze and swimming motions; dumb-bells, Indian clubs; massage; pelvic band with crutch-heads extending up into arm-pits; thicker sole of shoe for shorter leg.—Roberts.



*Rachitis*.—General soreness and dread of being handled; pseudo-kyphosis.

Treatment.—Proper alimentation with good milk as basis; best of hygiene; coolish baths; keep extremities warm; iron, phosphorus, cod-liver oil.

Phosphorus, 1/200 to 1/100 gr. t. i. d., may be given in cod-liver oil.—A. Jacobi.

One or more teaspoonfuls 3 or more times daily of emulsion containing 2 pints cod-liver oil, a pint each of sherry wine and syrup of wild cherry and 10 yolks of eggs.—J. Lewis Smith.

*Scurvy*.—Swollen, bleeding gums and petechiæ.

Treatment.—Fresh milk and orange juice.—Wm. Perry Northrup.

*Poliomyelitis Anterior*.—With headache and aching joints and sudden paralysis of leg or leg and arm.

Treatment.—Salicylates or mercuric chlorid; hot applications to spine frequently and faithfully, or very mild sinapisms; keep child on side or face and envelop affected limbs in cotton wool.—Archibald Church.

*Spinal Hyperemia*.—Dull lumbar and sacral aching; much increased by slightest exertion; total inability to move in akinesia algera.

Treatment.—Fluid ext. ergot m. x-xl 3 or 4 times daily.—Clevenger.

Early, energetic use of Paquelin cautery and of



descending constant current; tepid baths and tonics.—Hirt.

*Spinal Meningitis.*—Pain constant or paroxysmal; intense rachialgia in acute, increased by pressure or movement; paroxysmal rheumatoid pains in chronic; severe darting pains in head, neck, shoulder and upper limbs in hypertrophic form.

Treatment.—Counterirritation by painting twice daily with tincture of iodine or the use of irritative ointments, moxæ or Paquelin cautery (punctiform scars); prolonged tepid baths ( $\frac{1}{2}$  to  $1\frac{1}{2}$  hours); faradic brush over painful muscles.—Hirt.

*Cerebrospinal Meningitis.*—With headache, photophobia and spastic retraction of head.

Treatment.—Inunctions of ungu. Credé, 1 oz. applied daily for 3 days, and in case of relapse  $\frac{1}{3}$  oz.; hot water to spine; trional as a sedative when necessary.—Schirmer.

*Acute Spinal Leptomeningitis in Children.*—Sharp chill, vomiting or convulsions; great pain in back and darting pains around body or down limbs; tenderness over spine; spasm and rigid muscles and stiffness of neck and back; fickle temperature and pulse.

Treatment.—Absolute quiet on side or in partial knee-elbow position; thermocautery, blisters, leeches, dry or wet cupping; mild sinapisms, hot



spray douche, continuous ice-bag.—Arch. Church.

*Hematorrhachis*.—Sudden, persistent excruciating pain; may simulate angina pectoris; often with spasms and paresis of limbs.

Treatment.—Absolute rest in bed, applying ice over supposed seat of trouble; local bleeding if irritation seems to be localized; further treatment same as in acute meningitis.—Hirt.

*Hematomyelia*.—Pain comparatively slight at onset, gradually diminishing.

Treatment.—Ice to spinal column and internal administration of ergotin.—Hirt.

*Acute Myelitis*.—Girdle pain at upper level of lesion; “bloated feeling” in severe cases.

Treatment.—Absolute rest in bed; local blood letting; Chapman’s ice-bags; Priessnitz compresses renewed every hour or two; actual cautery; blisters along spine; tincture of iodine; mercurial ointment; potassium iodid, ergot, belladonna, laxatives, diuretics.—Roth.

Tepid baths 3 or 4 times a day for 15 to 30 minutes, best taken in forenoon; extension apparatus, spinal braces, etc., in compression form.—Hirt.

*Acute Ascending Paralysis* (Landry’s or Infectious Polyneuritis).—Pains may be sharp; paralysis rapidly progressing from feet up.

Treatment.—Actual cautery, dry cups or ice-



bags to spine; potassium iodid, full doses of ergot, belladonna and strychnin.—Ranney.

Remove cause (alcohol, lead); rest, salicylates, antipyrin; antiluetic treatment if indicated.—C. Jakob.

*Ataxic Paraplegia* (Postero-Lateral Sclerosis).—May be slight dull aching in sacral region and in limbs after walking.

Treatment.—Thorough course of mercury and potassium iodid if syphilis is suspected.

*Tumors of Spine*.—Pain localized, persistent, severe, much increased by movement and pressure.

Treatment.—Mercurial inunctions and potassium iodid if syphilitic—otherwise excision if possible.

*Pressure of Thoracic Aneurysm*.—Fixed, local gnawing pain in vertebræ between shoulders; may be dysphagia or left-sided intercostal neuralgia; pain often indicated by patient by extended thumb.

Treatment.—R. Antipyrini gr. xv.; syr. tolu dr. ii; aquæ dr. ii: A tablespoonful at intervals of 1 to 4 hours till relieved.—Germain See.

*Osteomalacia*.—Wandering and persistent pains in multiple areas, mostly in lower back and along sciatic nerve; pregnant women.

Treatment.—Phosphates, cod-liver oil, iron and tonics; best of hygiene; avoid conception.

*Spinal Osteoarthritis*.—Rheumatoid aching in



spine and lower limbs, with gradual bending forward; middle and old age.

Treatment.—Tonics, massage, hot and cold douches.

*Chronic Rheumatism.*—Local pain, tenderness and limitation of movements; sometimes occasional clicking sound; pain increased by movement, fatigue and changes in weather; may radiate along nerve trunks; other joints affected; morning stiffness.

Treatment.—R. Liq. potassii ars. m. v; potassii iodidi gr. v; syr. simp. q. s.: A teaspoonful in water t. i. d. between meals.—Da Costa.

*Gonorrheal Arthritis.*—Spine very tender; urethral blennorrhagia.

Treatment.—R. Acidi salicyl., ol. terebinth., lanolini aa. dr. iiss; adipis oz. iii: Apply to joints.—Balzer.

*Inflammation at Sacro-Iliac Synchronosis.*—Follows childbirth with narrow pelvis.

Treatment.—Salicylates and derivatives.

*Typhoid Spine* (Perispondylitis).—Constant pain, often of considerable vertical extent, aggravated by lateral or forward motion; tenderness on pressure, particularly in lumbar region; fever; may follow contusions; recovery in a few weeks.

Treatment.—Fixation of body brace; massage of lower extremities; rest, nourishing food and



change of climate.—Lovett and Withington. Free purgation may relieve.

*Coccygodynia*.—Severe, sharp or throbbing local pain on sitting, rising, walking or defecation; movement of coccyx increases suffering; neurasthenic form almost always associated with pain or ache at base of sacrum, between scapulæ, in neck, occipital, left parietal, supraorbital and left submammary region; may follow childbirth, sudden falls or blows, cold, rheumatism, hemorrhoids, painful caruncle, uterine disease or hysteria.

Treatment.—Rest-cure, tonics, massage, hydropathy for neurasthenics.

Expose coccyx by external incision, raise extremity of bone and sever muscles on each side with scissors; disarticulation and complete removal of coccyx if bone diseased.

*Syphilitic Endarteritis*.—Luetic history; pain, paresthesias, hyperesthetic zones; fatigue followed by complete paraplegia; incontinence of urine and feces.

Treatment.—Massive doses of potassium iodid in milk or water after meals.

*Multiple Sclerosis*.—Deep-seated, diffuse pains in limbs and back; loss of coordination in feet and hands; muscular weakness with contractures; intention tremors, nystagmus.

Treatment.—Bromids.—Spitzka.

R. Hydrarg. chlor. corros. gr. 1/24; liq. arsen.



chlor. m. iiss; infusum gent. q. s.: A teaspoonful t. i. d. in water.—Hughes.

*Syringomyelia*.—Sudden pain may indicate approaching hemorrhage.

Treatment.—Attention to hygienic and dietetic details.—Anders.

*Parasites in Spinal Cord*.—Cysticerci, echinococci; symptoms simulate spinal hyperemia or locomotor ataxia.

NEUROMUSCULAR.—Pain much increased by spinal and muscular movements; may be tender points and vasomotor phenomena.

*Lumbago*.—Muscular pain in lumbar region during rest, much increased by motion, often running down sciatic nerve; stiffness, no tenderness.

*Rheumatic*.—Usually one-sided, without fever.

Treatment.—Salicylates in acute cases; 20 per cent ointment of salicylic acid freely rubbed into skin in subacute and obstinate cases; potassium iodid, guaiac and small doses of arsenic in chronic cases.—Anders.

Dry cupping over affected muscles; acupuncture in acute cases, thrusting sterilized needles or hat-pins 3 or 4 inches long into lumbar muscles at seat of pain, withdrawing them after 5 or 10 minutes.—Osler.

R. Sodii salic. gr. x; potassii iodidi gr. v; syr. sarsap. comp. m. xxx; aquam q. s.: A teaspoonful in water t. i. d.—Solis-Cohen.

*Rhus toxicodendron* for subacute muscular or tendinous rheumatism worse at night.—Piffard.

*Neuritic*.—Usually two-sided, with fever.

Treatment.—Salicylates to salicylism; interrupted galvanic current; ether spray; strong infusion of capsicum on lint; iodids for chronic metallic poisoning.

*Myalgia from Sprain*.—Tender muscles; one side of back usually larger than other.

Treatment.—Belladonna liniment or iodine ointment rubbed in.

Ammonium chlorid gr. xx t. i. d. for 2 days (or till coryza), then quinin gr. v t. i. d. for a week.—Waugh.

Salicylates; tincture of capsicum (1 to 5 of water) locally on lint covered with oiled silk for a half hour 4 or 5 times daily.—Edgeworth.

*Myalgia from Bruise or Cold*.—Tender muscles and history.

Treatment.—Iodine ointment, chloroform or belladonna, opium and aconite liniment; massage or good rubbing.—Hare.

Ammonium chlorid in 10-20 gr. dose in solution with ext. licorice; other remedies are fl. ext. cimicifuga (m. xx-xl), potassium acetate or citrate (20 gr.), and very hot poultices.—Hare.

*Myalgia from Fatigue*.—Pain increased by exertion or emotion; helped greatly by massage.

Treatment.—Rest the chief remedy.



Strong lead plaster to loins; Turkish baths.—Ringer.

Strapping from thigh up with layers of adhesive plasters which overlap each other.—Potter.

*Onset of Acute Fevers.*—Particularly smallpox, influenza and tonsillitis; aching loins and joints.

*Treatment.*—Influenza. R. Phenacetini gr. iii; pulv. camphoræ gr. i; caffeinæ cit. gr. i: Take every 2 or 3 hours alternately with 2 gr. quinin sulphate.—Hughes.

*Early Stages:* Salipyrin gr. v, in capsule every 2 or 3 hours relieves pain and reduces fever without depression.—Butler Harris.

*Multiple Neuritis.*—Severe burning, boring pains in muscles of back and limbs and in nerve-trunks; tingling and numbness.

*Treatment.*—Salicylates, salophen, antipyrin, phenacetin, antikamnia with salol.

Rest in bed; salicylates and antipyrin in acute cases, with morphin and hot applications of lead water and laudanum if required; reduce stimulants gradually in alcoholic form; gentle friction of muscles from outset.—Osler.

*Hysteria.*—Two zones along 4 or 5 vertebræ in dorsal and lumbar region; stigmata.

*Treatment.*—Firing, electricity, blisters, suggestion.

*Neurasthenia.*—Bilateral pain over entire small of back, relieved by support.



Treatment.—Removal of weakening agent and increase of nutrition; plasters and rest in bed.

RENAL.—Lumbar pain, often radiating to groin and inner thigh; urinary signs and symptoms.

*Acute Nephritis.*—Dull aching on both sides, increased by movement, with weight or pressure; bloody, albuminous urine.

Treatment.—Three or 4 leeches over each kidney, or wet cupping (2 oz. blood from each renal region for a vigorous child of 6 to 8), following bleeding at once with a large, hot linseed poultice fitting closely around body at loins, covered with rubber cloth and oiled silk and changed every 6 hours; a little powdered mustard may be stirred in each poultice.—I. N. Danforth.

Immerse child to its chin for 15 or 20 minutes morning and evening in water kept at 100°, then wrap in warm, dry blanket and put to bed; also, if need be, dry cupping to lumbar region and hot applications of spongiopiline.—Goodhart.

*Neuralgia of Kidney.*—Sharp, paroxysmal pain in loin; malaria, plumbism, gout, anemia.

Treatment.—Etiologic remedies; coal tar analgesics; quinin and arsenic for malaria.

*Gouty Kidney.*—Sudden paroxysms, usually unilateral; pain on micturition; scanty, dense urine loaded with uric acid crystals and some red blood corpuscles and leucocytes—normal between attacks.



Treatment.—Abundance of water to drink; avoid rich foods, red meats and alcoholics; diet largely of milk and fresh vegetables; sodium phosphate, a tablespoonful in a glass of hot water before breakfast.

R. Lithii benzoat. gr. v; tinct. belladonnæ m. iii; ext. tritici rep. fl. q. s.: A teaspoonful every 2 or 3 hours.—Shoemaker.

*Renal Stone.*—If stone in cortex, pains fixed and continuous (sometimes increased by movements), strictly localized at angle of last rib and erector spinæ and over abdomen internal to crest of ilium, and patient sleeps on affected side; if loose in pelvis, pain is paroxysmal at long intervals, colicky and radiates to neck of bladder, groin, ovary, uterus or testicle and down thigh, with frequent micturition (urine bloody, purulent or scanty), and patient lies on sound side.

Treatment.—Hot bath; morphin hypodermically and inhalations of chloroform; local applications of hot poultices or cloths wrung out of hot water; occasional change in posture or inversion of patient; drink freely of hot lemonade or soda or barley water.—Osler.

Hot water irrigations of colon.

*Pyelitis.*—Pain constant, moderate, dull aching or dragging, increased by coughing or motion and sometimes by pressure; pyuria and pelvic epithelia.



Treatment.—Warm baths, narcotic poultices, morphin.—Roth.

Fluids freely in mild cases, particularly alkaline mineral waters, to which potassium citrate may be added; tonics, nourishing diet, milk and buttermilk freely.—Osler.

Urotropin, 15 to 30 gr. daily, taken in the morning or morning and evening, in lithia water or carbonated water—for pyelitis following acute infections.

*Acute Pyelitis in Infancy.*—Migration of colon bacilli from bowel; may be high fever, rigors and much pus and many bacteria in acid urine; great urinary distress.

Treatment.—Long continued administration of alkaline remedies.—John Thompson.

*Oxaluria.*—Pain usually bilateral, with much lumbar soreness and nervous depression; crystals.

Treatment.—Avoid sweets, rhubarb, tomatoes and cabbage; dilute nitromuriatic acid after meals.

*Suppurative Nephritis (Renal Abscess).*—Pain constant, dull, throbbing, pulsating along spine; rapid swelling of kidney; pus casts and bacteria in urine.

Treatment.—Nutritious, easily digested food; vapor or hot air baths; hot sand on loins or dry cupping if much pain; keep bowels active; quinin and small doses of opium.—Taylor.



*Perinephritis and Perinephric Abscess.*—Painful, tender swelling in loin; pressure pain in distribution of genitocrural, iliohypogastric, ilioinguinal and anterior crural nerves.

Treatment.—Early, free, permanent drainage.—Osler.

Ice as long as it is grateful and relieves pain; mercurial ointment and narcotics, later poultices.—Roth.

Incision for perinephric abscess should be made 2 fingers breadth below last false rib on outer side of sacrolumbalis at thinnest part of wall, where aponeuroses of transverse and oblique muscles unite.—Roth.

*Injuries to Kidney.*—History of direct or indirect violence (may be unrecognized at time); tenderness and violent lumbar pain shooting toward groin; frequent, painful micturition, hematuria; shock or collapse in severe cases.

Treatment.—Absolute rest; liquid diet; gallic acid, ergot or opium and lead if bleeding extreme; strap affected region.—Am. Text-Book of Surgery.

Ice-bladder over loins.

*Floating and Movable Kidney.*—Pain constant, dull, dragging in side or hypogastrium, increased by standing, relieved by lying—with occasional severe colicky paroxysms with nausea and vomiting—Dietl's crises; displaced kidney.



Treatment.—Avoid corsets and imprudent exercise, and wear abdominal belt or other supporting appliance; nephrorrhaphy or nephrectomy as last resort.—Roberts.

*Active Renal Hyperemia.*—Dull aching or sensation of weight in loins; sometimes at catamenial period; pollakiuria; urine at first increased, then decreased or suppressed; a little albumin, red blood cells, hyaline casts and renal epithelium.

Treatment.—Absolute rest and liquid diet; cupping over loins or use of hot fomentations; free use of water and other diluents and mucilaginous drinks; saline laxatives to freely open bowels; hot air bath or hot pack to promote sweating.—Anders.

*Passive Renal Hyperemia.*—Sensation of weight in loins; urine diminished; usually a little albumin; a few small hyaline casts and scattering blood corpuscles; signs of circulatory obstruction.

Treatment.—Potassium iodid, convallaria, caffeine, digitalis.—F. Delafield.

Rest; light, easily assimilated diet; cardiac tonics and diuretics, especially infusion of digitalis.—Anders.

*Urinary Fever.*—Pain in back with chill, headache and fever following instrumentation; urine diminished; blood cells and casts in severe cases.

Treatment.—Milk diet; abundance of water; urotropin 5 to 10 gr. t. i. d.



*Renal Tuberculosis.*—Slight continuous pain, often extending to bladder and urethra; polyuria, sterile pus, tubercle bacilli.

Treatment.—Nephrotomy and curettage if in early stage; nephrectomy for more extensive disease; palliative treatment in advanced stage.—*Am. Text-Book of Surgery.*

*Renal Cancer.*—Pain persistent, deep, dull, wearing or lancinating, radiating in all directions; profuse hemorrhages and renal tumor.

Treatment.—Early nephrectomy or palliative treatment.

*Renal Embolism.*—Sudden, severe pain with hematuria; thrombosis or endocarditis.

Treatment.—Mucilaginous drinks in abundance.

*Hydronephrosis.*—Aching or tearing pain and fluctuating swelling of kidney.

Treatment.—Gentle massage of tumor to displace obstruction; aspiration; incision, washing out, stitching edges of cyst wound to external incision and good drainage; nephrectomy.

*Blood Clots in Pelvis of Kidney.*—Renal colic like that from stone.

Treatment.—Diluent drinks; irrigation through ureteral catheter.

*Renal Cysts.*—Moderate, deep, dull, persistent pain; fluctuating kidney.

Treatment.—Frequent tapping; if this fails,



incise and stitch edges of cyst wound to parietal incision.—Am. Text-Book of Surgery.

*Tight Capsule of Kidney.*—Severe neuralgic pain, relieved by incision.

*Corset Pressure.*—Chronic pain in kidney in young women taking violent physical exercise.

*Tabetic Renal Crises.*—Pain like stone, but no blood or pus.

Treatment.—Acetanilid 4 to 8 gr. every half hour for 2 doses, if necessary, then every 4 or 6 hours, if required.—Germain See.

*Reflex Renal Ache from Superacid Urine Irritating Bladder.*—Pain not altered by movement; associated zone of hyperesthesia around groins.

Treatment.—Potassium citrate or bicarbonate in large doses in large draughts of water.

*Reflex* from vesical affections, ureteritis, lumbar abscess, scybala in colon, intestinal adhesions, aortic disease or aneurysm.

REFERRED.—No local lesions; cutaneous tenderness in painful area.

*Upper Dorsal.*—Esophageal and gastric disorders, particularly ulcer: 5-8 D.

Cancer of Breast or Mastitis.—Zone around lower breast, axilla and angle of scapula.

*Scapular.*—Lithemia.—Right shoulder usually.

Cardiac and Aortic Disease.—Angle of left scapula.

Pancreatic Cysts.—Left shoulder.



Kidney Disease.—Either side.

Hepatic Disease.—Right side, sometimes shooting into neck and arms.

Splenic Disorders.—Below tip of left scapula.

Gastric Derangements, particularly Flatulence or Dilation.—Left shoulder tip.

Wax in ear.—Distinct aching of shoulder.

*Lower Dorsal*.—Esophageal Affections or Cancer at Cardiac Orifice.—Pain in either increased by passing bougie.

Gastralgia.—Neuralgic spots at apparent origin of spinal nerves.

Gall-Stones.—Maximum at 11 D., extending out to angle of scapula.

*Lumbosacral*.—Ovarian Disease.—Commonly at crest of ilium and just below and to one side of navel.

Corporeal Uterine Disease and Displacements.—Lumbosacral junction and umbilicus; pain most marked when rectouterine fold involved.

Treatment.—Chronic Metritis.—Temporarily relieved by rubbing the region with a mixture of 1 part chloroform and 3 parts olive oil 4 times a day.—Garrigues.

Cervical Uterine Disease.—Lower sacral pain, shooting into legs if lower part of cervix affected; upper sacral and inguinal if upper cervix involved.

Retrouterine Hematocele.—History of sudden

abdominal pain at menstrual period or menorrhagia followed by inflammation; tumor soft at first, becoming hard.

First Stage of Labor Pains.—Periodic pains in upper sacrum and groins, then lower sacrum and coccyx; dilation of os.

Salpingitis.—Pain at 5 L., 1 S. and in groin.

Retention of Urine.—Pain radiates from lower lumbar and sacral regions around to just above pubes, to perineum and down inner thigh.

Chronic Constipation. — Lumbosacral and around forward.

Gastroenteroptosis.—Often intense lumbago.

Vesical and Prostatic Disease.—With painful and difficult micturition.

Rectal Fissure, Ulcer, Hemorrhoids and Cancer.—Dyschezia in all and local signs.

Fecal Accumulations and Flatulence.

Purgatives.—Pain in small of back and superior gluteal region, 4 to 6 hours after taking.

Diarrhea, Dysentery and Cholera.—Nagging pain in back.

Intestinal Catarrh and pain in back relieved by ichthyol in 5 to 10 grain doses night and morning.—Freeland.

Orchitis.—Pain at 12th rib.

Epididymitis.—Pain at 5 L. and 1 S.

Sexual Neurasthenia.—Sacral aching, formication; knee-jerk much diminished or absent.



*Coccygeal and Anal* ("Neuralgia of Rectum").

Hemorrhoids or Scar Tissue.

Anal Fissure.—Much increased by defecation.

Trigonal and Prostatic Disease.

Displaced Uterus or Coccyx.

Sitting on Cold Steps or Damp Grass.

Strangulated Inguinal Hernia.—10 D. area on same side.

*Dysmenorrhea*.—Obstructive cervical pain only at menses; 11-12 D., 1 L. and 2-4 S.

*Ovarian* pain intermenstrual (10 D.), spreading and increasing at flow.

## CHAPTER VII.

### ABDOMINAL PAIN.

Prediagnostic treatment of acute abdominal pain.—Enema of 1 oz. brandy or whisky in 3 oz. milk; encase each leg and the chest in hot blankets and place hot bottles along side.—Greig Smith.

COLICKY.—Paroxysmal, griping, obstructive, usually afebrile; often relieved by firm, steady, uniform pressure.

*Flatulent or Intestinal Colic.*—Sudden, severe, griping, boring and twisting, usually most intense at navel, radiating into lumbar region or over sacrum; relieved by pressure or passage of flatus; tympanitic dyspnea, constipation, a great fuss—soon relieved by inhaling chloroform; from errors in diet, cold feet, worms, impacted feces, enteroliths, gastrointestinal catarrh, adhesions from chronic peritonitis, rachitis or anemia.

Mistura rhei et sodæ  $\frac{1}{2}$  to 1 dram in water every 2 or 3 hours till a thorough evacuation.—Louis Fischer.

Oil of cajeput 3 drops on sugar as needed.

Nursing Infants.—Diminish proteids in mother's milk (more water and exercise and sleep, less meat or excitement); give child  $\frac{1}{2}$  to 2 oz. of sweetened gruel just before each nursing—or condensed milk may be used.—Zahorsky.



Remove irritating substances with emetic, castor oil and copious injections; liquid diet; warm applications; gentle massage with warm oil.

Infants.—Potassium bromid, chloral hydrate and sodium bicarbonate,  $\frac{1}{4}$  gr. each in peppermint water as required.—J. W. McLane.

R. Ext. zing. fl. m. iii; tinct, asafetidæ m. i; aquæ menth. pip., aquæ cinnam. aa. m. xv; syr. simp. q. s.: A teaspoonful in water t. i. d. before meals.—Godfrey.

Children.—Spt. chloroform 1 part to 4 parts comp. tinct. cardamom: Take m. xv-xx in  $\frac{1}{2}$  oz. warm water every half hour till relieved.—A. A. Smith.

Adults.—Milder forms relieved by a dram or two of paregoric with a few drops of essence of peppermint made into a toddy with a cup of hot sweetened water, followed by rhubarb and magnesia.—Lyman.

Severe Intestinal.—Hypodermic of morphin and atropin; sometimes also  $\frac{1}{2}$  dr. chloral hydrate by mouth and thorough irrigation of colon with hot water; lay a large, hot linseed poultice, into which a dram of chloroform has been stirred, over entire abdomen; hot mint tea or hot camphor water as a beverage; 10 gr. calomel and 5 gr. sodium bicarbonate as soon as relief is obtained.—Lyman.

Colic Due to "Cold."—Protracted bath in water



at 100°, followed by packing with warm, moist cloths to promote diaphoresis.—Roth.

Crapulent Colic.—Equal parts of aromatic syrup rhubarb, comp. tinct. cardamom, camphorated tinct. opium and cinnamon water: Dose, 2 to 4 teaspoonfuls.—Hartshorne.

Prevention.—Sodium phosphate 30 gr. in a glass of water t. i. d. preferably before meals; milk diet if obstipation; avoid tea, coffee and alcoholics.—W. W. Johnston.

*Constantly Recurring Colic of Children.*—Discontinue sugar till fermentation ceases; sweeten food with small saccharin tablets (one to pint) or glycerin (teaspoonful to each feeding).—Louis Fischer.

*Local Paralysis of Inflammation.*—Peristaltic activity of upper intestine and colicky pain.

Treatment.—Liq. opii comp. 10 drops and tinct. belladonna 5 drops in a little hot water; instil into rectum and repeat until pain is relieved; after a rest of 3 or 4 hours give 6 gr. quin. sulph. in 2 dr. whisky and 2 oz. warm water by enema, and repeat if need be.—Skene.

*Hepatic Colic.*—Sudden, irregularly recurrent attacks; focus of pain and tenderness at gall-bladder, 3 finger-breadths to right and above navel, radiating toward back and right shoulder and down right arm, ceasing suddenly with passage of stone into bowel; painful dorsal pressure-point



to right of spine; often jaundice, nausea, vomiting and pyrexia; may be peritoneal friction sound; enlarged liver.

Treatment.—Morphin and atropin hypodermically; ether by inhalation.—Bartholow.

Hot baths or applications; small doses of calomel after paroxysm; effervescent sodium phosphate daily before breakfast as a prophylactic.—Norbury.

Tinct. gelsemium 5 drops every  $\frac{1}{4}$  hour.—Ringer.

Nitroglycerin m. 1-100 has given prompt relief.

R. Olei terebinth. m. v; syr. acaciæ oz. ss; sodii sulphocarbolat. gr. xx; spt. ether co m. xv; aquam menth. pip. ad oz. i: To be taken twice or thrice daily; also apply hot poultices to hepatic area.—Therap. Gazette.

Prompt surgical intervention when medical measures fail.

Rectal injections of 2 quarts or more of warm water, to be retained about an hour, every two or three days; first clear out bowels with a pint or so of warm water.—Keay.

Prevention.—Potassium iodid or sodium phosphate, benzoate or salicylate (10 gr. 3 or 4 times a day for several months); surgical intervention may be needed.

*Renal Colic.*—Pain radiates from loin down inguinal region and genitals—may be reflected down thigh, up back and across abdomen, sometimes



with numbness; vesical tenesmus, bloody urine and calculus.

Treatment.—Morphin hypodermically or morphin or opium internally or in suppositories; inhalations of ether or chloroform; locally hot poultices, hot fomentations, belladonna applications or hot bath; rest in bed; warm diluent drinks such as barley water.—Taylor.

Uric Acid Calculi.—R. Lithii benzoat. gr. v; tinct. belladonna m. iii; extracti tritici repentis fl. q. s.: A teaspoonful every 2 or 3 hours.—Shoemaker.

Active exercise, vegetable diet with pigeons and fruit, much water, no alcoholic liquors, very little nitrogenous foods, cheese, gravies, etc.—Roth.

Phosphate and Carbonate Calculi.—Carbonated distilled water; vegetable acids, especially lactic.—Roth.

Calcium Oxalate and Cystin.—General hygienic treatment; avoid all excesses; moderate exercise; abundance of water, hot or seltzer; acid phosphate of sodium as a solvent.—Roth.

*Floating Kidney*.—Constant, dragging pain in side or hypogastrium, with occasional severe colicky attacks with nausea and vomiting.

Treatment.—Avoid corsets and imprudent exercise and wear some supporting mechanical appliance or an abdominal belt; nephrorrhaphy or nephrectomy in severe cases.—Roberts.



Symptoms of Strangulation.—Complete rest; poultices and hot fomentations to loin and abdomen.—Taylor.

*Pancreatic Colic.*—Sudden, intense, diffuse, deep-seated, epigastric or umbilical pain, radiating along lower left costal border to back; may be vomiting, fever, ptyalism, glycosuria; frequently fat, lime calculi or much undigested muscle fiber in stools.

Treatment.—Opium or belladonna; ice-bag or leeches to epigastrium or leeches to anus.—Louis Starr.

*Lead Colic.*—Pain usually sudden and persistent, twisting or sawing, radiating from navel; abdomen hard and retracted; obstinate constipation, blue line on gums, wrist-drop.

Treatment.—R. Pulv. opii gr. i; ext. belladonna gr. 1-6; olei tigllii m. i: A pill every 2 hours till relieved.—Loomis.

R. Magnes. sulph. dr. i; acidi sulph. dil. m. viii; aquam q. s.: A tablespoonful t. i. d. preceded by 10 gr. potassium iodid.—Brunton.

R. Aluminis gr. xv; ac. sulph. arom. m. viii; syr. limonis m. xv; aquam q. s.: A tablespoonful every hour or two.—Bartholow.

Morphin hypodermically; warm water injections well up into bowel; friction over abdomen with oil of nobby and chloroform.—Roth.



*Fireman's Colic.*—Severe pain in abdomen and headache; red eyes; prostration.

Treatment.—Put a grain each of phosphate of sodium, potassium and calcium to each ounce of drinking water.—Willis Cummings.

*Copper or Brass Colic.*—Pain increased by pressure; diarrhea, abdominal distention; copper workmen; anemia, debility; green line at base of teeth.

Treatment.—Remove cause; small doses of potassium iodid; milk diet; abundance of drinking water; codein, or morphin if pain very severe.

Dilute phosphoric acid 15 m. t. i. d.—Wm. Murray.

*Perforating Ulcers of Stomach and Duodenum.*—Previous symptoms; sudden, violent epigastric pain; may be shock or vomiting; rigidity of abdominal muscles; local tenderness; tympany; immobile trunk.

Treatment.—Little or no morphin; early abdominal incision and closing of perforation by bringing serous surfaces together with two rows of Lembert sutures, or if this is not possible cover perforation with omentum and separate region from rest of abdominal cavity by means of tampons; cleanse all infected parts of abdominal cavity, especially left subphrenic space; drain with gauze or tubes all those places in which exudate and pus are likely to collect; no food whatever by



mouth for a week if operation not determined on.—Lennander.

*Acute Intussusception.*—Pain sudden, severe, localized, gradually increasing, with shock, obstinate constipation and blood-stained mucous discharge; paroxysms of hours with intermissions—diffuse ileocecal or umbilical; pressure may diminish pain at first; erectile pseudo-tumor.

Treatment.—Morphin hypodermically if required; thorough irrigation of large bowel under pressure and kneading of bowel with patient inverted; early celiotomy if these measures fail.—Hawkins.

*Cicatricial Obstruction.*—Pain sudden, constant, agonizing, general, with focus at navel.

Treatment.—Careful regulation of diet; opium and belladonna for paroxysmal pains; enemata; surgical measures if obstruction becomes complete.—Osler.

*Acute Internal Strangulation of Bowels.*—Eructations, nausea, vomiting (becomes fecal); feeling of constriction and griping umbilical pains, subsiding with gangrene; flatulence, tenesmus, insuperable constipation (one or two stools may pass); peritonitis, gangrene.

Treatment.—Early surgical intervention.

*Volvulus.*—Steady pain, with periods of very acute exacerbations.

Treatment.—Large enemata of water or oil un-



der hydrostatic pressure (fountain syringe several feet above patient) with patient in knee-chest posture; inflation of intestine with air by means of a long rectal tube and stomach pump; median laparotomy and untwisting of coils of gut.—Roberts.

*Inflamed or Incarcerated Descending Testicle.*—Symptoms often very similar to acute obstruction.

Treatment.—Rest in bed; elevation of pelvis; moderate purgation; application of heat or cold; hypodermic injections; if suffering severe, incise and expose gland.—White and Martin.

*Irreducible Hernia.*—May be griping abdominal pain.

Treatment.—Try to render reducible, if recent, by rest in bed, saline laxatives and local application of ice; protect and prevent increase in size by wearing a suitable bag-shaped truss or supporter; operation.—Roberts.

*Strangulated Hernia.*—Tumor painful, tender, tense; tympany if intestine in sac; no impulse on coughing; pain usually referred to umbilical region (often ceases with gangrene); skin over gut may become dark; obstinate constipation and violent, gushing vomiting, finally of brownish-yellow fluid with fecal odor.

Treatment.—Avoid purgatives; gentle taxis for 2 to 5 minutes; enemas, ice locally, moderate doses



of morphin; ether locally, hot bath; if taxis fails again in 3 or 4 hours, immediate operation is indicated.—Roberts.

*Intestinal Worms.*—Localized colicky cramps or heavy boring pains, often relieved by milk.

Treatment—Thread Worms.—Infusion of quassia (tablespoonful to a pint) with salt brine (teaspoonful to pint)— $\frac{1}{4}$  pint by enema 2 or 3 times a day for several days.—Beale.

Santonin gr.  $\frac{3}{4}$  and calomel gr.  $\frac{1}{2}$  before breakfast for 3 days, together with intraanal application every evening of a little ointment of mercury in twice as much glycerite of starch.—Comby.

Round Worm.—Santonin  $\frac{1}{4}$  to 2 gr. with calomel  $\frac{1}{3}$  to 2 gr. at bedtime followed by dose of castor oil before breakfast.—Hughes.

Round and Thread Worms.—One dram each of fluid ext. spigelia and of senna with 1 gr. santonin at a dose.—J. Lewis Smith.

Whip Worm.—Laxatives with anthelmintics; intestinal irrigations.—Roth.

Tape Worm.—Fast 24 to 48 hours with open bowels; then take pelletierin tannate gr. v-xx in capsule, followed in 15 minutes by dose of castor oil.—Shoemaker.

R. Ext. filicis maris eth. dr. iiss.; hydrarg. chlor. mitis gr. xv: M. et divide in capsulas No. xx: Dose 12 to 16 capsules.—Crequy.

R. Oleores. aspidii dr. ii; chloroformi dr. ii;



olei tigllii m. iv; glycerini oz. ii: Take half at 8 a. m., the rest in an hour if needed.—Dock.

*Appendicitis.*—Appendicular colic; unilateral muscular rigidity.

Treatment.—Saline purgatives (unless tenderness) followed by opium after bowels move.—J. C. DaCosta.

Persistent use of ice locally and but little opium, until operation.—Osler.

*Fecal Impaction.*—History of chronic constipation; palpable doughy mass.

Treatment.—Saline cathartics; large, frequently repeated high enemata (preferably oily or mucilaginous) by Hegar's method.

*Ruptured Tubal Pregnancy.*—Sudden, intense, right or left iliac pain with vomiting, sweating, collapse and signs of internal hemorrhage; colicky pain about navel in tubal abortion.

Treatment.—Ice-bag over lower abdomen and abdominal section as soon as practicable if hemorrhage serious; if extravasation into broad ligament, keep ice-bag on lower abdomen for 48 hours with patient as immobile as possible, then lie in bed about 2 weeks longer.—Byford.

*Chronic Arsenical Poisoning.*—Colicky or dyspeptic pains; edema of lower lids; neuritis and paralyses.

Treatment.—Sulphur waters; potassium iodid cautiously; ammonium chlorid as a specific; vapor



baths; tonics, especially iron and quinin.—Roth.

*Ruptured Spleen.*—Intense local pain and collapse following severe trauma.

*Pancreatic Hemorrhage.*—Sudden, severe epigastric pain with collapse.

Treatment.—Heat externally; warm saline solution by injection; hypodermics of morphin, atropin and strychnin and diffusible stimulants.—Anders.

*Rupture of Heart.*—Epigastric pain and in precordium.

*Reflex Colic.*—From uterine, ovarian, renal or vesical disease.

Treatment.—Valerianate of zinc 1 gr. 3 or 4 times a day in neuralgia from reflex irritation of female pelvic organs.—W. W. Johnston.

*Gouty Colic.*—With other lithemic symptoms.

Treatment.—Colchicum.

*Rheumatic Colic.*—Arthritic diathesis; pain often very severe.

Treatment.—Potassium iodid, mercury and salicylates.

*Malarial Colic.*—More or less periodic.

Treatment.—Quinin and arsenic.

Periodic Infantile.—Quinin in  $\frac{1}{2}$  gr. dose rubbed up with sugar of milk, given an hour before anticipated attack and repeated at its beginning or a little before for 3 or 4 days.—Lancet-Clinic.

*Hysterical Colic.*—With cutaneous hyperesthesia.



Treatment.—Compound spirit of ether; rub spine with stimulating or anodyne liniments.—W. W. Johnston.

*Angioneurotic Edema*.—Locally limited transparent edematous swellings.

Treatment—Anemic Cases.—R. Strych. sulph. gr. 1-20; quin. sulph. gr. ii; massæ ferri carb. gr. i: One pill after meals.—Thornton.

*Henoch's Purpura*.—Multiform erythema; pain, vomiting, diarrhea; joint pains or swelling; often trifling hemorrhages from mucous membranes; relapsive and recurrent; chiefly in children.

Treatment.—Iron; arsenic in rapidly ascending doses; salicylates; good food, including vegetable juices.—Tyson.

*Epidemic Dry or Bilious Colic*.—Intertropical countries; pain mostly in epigastrium and colon, aggravated by movement, often relieved by pressure; at first dark, offensive diarrhea, later constipation; abdominal distention or retraction; severe nervous symptoms; sometimes due to lead.

Treatment.—Emetics, purgatives and anodynes; change of climate often necessary to complete cure.—W. W. Johnston.

Colicky pain shortly after eating.

Treatment.—Small doses of liquor potassii arsenitis before meals.—Philip F. Barbour.

Cramps with diarrhea.

Treatment.—Equal parts of tinct. opium, spt.



chloroform, tinct. capsicum, and aromatic spt. ammonia. 20 to 40 drops every  $\frac{1}{2}$  hour or hour.—Shoemaker.

*Membranous Enteritis, Enterocolitis, Cholera Morbus or Infantum and Dysentery.*—See below under inflammatory pain.

*Raynaud's Disease.*—Local syncope, asphyxia and gangrene of fingers or toes.

#### NEURALGIC.

Pain intermittent, shooting, burning, cutting, like neuralgia elsewhere; no relation to food as a rule; often cutaneous tenderness.

*Nervous Gastralgia.*—Pain sudden, severe, gnawing, drawing, burning, cutting, boring, diffuse or localized, radiating from epigastrium to lower ribs or over spine of ilium; increased by drinking cold water; slight if any relation to food; often relieved by firm, steady pressure or food; puncta dolorosa over intestinal plexi; frequently nocturnal, irregularly recurrent, lasting a few minutes to hours or days; usually in young adults, from anemia, hysteria, uterine or ovarian disorders, sexual excesses, leucorrhœa, masturbation, or chronic coffee poisoning.

Treatment.—Oxid of silver in form relieved by food; subcarbonate of bismuth and saccharated carbonate of iron before food for anemia; a grain of cocain to relieve attack.—Gowers.

Arsenic curative, gr. 1-24 in pill form with 2



or 3 gr. gentian t. i. d. half way between meals.—  
Sir Jas. Sawyer.

Pyramidon 5 to 10 gr. in powder as required.—  
Hirschborn.

Heat by means of poultices or hot drinks; carbolic acid, chloroform water, cocain; oil of peppermint, atropin, aconite, etc.—Benedict.

R. Codein/ phosphat. gr.  $\frac{1}{4}$ ; bis. subnit. gr. v; sacchari lactis gr. iii; one powder every 2 hours.—  
Ewald.

R. Morph. hydrochlor. gr. 1-12 to  $\frac{1}{8}$ ; cocainæ hydrochlor. gr. 1-9 to 1-5; tinct. belladonna m. ii; aquæ amyg. amaræ m. x: Take every hour.—  
Ewald.

R. Liq. chloroformi aq. sat. dr. ss.; tinct. anisi stell. m. iv; aq. aurantii flor. q. s.: A teaspoonful every  $\frac{1}{4}$  hour.—Dujardin-Beaumetz.

Treat hysteria if this the cause; if chlorosis or anemia the cause, use mercuric chlorid in combination with tincture of iron or peptomangan (Gude); when of dyspeptic origin use combination of sodium bromid, charcoal, and pepsin, with rest, diversions and regulation of habits of eating; for gouty gastralgia salicylate of colchicin, Buffalo lithia water and cascara; Weir Mitchell rest-cure for neurasthenic cases; if due to sexual excesses use a combination of nux vomica, Indian hemp or ergotin, or give phosphorus in 1-100 gr. pills; in true or "idiopathic" gastralgia try



morphin and atropin hypodermically or 10 to 20 m. co. spt. ether—also inhalations of 2 or 3 drops of amyl nitrite or 1-100 gr. fresh tablet nitroglycerin when pallor of face.—Landon B. Edwards.

*Neuralgia of Intestinal or Mesenteric Plexi.*—Frequent recurrence with extreme prostration; nausea, eructations, ravenous appetite; often history of malaria or lithemia; readily relieved by antineuralgic treatment, especially arsenic.

Treatment.—Static electricity with sparks 2 inches long for 20 minutes daily, or electric spray over abdomen.—Ranney.

*Lumbo-Abdominal Neuralgia.*—Three painful points of Valleix near spine, at side and in front; pain radiates to anus and genitals; similar pain often present in other parts of body.

Treatment.—Freeze corresponding spinous processes with rhigolene spray.—Albert Abrams.

*Lesions of Vagus Nucleus.*—Gastric crises like those of tabes. See just below.

*Locomotor Ataxia.*—Girdle sensation; severe, sudden, darting, tearing, rending gastric crises; lightning-like pains radiating from shoulder to buttocks; nausea, vomiting, vertigo.

Treatment.—Slight gastric crises relieved by simultaneous sinapisms to epigastrium and neck.

Antipyrin, acetanilid, cannabis indica; morphin or cocain hypodermically; prolonged use of nitro-



glycerin in increasing doses until physiologic effects.—Osler.

*Nervous Enteralgia.*—Pains boring, tearing, cutting, doubling-up, circumscribed or diffuse and shifting; not aggravated by pressure; may last several days; eructations of odorless gas and expulsion of flatus and bowel irregularities; from hysteria, neurasthenia, disseminated sclerosis, chronic spinal meningitis, anemia, pelvic irritation, nervous shock, cold or gout.

Treatment.—Vague neuralgia of elderly arthritic subjects when fatigued, promptly relieved by eating a little dry bread or by drinking a cup of hot broth or milk and lying down for a short time.—Lyman.

Treatment in general like that for gastralgia.

*Cardialgia.*—Scalding, sore, neuralgic epigastric pain with pyrosis; common at menstrual periods, during latter part of pregnancy and in gouty and hypochondriacal subjects—also from abuse of tobacco.

Treatment.—Bismuth subnitrate gr. v and potassium cyanid gr.  $\frac{1}{8}$  in pill after each meal.—Benj. Lee.

*Hyperchlorhydria and Gastrosuccorhea.*—Irregular epigastric pain relieved by antacids, eggs, meat or milk; water-brash and heart-burn.

Treatment.—Drink a glassful of cold water.—A. L. Benedict.



See also under dyspeptic pain below.

*Abdominal Malarial Neuralgia.*—Pain may be quite severe and variously localized; periodic fever and chilling, nausea, vomiting and enlarged spleen; no plasmodia in post-infective; large doses of quinin cure.

*Anemia—Debility and Overwork.*—"Stitch in side" in region of spleen.

Treatment.—Chiefly etiologic.

Antipyrin gr. ii in a tablespoonful of water of chloroform every hour till relieved in neuralgia of stomach.—Thornton.

*Psychoses.*—Prodromal gastralgia.

*Hysteria.*—Pain usually in right or left lower half of abdomen; hysteria often latent; hyperesthetic zones in abdomen; anesthetic and analgesic areas of conjunctiva and pharynx; pains much aggravated by psychical excitement; dysmenorrhea and constipation.

Treatment.—*Suggestion*; constant current (3 to 5 m. a.) with anode over hyperesthetic zones; Blaud's pill for 4 months, and after an interval as long again; valerian, asafetida; divert attention from self.—Richard Lomer.

*Hepatalgia.*—Neuralgic pain in region of liver; neurosis of pale and delicate women.

Treatment.—Removal of cause (anemia, hysteria); general tonic treatment (strychnin); abundance of rest; sedatives (bromids).—Gowers.



*Zoster*.—Severe neuralgic pains and vesicular eruption along course of intercostal nerves.

Treatment.—Sodium salicylate 60 to 90 gr. daily.—Frank Mracek.

Excessive Pain.—Paint t. i. d. with morphin in collodion, a grain or two per ounce; or with a solution of 15 gr. acetanilid per ounce of ether.—Cantrell.

*Myelitis*.—Girdle pain and bilateral, flaccid loss of motor power.

Treatment.—Antikamnia, acetanilid, phenacetin, antipyrin; ice-bags or leeches to spine; ergot; mercurial ointment, blisters, iodine or actual cautery.

Paroxysmal recurrence often prevented by course of aluminic chlorid 3 gr. t. i. d.; local use of ether spray, chloroform or menthol often relieves; galvanism and potassium iodid may give marked improvement—the latter particularly when a syphilitic history.—Gould and Pyle's Cyclopedic.

*Spinal Tubercular Caries*.—Symmetric bilateral neuralgic pains with epigastric or umbilical paroxysms.

Treatment.—Perfect rest in supine posture on hard mattress; leeches, blisters or hot iron may do good; take patient in bed out of doors every day if possible.—J. C. DaCosta.



*Spinal Tumors.*—Severe girdle pain.

Treatment.—Operative intervention in non-malignant; opium for malignant and generalized.

*Aneurysm of Abdominal Aorta or Celiac Axis.*—Rachialgia and epigastric or umbilical paroxysms; pulsating pseudo-tumor with thrill.

Treatment.—Opium for pain; lactucarium to quiet; comp. jalap powder at intervals, recumbent posture; restriction of diet to 10 oz. solids and 6 oz. liquids in 24 hours.—Tufnell.

*Old Peritonitic Adhesions.*—History of past inflammation.

Treatment.—Abdominal or vaginal section; break up adhesions with fingers and dust with aristol.—Hawkins.

*Chronic Mercurial Poisoning.*—Gastrodynia, tremor and ptyalism.

Treatment.—Diuretics and diaphoretics; small doses of potassium iodid; vapor or sulphur baths; pure, fresh air; easily digested, nourishing food.—Roth.

*Morphin Habit.*—Often severe gastralgia when not under influence of drug.

Treatment.—Strong wine; may need to give occasional injection of morphin.

Pains of Morphinism.—Spray of 1 part menthol, 10 parts chloroform, and 15 parts ether; phenacetin or phenalgin in full doses.—Mattison.



*Uremia.*—Severe epigastric or hypochondriac crises often precursory of grave symptoms.

Treatment.—Vapor or hot air bath or hot water pack to secure free perspiration; elaterin to produce watery stools; ice-bag to head.

*Diabetes.*—Severe epigastric pains (sometimes with vomiting) and constipation preceding onset of coma.

*Reflex Causes.*—Acute proctitis; violent epigastric pain.

Pelvic Disease or Tumors.—Right or left iliac pain.

Corporeal Uterine Disease.—Reflex pain at umbilicus.

Left-sided Laceration of Cervix and Left Ovarian Disease.—Pain in splenic region.

Genitourinary Disorders.—Reflex epigastric pain from orchitis, cystocele, prostatitis, or irritation of bladder, especially in children.

Renal Affections.—Pain sometimes seated deep to right or left of spine below navel.

Ovarian Cysts.—Intermenstrual neuralgia. Fecal accumulations; peripheral pain in groins. Pleuritis, pneumonia, appendicitis.

DYSPEPTIC.—Definite relation to food, with disturbance of function and malassimilation; nausea, vomiting, flatulence, diarrhea, anorexia, pyrosis, foul breath, coated tongue; usually little or no fever.



*Simple Indigestion.*—Epigastric pain and fullness from overeating or too hasty eating or too rich food.

Treatment.—R. Acidi hydrochlor. dil. m. xv-xx; syr. limonis, syr. aurantii aa. dr. ss.; spt. chloroformi (aut tinct. zing.) m.x: Take in 1½ oz. water half an hour before meals.—Beale.

Irritable Stomach of Children from Improper Feeding: R. Bis. subnit. gr. iii; sodii bicarb., pulv. rhei aa. gr. i.: One powder every 4 hours.—Shoemaker.

*Acute Gastritis.*—Diffuse epigastric fulness and tenderness in catarrhal, sometimes with moderate fever and sickness; intense spontaneous pain from mouth to stomach in irritant or corrosive poisoning.

Treatment.—Calomel 1-6 gr. and sodium bicarbonate 3 gr. every 2 or 3 hours.—Shoemaker.

If vomiting has not occurred empty stomach by means of warm salt water and tickling throat, or apomorphin or ipecac and tartar emetic; brausepulver (10 parts sodium bicarbonate, 9 tartaric acid and 19 white sugar) or effervescing citrate of magnesia or seidlitz powder; fast for 24 to 72 hours.

Sodium iodid gr. xv-xx t.i.d.—Bartholow.

Of Infants.—Sodium bicarbonate gr. iii in ½ oz. of cream and milk every hour; or calomel gr. 1-10 to ½.—Delafield.



Warm poultice of linseed meal with or without mustard over epigastrium.—Blackader.

*Chronic Gastritis.*—Slight soreness; lancinating digestive pains in atrophic form.

Treatment.—R. Sodii iodidi, sodii bromidi aa. gr. viii; sodii arsenat. gr. 1-30; aquae q. s.: A teaspoonful in water t.i.d.—Bartholow.

R. Bismuthi subnit. gr.x; argenti nitratis gr. i-ii: Take before breakfast.—Niemeyer.

Severe Cases.—Opium or belladonna in small doses after meals, or cocain in 1-6 gr. dose; belladonna plaster over stomach.—Hughes.

Alcoholic.—R. Tinct. belladonnæ m. i.; tinct. nucis vom. m.iiss.; tinct. dioscoreæ villos. m.x; syr. zing.q.s.: A teaspoonful in water every fourth hour.—Shoemaker.

Children.—Flannel abdominal binder; keep feet and ankles always dry and warm; cascara at bedtime; small doses of opium or bromid with chloral twice a day; large enemas of warm water; cold brine affusions and rubbing; systematic dietary; careful mastication of food.—A. D. Blackader.

*Gastric Ulcer.*—Intense, sharply circumscribed, burning, boring epigastric pain soon after eating—increased by movement or pressure; painful spot one inch to left of 10th to 12th dorsal vertebræ—may be only pain in back or “stitch in side.”



**Treatment.**—Avoid spiced foods and alcoholic drinks.

Exclusive milk diet; enough sodium bicarbonate (5 to 10 dr. a day) to neutralize acid, taken hourly in small doses with chalk and magnesium carbonate.—Debove and Gouvin.

Rest in bed; no food by mouth for three days—a nutritive enema t. i. d.—then begin feeding by mouth, at first with small quantity of milk and flour soups, then leguminous soups, then leguminous vegetables and potatoes as a puree, adding later a little meat-broth; restrict amount of diet till third week; then give iron, 1 dr. of 2 or 3 per cent solution of chlorid t. i. d. in a wineglass of egg-water—also 1-30 gr. arsenous acid and 1-3 gr. ferric chlorid after meals.—Ewald.

Potassium dichromate 1-16 to 1-12 gr. every 6 hours well diluted.—T. McHardy.

Tincture of iodine m. x. t. i. d. in water.—Murrell.

Ice-bags or Leiter's coil; large doses of bismuth,  $2\frac{1}{2}$  to 4 dr. suspended in water; morphine or  $\frac{1}{2}$  oz. sol. of chloroform (1:20) every 2 hours for severe gastralgia.—Ewald.

Chlorid of gold and sodium 1-20 gr. t. i. d., particularly when tongue red and glazed, epigastric pain and relaxed bowels after eating.—Bartholow.

*Hemorrhagic Erosions of Stomach.*—Moderate distress, gnawing and burning after eating; sub-



acidity and fragments of gastric mucosa in wash-water; emaciation.

Treatment.—Same as for gastric ulcer. Gastric lavage with 1:1000 or 1:2000 silver nitrate followed by neutralization with decinormal salt solution.—Pariser.

*Nervous Dyspepsia.*—Epigastric fulness and eructation of odorless gases shortly after meals; slight, intermittent gastralgia usually relieved by food, but much increased by condiments and irritants.

Treatment.—Gastric sedatives (bismuth or cerium)  $\frac{1}{2}$  or 1 hour before meals in mucilage of acacia or cherry laurel water; when appetite is fair give pepsin, charcoal and bromid an hour after meals; calomel and sodium phosphate an hour before meals for imperfect secretion.—Skene.

*Gastrointestinal Myasthenia.*—Prolonged gastric fulness and heaviness soon after eating—fluids as distressing as solids.

Treatment.—R. Sodii bicarb. gr. v.; tinct. nucis vom. m.v.; tinct. capsici m.iiss.; cascarae cord. q.s.: A teaspoonful before or after meals.—Stewart.

*Hyperesthesia Gastrica.*—Pain excited by contact of any food and subsides with evacuation of stomach; often hysterical stigmata.

Treatment.—R. Morphinae hydrochlor. gr. 1-15 to 1-10; cocainae hydrochlor. gr. 1-8 to 1-4; tinct.



belladonnae m.iii-vi; aq. amyg. arom. q.s.: Ten to 15 drops every hour.—Ewald.

*Hypochlorhydria*.—Feeling of weight, fullness and distress with eructations soon after meals; fermentation diarrhea common; indicanuria.

Treatment.—Stimulation diet (koumiss, well seasoned meats finely minced, vegetables passed through sieve, hard bread, toast, crackers and moderate amount of fats); avoid sugar and alcohol; give strychnin and other vegetable bit- ters and hydrochloric acid—also guaiacol and creasote if gastric fermentation.—Alfred W. Perry.

*Hyperchlorhydria*.—Disappears after eating proteids or taking alkalies, gradually returning in 2 or 3 hours; not relieved by pressure.

Treatment—Sedative diet ( $\frac{1}{2}$  to 1 pint of warm milk at beginning of each meal; fish and meat finely divided; only enough starchy food to pre- serve nutrition); avoid potatoes, spices, condi- ments and salty foods; bismuth salts 20-40 gr. a few minutes before meals; sodium bicarbonate 10 gr. four or five times after meals at ten- minute intervals for hyperacid pain; sodium sulphate 40-60 gr. an hour before a meal; pepsin useless—iron and strychnin harmful.—Alfred W. Perry.

*Gastrosuccorrhea*.—Symptoms similar to hyper- chlorhydria; excessive secretion of gastric juice.



Treatment.—Give stomach rest, feeding by rectum; interdict salt; use only distilled water; hot-air baths to remove salines through sweat-ducts; tonics and hygienic measures for overwrought nervous system.—Benedict.

*Achylia Gastrica.*—Pain only while food is in stomach; absence of normal secretion.

Treatment.—Chopped meat and other stimulating diet; strychnin; dilute hydrochloric acid, 20 drops in a glass of water (through glass tube) just after eating, repeated in a half hour and again in an hour.—Hemmeter.

*Pyloric Stenosis and Gastric Dilatation.*—Diffused epigastric weight, pressure, fulness, burning, soreness; vomiting at intervals of large quantities of fermented food.

Treatment.—Light nutritious diet in small quantities at frequent intervals; lavage two or three times weekly; treat catarrh and apply massage and electricity; tonics, especially strychnin; abdominal support; dilatation of pylorus or establishment of gastro-duodenal fistula for fibroid thickening and cicatricial thickening.—Stevens.

*Gastroptosis.*—Burning or shooting epigastric pains after eating; also dyspeptic symptoms independent of food; physical examination shows stomach as a whole lower than normal.

Treatment.—Dress reform; well fitted abdom-



inal belt; diet, massage and exercise of trunk muscles for constipation.—Boardman Reed.

*Perigastric Adhesions.*—Pain produced by overloading stomach or inflation.

*Intestinal Indigestion.*—Paroxysmal griping or heavy, dull distress; spreads from navel, much increased by pressure, 2 to 4 hours after eating; flatulence, borborygmi, lienteric diarrhea; may be sharp fever.

Treatment.—Benzonaphtol and bismuth salicylate  $1\frac{1}{2}$  gr. each to a child of 6 months for intestinal fermentation.—S. Solis-Cohen.

If acute prohibit carbohydrates for 4 or 5 days; for chronic administer taka-diastase, 3 to 5 gr. just after meals, and restrict amount of carbohydrates.—Christopher.

*Enterocolitis.*—Griping pain 2 to 4 hours after taking food and before stools; mucoid diarrhea and tympanites.

Treatment.—Mild counterirritation by turpentine stupes or mustard or thin flaxseed poultice.—Holt.

See below under inflammatory.

*Pancreatic Cancer*—Severe, deep-seated epigastric or upper umbilical pain, with persistent intestinal dyspepsia and oily stools.

Treatment.—Opium or operation.

*Intestinal Carcinoma.*—Sharp, radiating, colicky umbilical pains a few hours after eating; palpable tumor.



Treatment.—Surgical measures; coal tar derivatives and opium.

*Chronic Valvular Disease.*—Obstinate subacute gastritis and gaseous distention of stomach and bowels.

Treatment.—Mild laxatives; carminatives with salol or creosote; opium as last resort.—Anders.

*Idiosyncrasies.*—Most common with mussels and strawberries; often skin eruption.

INFLAMMATORY.—More or less continuous pain increased by movement, with tenderness (not cutaneous) on pressure, thirst and fever (unless shock or profound sepsis); vomiting and diarrhea or constipation; hyperleucocytosis if suppuration.

*Acute Peritonitis.*—Pain intense, diffuse or localized, much increased by pressure—may be absent in septic form; painful retching and vomiting and usually constipation; high fever, chill, wiry pulse.

Treatment.—Hot linseed poultices, or flannels wrung out of hot water and sprinkled with turpentine, or liniment of belladonna, or ice compresses.—Taylor.

R. Olei terebinth., olei olivæ aa. oz. ii; massæ hydrarg. oz. ii.: Apply warm with flannel over abdomen.—Shoemaker.

Perforation.—Large doses of opium in suppositories or enemas, with ice-cold applications to ab-



domen; prevent gagging and choking.—Ewald.

Diffuse septic peritonitis.—Cleanse focus of infection with hydrogen peroxid; flush abdominal cavity thoroughly with normal saline solution; elevate head and trunk; drain pelvis.—Fowler.

*Acute Appendicitis.*—Colicky, radiating pain becoming fixed in right iliac fossa; localized tenderness at McBurney's point, right-sided muscular rigidity and perhaps tumor; early moderate fever, comparatively frequent pulse.

Treatment.—Ice externally; opium to make patient comfortable until operation.—Mynter.

Apply leeches if symptoms urgent; warm cataplasms and opium.—John Ashhurst, Jr.

Subdue peristalsis with a firm, snug abdominal binder over a layer of cotton batting, with a sheet of oil silk next to skin; repeated colon lavage (111° F.); sometimes calomel and salines; hot and cold applications; no food for a week or more.—Love.

*Acute Salpingitis.*—Pain radiates to thigh and is less circumscribed than in appendicitis; usually ameliorates by 3d or 4th day.

Treatment.—Absolute rest in bed; fluid diet; ice-bag on lower abdomen; opium suppositories; hot vaginal douches and hot rectal injections; if case serious and inflammation unmistakably purulent, appendages should be removed at once.—Garrigues.



*Typhlitis Stercoralis.*—Dragging pain in right iliac region, with doughy, sausage-shaped tumor.

Treatment.—Saline purgatives, particularly magnesium sulphate; large colon irrigations.

*Typhoid Fever.*—Active pain from perforation, (sudden, severe, paroxysmal with quickened pulse, tender, distended abdomen and rising leucocytosis), hemorrhage, phlebitis and unknown causes.

*Chronic Appendicitis.*—Recurrent, subacute tearing iliac pain after walking or long standing; local tenderness.

Treatment.—Operation in the interval.

Podophyllin 1-10 gr. 2 or 3 times a day.—Mynter.

*Simple Chronic Peritonitis.*—Pain shifting and usually slight till late; some tenderness; alternate diarrhea and constipation; fluctuation and fever after effusion; late emaciation.

Treatment.—Hot opium fomentations, belladonna inunctions, blisters, iodine ointment, yellow oxide of mercury ointment (20 gr. per ounce), best of hygiene; flannel bandage; rest; bland but nutritious diet.—J. Henry Fruitnight.

*Chronic Tubercular Peritonitis.*—Process may be latent or sudden and violent; usually irregular fever, sacculated exudations and gastro-intestinal disturbances; search for tubercular signs in lungs, pleuræ, fallopian tube, testis and elsewhere.



Treatment.—Abdominal section and irrigation; ichthyol ointment; non-flatulent diet; counter-irritation with equal parts of belladonna and iodine ointment.—Anders.

*Dysentery*.—Severe grinding tormina in lower colon; straining, frequent, mucopurulent, bloody stools.

Treatment.—Hope's Camphor Mixture: R. Acidi nitrici dr. ss.; tinct. opii m.xx; aquæ camphoræ oz. iv.: One to 4 teaspoonfuls every hour or two according to symptoms.

Acute of Nursing Infants.—Greatest regularity in nursing; a little magnesia or sodium bicarbonate with oil-sugar of fennel—a bottle before each nursing.—Roth.

*Intestinal Catarrh*.—Often diffuse, dull pain and tenderness; diarrhea or constipation; whole hand laid on and passed over abdomen.

Treatment.—Tincture of rhubarb  $\frac{1}{2}$  dr. 1 to 3 times a day when mucoid or watery stools alternating with normal movements.—Roth.

Chronic Infantile Intestinal Disorders.—Antiseptic douches of 1 or 2 quarts of water at 100° containing  $\frac{1}{2}$  oz. boric acid to each quart, or 30 m. creolin, or 10 gr. sodium salicylate, or thymol 1:2000 or mercuric chlorid 1:10000—use No. 11 or 12 soft rubber catheter.—E. P. Davis.

Chronic Intestinal Catarrh.—Cold water irrigations, containing small doses of astringent



(zinc sulphate, alum or lead acetate gr. 1 to 4 or 6 oz. of water).—W. W. Johnston.

*Acute Enterocolitis.*—(Follicular Enteritis): Griping, colicky pains in colon; mucoid diarrhea and tympanites; “summer complaint” of infants.

Treatment.—Resorcin  $\frac{1}{4}$  to  $\frac{1}{2}$  gr. every 2 hours, combined or not with bismuth, chalk or opium.—Jacobi.

*Membranous Enteritis.*—Paroxysms of severe pain and discharge of gray, translucent, mucoid pseudo-membranous casts; a neurosis.

Treatment.—Light food at frequent intervals in small quantities; rest in bed; warm poultices; enema of a quart of warm water containing a teaspoonful of common salt or essence of peppermint, followed by codein or opium and perhaps belladonna.—Einhorn.

Small doses of castor oil in emulsion with salol several times a day.—Hawkins.

*Cholera Infantum.*—Colicky pains at first; profuse, watery, explosive stools, excessive vomiting and rapid collapse.

Treatment.—Enema containing 2 or 3 drops of laudanum every 3 hours.—Goodhart.

Morphin hypodermics cautiously.

Chloral hydrate 3 to 5 gr. in a half ounce of starch water thrown into bowel every 2 or 3 hours.—Shoemaker.



*Cholera Morbus.*—Severe, paroxysmal, doubling-up, griping pains in abdomen and cramps in calves; serous diarrhea and troublesome vomiting.

Treatment.—R. Acidi carbol. gr. 1-5; glycerini m. viii; tinct. opii camph. m. xxiv; aq. cinnam. q.s.: A teaspoonful immediately after each paroxysm of vomiting until these cease; small, frequent doses of calomel; mustard sinapisms over epigastrium and spine.—N. S. Davis.

R. Tinct. camph., tinct. opii, tinct. capsici aa. m. xvii; olei caryoph. m. 1-6; syr. rhei (spiced), q.s.: A teaspoonful every 15 to 30 minutes; add 2 to 4 drops of chlorodyne if pain very acute; calomel gr. 1-15 on tongue every 5 minutes for vomiting.—Jno. Elsner.

*Asiatic Cholera.*—Premonitory colic for a day or two; very painful cramps in legs and feet; profuse, frequent, rice-water evacuations, rapid emaciation and collapse; epidemic.

Treatment.—Rest in bed; Priessnitz compresses on abdomen; diet of barley water and red wine or brandy; a teaspoonful of laudanum in 10 dr. comp. tinct. cinchona several times a day if stools increase in number; 3 drops every 2 or 3 hours of strong hydrochloric acid; in cold stage wrap in warm blankets and surround with hot bottles and poultices on abdomen, with 10 to 20 drops of laudanum every 1 to 3 hours.—Roth.



*Gastric and Intestinal Irritation of Infants.*—Hydrargyrum cum creta repeated at intervals until stools are altered—1-6 gr. every 4 hours till 1 gr. has been taken for children under 2 years—between 2 and 12 years 3 to 5 grains may be given as a single dose when required.—Garrod.

*Intestinal Ulceration.*—Localized burning pain and often tenesmus; pus, blood and shreds of tissue in stools; duodenal ulcer simulates ulcer of stomach.

Treatment.—Applications of hot water; cataplasms; injections of hot water; morphin with or without belladonna if necessary.—Jas. T. Whitaker.

*Acute Pancreatitis.*—Intense, deep-seated epigastric pain and tenderness, persisting in spite of careful feeding.

Treatment.—Absolute rest; milk, lime water and meat broths in small quantities; ice or leeches to epigastrium or leeches to anus; free use of opium; iced carbonic water for vomiting; stimulants and heat to extremities for collapse; light linseed poultices later.—Louis Starr.

*Cholangitis.*—Dull, heavy feeling of distention and sometimes darting pains over hepatic area; jaundice, choluria; drab, fetid stools.

Treatment.—A few leeches over painful area; operation for stone.

Children—Liquor potassii cit. m. xx-xl and



tinct. opii camph. m. x-xx every 2 or 3 hours.—  
Musser.

*Perihepatitis.*—Sudden, acute pain in right hypochondrium, increased by pressure or movement; may be peritoneal rub.

Treatment.—Local abstraction of blood by leeches; tight bandage around body at level of hypochondrium (may include turpentine stupe or water compress); morphin hypodermically.—  
Bartholow.

*Subphrenic Abscess.*—Early, deep, tearing, circumscribed pain in epigastrium or right hypochondrium, increased by deep breathing or coughing; usually follows perforating gastric ulcer.

Treatment.—Incision along costal arch, together in some cases with resection of ribs below lower limit of pleura; transpleural evacuation if empyema exists or pleural cavity obliterated.—  
Lennander.

*Hepatitis and Hepatic Abscess.*—Sharp, lancinating, paroxysmal pain or constant dull aching in right hypochondrium; smooth, tender enlargement of liver; intermittent fever, chills and sweats.

Treatment.—Repeated aspiration or laparotomy followed by drainage and suturing edges of opening of abscess to abdominal incision.—Am. Text-Book of Surgery.

*Hepatic Cirrhosis.*—Dull pain in hepatic region



radiating to right shoulder; morning nausea and vomiting, hematemesis, ascites; surface of liver becomes hard, rough and granular.

Treatment.—In early stage Carlsbad water (Kissingen in debilitated); also iodine waters; nitric acid; iodine or iodide of iron for syphilitics.—Roth.

*Suppurative Pylephlebitis.*—Severe, burning hepatic pain; rapid ascites and splenic enlargement.

Treatment.—Morphine if required.

Bismuth, creosote and glycerin for gastrointestinal disturbances; ammonium carbonate or acetate to dissolve thrombi and emboli; corrosive sublimate, quinine and carbolic acid subcutaneously.—Bartholow.

*Psoas Abscess.*—Right or left iliac pain; drawing up of leg; tends to point in groin or lumbar region; sequel of Pott's disease.

Treatment.—Open in loin or in groin or in both places, using through and through irrigation by means of a large drainage tube, which later may be replaced by two tubes, to be gradually shortened.—Am. Text-Book of Surgery.

*Diaphragmatic Pleurisy.*—Pain often referred to front of abdomen above umbilicus.

*Pericarditis.*—Sometimes pain in epigastrium.

Treatment.—R. Antimon. et potass. tart. gr.  $\frac{1}{4}$ ; tinct. opii m. iv; aq. camph. q.s.: A tablespoonful every 2 hours in acute form.—Graves.



*Perisplenitis, Splenitis, Splenic Infarcts.*—Sudden, severe pain in region of spleen—burning, crushing, stinging, insensitive to pressure; chill, fever, friction sound; cardiac valvular disease.

Treatment.—Etiologic treatment; quinin and arsenic in malarial form; chalybeates, iodids and ergot for various chronic splenic enlargements; splenotomy.

*Rupture of Spleen.*—Symptoms usually mistaken for intestinal perforation with internal hemorrhage.

*Wounds of Intestine.*—Circumscribed peritonitis; symptoms of shock if rupture—hydrogen gas test causes well marked tympanites.

Treatment.—Keep in bed on strict diet for several days; immediate laprotomy if rupture.—Am. Text-Book of Surgery.

PRESSURE AND TRACTION.—More or less continuous oppression and dragging and weight; physical signs of tumor or enlarged viscera.

*Gastric Cancer.*—Continuous, dull epigastric oppression, drawing and lancinating pain, not much relieved by vomiting or pressure; coffee-ground vomiting, achlorhydria, progressive emaciation.

Treatment.—R. Bismuthi subnit. gr. v; acidi carbol. gtt. i; aq. chloroformi q.s.: A tablespoonful before food.—Thornton.

R. Tinct. conii m. i; morph. sulph. gr. 1-24;



acidi carbol. m. 1-8; syr. acaciæ q.s.: A teaspoonful whenever in pain.—Shoemaker.

R. Morph. sulph. gr. 1-8; sodii bicarb. gr. v; bis. subnit. gr. x: Repeat p. r. n.—Osler.

*Intestinal Carcinoma.*—Sharp, radiating umbilical pains a few hours after eating; blood and pus in stools.

Treatment.—Opium or operation.

*Pancreatic Abscess or Cyst.*—Colicky pain referred to epigastrium, left hypochondrium or left shoulder.

Treatment.—Incision over tumor, aspiration and incision and evacuation of tumor, stitching to abdominal wound and drainage.—Am. Text-Book of Surgery.

*Pancreatic Cancer.*—Severe, deep-seated epigastric or umbilical pain; jaundice, emaciation, clay-colored, greasy stools.

Treatment.—Opium or operation.

*Cholelithiasis.*—Sudden, intense pain over liver, radiating to back and right shoulder, usually an hour or two after eating; may be rigor, fever and jaundice.

Treatment.—R. Menthol gr. viii; spt. vini gallici dr. v; vitel. ovi no. ii; olei olivæ oz. vi: Take in 4 to 8 portions during course of 2 or 3 hours.—Roth.

*Congestion of Liver.*—Dragging weight, fulness



and distress in right hypochondrium, with smooth, regular enlargement.

Treatment.—Local abstraction of blood over liver or at anus; warm applications, blisters; saline laxatives, aloes, rhubarb, cascara.—Roth.

A combination of colchicum and saline purgatives for gouty subjects.—Bartholow.

Torpid liver.—R. Ammonii chlor. gr. x; sodii chlor. gr. iv; succi tarax. dr. i; decoctum aloes co. q.s.: A tablespoonful t. i. d.—Shoemaker.

*Tubercular Liver.*—Weight and dragging; tubercular disease elsewhere.

*Syphilitic Liver.*—Dragging and weight in hepatic region; liver often bossed.

Treatment.—Ordinary tertiary antisyphilitic treatment.

*Fatty Liver.*—Weight and dragging but rarely local pain; smooth, cushion-like enlargement; general obesity.

Restrict diet to fresh animal foods, game, fish, oysters and such succulent vegetables as lettuce, celery, spinach and raw cabbage; persistent use of sodium phosphate.—Bartholow.

*Amyloid Liver.*—Dragging pain and smooth, firm enlargement of liver; tuberculosis and suppurative bone disease.

Treatment.—Treat syphilis, malaria or surgical cause; rub in pea-sized piece of official mercuric iodid ointment over whole hepatic area, intermit-



ting when skin becomes sore; chlorid of gold and sodium; nitrogenous diet.—Bartholow.

*Liver Cysts.*—Weight and dragging sensations if large.

Treatment.—Abdominal incision; stitch cyst to wound; incise, evacuate and drain.

*Hepatic Cancer.*—Constant, dull, boring or stabbing, darting local pain; rapid downward enlargement with hard, irregular, nodular surface.

Treatment.—Opium as required.

*Splenic Engorgement, Enlargement, Abscess or Tumor.*—Pain, tenderness and swelling in region of spleen; intermittent fever, chills and sweats if abscess.

Treatment.—Enlargement. Official ointment of red iodid of mercury rubbed in over spleen.—Bartholow.

Acute Congestion.—Cold affusions, evaporating lotions or tincture of iodin locally; quinin for malarial.

Hypertrophy.—Quinin for malaria; iron and quinin for chlorosis and anemia; mercurials for syphilis.—Bartholow.

Lardaceous.—Combat special cause, especially chronic suppurative processes.

Abscess.—Try to prevent by ice applications, counterirritation or local blood-letting and saline purgatives.—I. E. Atkinson.

Incise and drain with strict antiseptic precautions.



*Gastroptosis.*—Dragging pains in lower abdomen; stomach displaced downward.

Treatment.—Remove all causes that favor condition and treat associated functional disturbances; nervines and nutrients.—Anders.

*Enteroptosis.*—Dragging pains in lower abdomen; colon below navel, as shown by percussion when filled with water or air.

Treatment.—Move bowels regularly; supporting bandage; electricity, massage, hydrotherapy; Weir Mitchell rest cure for strongly nervous cases; suitable medication for flatulence, fermentation, etc.—Anders.

*Local Peritonitic Process About Left Flexure of Colon.*—Pain in splenic region; chronic constipation.

Treatment.—Counterirritation by leeches and blisters.—Tyson.

*Pregnancy.*—Pressure interference with gastric functions in latter months.

*Aneurysm of Aorta.*—Constant, deep, boring epigastric or umbilical pain; expansive tumor and thrill.

Treatment.—Ice-bag over pulsating swelling; rest in bed, salines and ergot.

*Ovarian Cysts.*—Intermenstrual neuralgia, sacral burning and boring.

Treatment.—Celiotomy and removal.



**CHAPTER VIII.****PELVIC PAIN.**

## UTERINE HYPOGASTRIC.

*Acute Metritis.*—Pain deep-seated, diffuse, cramping and bearing-down, radiating to loins, hips and hypogastrium, with vesical and rectal tenesmus; least severe in puerperal.

Treatment.—Hot colon douches in Sims' position. Ice-bag over hypogastrium (24 to 48 hours) if much pain and fever; hot fomentations later; morphin if required only; salines and other laxatives; alcoholic stimulants; concentrated liquid diet and quinin in septic cases.

From Sudden Suppression of Menses.—Warm sitz-baths, mustard foot-baths and hot drinks soon as possible; then to bed and use hot fomentations to abdomen and inside of thighs for several hours; saline cathartic; sodium citrate gr. xxx every two or three hours; subsequent counterirritation; if menses do not reappear, keep quiet for a month with counterirritation, mild laxatives, bland diet, warm sitz-baths, and hot douches (115° to 120°) faithfully used.—Byford.

Gonorrhœa or Decidual or Placental Remains.—Thorough curettage of uterus, swabbing out with 95 per cent carbolic acid, then douching with mercuric chlorid (1:2000) followed by sterilized hot water douche, and leaving a dram iodoform



pencil in uterus; douche of bichlorid or carbolic acid (followed by plain douche) should be repeated twice a day if infection of some standing.—Byford.

Hysterical Metritis.—Suggestion; constant current of 3 to 6 m.a. with anode over hyperesthetic zones; Blaud's pill persistently for four months, and after an interval, as long again; valerian and asafetida in convulsive types; remove patient from too sympathetic surroundings and divert her attention from herself.—Richard Lomer.

*Chronic Endometritis and Metritis.*—Neuralgic pains and attacks of uterine colic, principally at menstrual periods; traction on cervix gives rise to lumbar pain.

Treatment.—Etiologic treatment (e. g., removal of placenta and membranes after delivery, curettage after abortion, etc.); a good deal of rest—never walk so much as to increase pain; keep bowels open and restrict sexual intercourse; elastic belt around whole abdomen in stout women; warm bath twice a week; warm sitz-baths, using bath speculum; regular hydropathic treatment; curet in hyperplastic form studded with prominences; Apostoli's intrauterine chemical galvano-cautery if whole membrane swollen; treat endometritis with Churchill's tincture of iodine, chlorid of iron (hemorrhagic form) or silver nitrate (catarrhal form), painting vaginal roof



with tincture of iodine and have patient introduce a pledget with glycerin night and morning.—Garrigues.

Chronic Parenchymatous.—Same measures as for chronic endometritis; long continued use of small doses of chlorid of gold or corrosive sublimate; bipolar intrauterine faradization; massage; trachelorrhaphy or excision of cervix.—Garrigues.

Senile.—Tonics and good diet; correct displacements with medicated tampons; local application twice a week of powdered iodoform or tannin-boroglycerid (20 gr. per oz.) or fluid extract *Rydrastis* with peroxid frequently and packing with iodoform gauze.—Skene.

Exfoliating.—Destroy endometrium by curetment, followed by application of tincture of iodine or iodoform pencils, or by galvano-chemical cauterization of Apostoli.—Garrigues.

*Tubercular Endometritis*.—Caseous leucorrhœa containing tubercle bacilli.

Treatment.—Total vaginal extirpation of uterus and adnexa.—Pryor.

*Endocervicitis*.—Numb, deep pain and sense of weight in pelvis; profuse, purulent, tenacious discharge from cervix; follicles enlarged, giving appearance of erosions or ulceration; Nabothian cysts in chronic.

Treatment.—Apply tincture of iodine on cotton



to internal os every other day (daily in gonorrhoea); if cervix markedly congested, puncture with a scalpel in a half dozen places and promote bleeding with  $\frac{1}{4}$  of 1 per cent hot lysol vaginal douches every four hours for a day; vaginal douche of mercuric chlorid 1:10000 every three hours in gonorrhoeal cases; prick cysts and twist off polypi under cocain.—Pryor.

“Erosions.”—Bathe vaginal portion in a tubuliform speculum twice a week for a couple of minutes with acidum pyrolignosum rectificatum or with 10 per cent sol. cupric sulphate.—Garrigues.

Ovula Nabothi.—Prick open and then paint with tincture of iodine; if very numerous destroy gradually with needle-shaped Paquelin’s or galvanocautery.—Garrigues.

*Uterine Retroversion.*—Pain depends largely on complications; usually radiates toward rectum and is often accompanied by severe tenesmus, especially during defecation; greatest tenderness at posterior fundus; often lumbar and inguinal traction pains.

Treatment.—Replacement bimanually or in knee-chest posture; keep in place with cotton tampon (in cul-de-sac) soaked in boroglycerid or 10 per cent ichthyol-glycerin, and under this a lamb’s wool tampon turned sideways; intra-uterine application of tincture of iodine; hot water



vaginal injections; repair pelvic floor and keep stools soft; Alexander's operation or hysterorrhaphy.—Am. Text-Book of Gynecology.

*Uterine Antelexion.*—Premenstrual pain, diminishing as flow is established.

Treatment (Simple).—Dilate cervix, irrigate and curet uterus and pack with iodoform gauze, leaving in for six days—best done two weeks before period.—Am. Text-Book of Gynecology.

With Retroversion.—Dilate cautiously to one-half inch, wash out, curet, irrigate again and pack tightly with iodoform gauze; remove pack on fifth day, leaving a light drain of gauze each time three days for two weeks; amputate cervix if much elongated.—Am. Text-Book of Gynecology.

*Prolapse of Uterus.*—Traction, lumbosacral bearing-down and sinking feeling in chronic; sudden, severe, bearing-down lancinating pain in acute, usually after a fall; often painful sensations in flanks and epigastrium; vesical tenesmus.

Treatment.—Reduce hernia; treat ulcers with iodine; fill vagina with iodoform gauze and apply tight T bandage; after ulcers cured, support uterus with Braun's colpeurynter (wash bag thoroughly, anoint with zinc ointment and introduce an ounce of water, filling up with air; remove every night and keep vagina cleansed with boric acid solution); operative procedures to reduce or



gan in size and retain it in elevated position (keep patient recumbent for two weeks before).—Am. Text-Book of Gynecology.

Support uterus with hard pessary or aseptic wool tampon placed in mornings and removed at night; uterus best replaced with patient in knee-chest posture.—Hawkins.

Acute.—Return organ gently and pack vagina lightly with cotton or gauze; ice-bag to suprapubic region; Trendelenburg's posture and saline transfusion if symptoms of internal bleeding.—Am. Text-Book of Gynecology.

*Senile Prolapsus of Pelvic Organs.*—Dragging down feeling; irritable bladder and dyschezia; relaxed pelvic floor; cellular and muscular tissue atrophied.

Treatment.—Astringent douches (zinc sulphate or tannic acid); rest after short periods of exercise; perineal pad and strap; plain or medicated tampons, followed by small size Peaslee ring pessary (change and clean every month or two) and continued douches.—Skene.

*Carcinoma of Uterus.*—Often painless until perimetrial tissue invaded; uterine colic in corporeal; radiating pain in cervical, becoming continuous; characteristic sacral pain; pain in advanced stage neuralgic and violent, in back and shooting down legs especially at night; lymph glands in groin and left supraclavicular region



may be enlarged; sometimes edema of one or both legs; blood-stained irregular discharges after menopause; hard nodules or crater-like ulcer, or friable cauliflower growth in cervix.

Treatment.—Hysterectomy if disease confined to uterus.

Phenacetin a specific for pains.—Richard Lomer.

Inoperative Cases.—Relieve pain and hemorrhage by occasional dilatation of internal os and scraping endometrium very carefully, then washing out debris carefully with copious injections.—Winckel.

*Uterine Sarcoma.*—Pain usually severe, sometimes expulsive, radiates up and down.

Treatment.—Extirpation by wide enucleation.

*Uterine Fibroids.*—Dragging or pressure with vesical or rectal neuralgia shooting down legs; rapid-growing tumors more painful than slow; pain increased by multiplicity or cystic degeneration; aggravated by menopause—often disappears later; slight local pain.

Treatment.—Fluid extract ergot and fluid extract salix nigra of each  $\frac{1}{2}$  dram t.i.d.—Adams.

Vaginal or abdominal extirpation if they cause serious trouble. Iodid of calcium 2 or 3 gr. in water one-half hour before meals in interval of menses; aqueous fluid extract of hydrastis (with cinnamon water or tincture of cardamon) m.x.



t.i.d. near and during menstrual periods.—Skene.

*Mucous Polypi.*—Neuralgiform pain and cramps; may be sacral pain, and irritation of bladder; patient cannot lie on one side; os dilated and tumor often projecting.

Treatment.—If readily accessible, ligate pedicle with strand of catgut and excise; for those higher in uterine cavity, dilate cervical canal and remove with torsion or ecraseur.—Kelly.

*Uterine Retention Cyst.*—Hematometra, pyometra, hydrometra, physometra; constant pain and tenderness in lower abdomen with paroxysmal exacerbations at menses; rectal and vesical disturbances; may be dribbling of pus or blood and slight fever; uterus feels like tense bag; point of occlusion determined by finger.

Treatment.—Evacuate with sound and dilators and keep channel open.—Kelly.

*Hysteralgia.*—Sudden, recurrent attacks of severe pain in uterus, often radiating to iliac fossa and down leg; usual cause, menopause; also from changes of puberty, anemia, malnutrition, rheumatism, metritis, cancer of womb and hysteria.

Treatment.—Vaginal injections of potassium bromid, an ounce to the pint of water.—Munde.

Menopause.—℞ Liq. potass, ars. m.v.; ammon. (aut strontii) bromidi gr. v-xv; ferri et ammon. cit. gr. viii; aquam cinnam. q. s. A teaspoonful in water t.i.d. after eating.—Allbutt.



*Abortion and Miscarriage.*—Periodic, numb, drawing, cramping, bearing-down, labor-like pains, with uterine discharge of blood and mucus, dilated os and presenting fetus.

Treatment.—Threatened.—Replacement of displaced uterus; absolute rest in bed; opiates in full doses for restlessness; ice to vulva; cold cloths to abdomen; hemostatics internally; fluid ext. viburnum prunifolium dr. i every two or three hours; keep in bed for a week after symptoms disappear.—Lusk.

Inevitable.—Profuse hemorrhage with clots, patulous os, and presence of embryo or portions of ovum in clots.

Treatment.—First two months, rest in bed for a few days; third month, if ovum entire, warm vaginal douche and wait—if very long in primipara, dilate external os; if sac ruptures check hemorrhage by cleansing out uterus with finger, using vaginal tampon if cervix not sufficiently dilated (never leave in more than twenty-four hours) and giving antiseptic vaginal injections before and after introduction of tampon.—Lusk.

*Death of Fetus in Utero.*—Painful sensation of faintness; gaping os and movable cranial bones; peculiar putrid taste in mouth; temperature same as in vagina.

Treatment.—Dilate neck with fingers and inject 4 to 6 ounces of equal parts glycerin and boiled



water and pack neck with gauze; after labor, wash uterus once or twice daily with a quart of 1:4000 mercuric chlorid or Calvert's carbolic acid (40 or 60 drops to pint), gradually decreasing strength of solution; 2 drams 30 per cent ichthyol vaginal suppositories with lanolin and cacao butter; strychnin, ergotol, bouillons.—Buchtel.

*Cervical Lacerations.*—Bearing-down feelings with neuralgic pains in iliac fossa, sacral region, left breast, inner or outer thigh and over spleen.

*Treatment.*—Amputation or trachelorrhaphy after following preparatory treatment for two to six weeks if erosion or sclerotic or cystic changes: Vaginal douche of 1 gallon hot water two or three times a day; procure one or two watery fecal movements daily by Rochelle salts or magnesium sulphate; every five or six days place woman in knee-chest posture, expose cervix with Sims' speculum and puncture Nabothian cysts and also vaginal surface of cervix (if this is much enlarged and congested, then dry cervix and apply Churchill's tincture of iodine over whole of cervix and vaginal vault; remove excess of iodine with a little cotton and place against cervix a glycerin tampon—to be removed in twelve hours and followed with vaginal douche of hot water.—Penrose.

*Pregnancy.*—Stretching and pressure muscular pains and pelvic neuralgia, particularly in



women who have suffered from previous pelvic inflammations.

Treatment.—Iron, arsenic, quinin; regulate diet, sleep and emunctories; oleate of morphin endermically; 3 or 4 gr. acetanilid repeated hourly for three doses if need be, combined with caffenin, digitalis or an alcoholic stimulant; remove local sources of irritation if possible.—Jas. H. Etheridge.

*False Labor Pains.*—Indistinct pains, frequently from hemorrhoids, or from irritable or hysterical uterus; cervix or os remains flabby during pain.

Treatment.—Give a 4-quart enema at once and then  $\frac{1}{4}$  grain morphin hypodermically, to be repeated by the mouth in an hour or two if pain lessens but does not disappear; hot drinks (ginger and peppermint), inhalations of chloroform and even hot fomentations and flaxseed poultices may be used.—T. Mitchell Burns.

*True Labor Pains.*—Periodic, gradually increasing in force and frequency; dilation of os (tense during pain) and discharge of blood-stained mucus.

Treatment.—Chloral 15 gr. repeated half-hourly for three doses for nagging, ineffectual early pains; chloroform inhalations when presenting part reaches pelvic outlet; codein (up to  $1\frac{1}{2}$  grains by mouth or 3 grains by rectum) to allay



reflex nervous excitability and render contractions natural.—Grandin and Jarman.

*After Pains.*—Due chiefly to relaxation of uterus and passage of clots; may be caused by excess of ergot or quinin.

Treatment.—Small doses of ergot (5 drops) every three hours.—Lomer.

Keep womb well contracted by gentle rubbing, particularly for a half hour or hour after childbirth; also antikamnia and codein or small doses of Dover's powder.

*Inversion of Uterus.*—Sudden pain and shock, followed by backache, dragging, tenesmus, hemorrhage; from polypi or labor.

Treatment.—Manual reposition if practicable (squeeze tumor with one hand to make longer and smaller, and push with other hand like a wedge up into cervix) or vaginal amputation of uterus.—Kelly.

*Subinvolution of Uterus.*—Constant backache and feeling of dragging weight; uterus too large and soft, often retroverted.

Treatment.—Potassium chlorate gr. viiss. t.i.d. with a few drops of dilute hydrochloric acid.—Tait.

Rest in knee-chest posture; copious hot vaginal douches; course of quinin and ergot; bipolar electricity; keep bowels freely open.

TUBO-OVARIAN.—Iliac.



*Oophoralgia*.—Spontaneous or provoked ovarian neuralgia felt in iliac and subumbilical region, usually the left; also in hip, leg or loins; often increased by exercise or motion of any form, and nearly always during menstruation; often with hemianesthesia of same side, dyspareunia, hysterolepilepsy and globus hystericus; cardialgia, vomiting, palpitation, loss of consciousness or convulsions sometimes produced by pressure on ovary, which is normal to physical examination; appears in hysterical, malarial, alcoholic and masturbating subjects.

Treatment.—Suggestion; constant current of 3 to 6 m.a. with anode over hyperesthetic zones; valerian and asafetida; Bland's pill persistently; isolation.—Richard Lomer.

R. Liq. digitalis norm. m. iss.; liq. gelsem. norm. m.  $i\frac{1}{4}$ ; sodii brom. gr. xx; aquæ q.s. A tablespoonful every 3 hours.

*Ovarian, Labial and Perineal Neuralgia*.—Sudden, darting pain with uterine and ovarian tenderness; often worst midway between or just before menses.

Treatment.—R. Ext. belladonna gr. 1-5; ext. stramon. gr.  $\frac{1}{4}$ ; lactophenin, gr. ivss. Two or 3 pills daily.—J. S. Martin.

*Iliohypogastric and Ilioinguinal Neuralgia*.—Pain paroxysmal, radiating, lancinating, often severe; painful points at lumbar spines, middle of



iliac crest and a little above external ring—in-  
guinal points on scrotum and in vagina; from  
pelvic or lumbar disease, psoas abscess, trauma,  
exposure or hysteria.

Treatment.—Phenacetin in rectal suppositories  
of 10 gr. each; galvanic current very useful—  
contraindicated in pregnancy.—E. P. Davis.

*Herpes Vulvae.*—Neuralgia of ilioinguinal or  
external spermatic nerve; drawing, gnawing or  
boring; always one-sided; present a few days be-  
fore appearance of vesicles.

Treatment.—Phenacetin, antipyrin, etc.—Lo-  
mer.

*Cirrhotic Ovaries.*—Circumscribed in one or  
both iliac fossæ, radiating to hip, knee, bladder,  
rectum, breast; intermenstrual, very painful, par-  
ticularly if adherent, often alternating from one  
side to other in successive months, if bilateral.

Treatment.—Treat any disease of uterus first;  
bed for 1 or 2 months; daily massage; mild sa-  
line purgatives; weekly application of Churchill's  
tincture of iodine to vaginal vault, followed by  
glycerin tampons and hot water vaginal injections  
twice a day; forbid coitus; later absolute rest at  
menstrual periods; oophorectomy if suffering per-  
sists.—Penrose.

*Cystic Ovaries.*—Pain, usually bilateral in ova-  
rian region (more marked on left side), increased  
by standing, exercise, coition or defecation and at



outset of menstrual periods; often menorrhagia and reflex pain in region of breast; ovary very tender and slightly enlarged; anorexia, indigestion and mental depression.

Treatment.—Open cul-de-sac, free ovary, introduce posterior retractor into pelvis, and lift uterus into abdomen; introduce gauze pad between retractors, and lower head of table; grasp ovary with Luer's forceps and pull down; stab every cyst with tenotomy knife; return ovary to pelvis and treat the other in same way.—Pryor.

*Hyperemia and Hematoma of Ovary.*—Usually affects both ovaries; pain and heaviness in ovarian regions, increasing 4 or 6 days before menstrual period; menorrhagia the rule; dull tenderness on deep pressure in iliac regions; overstimulation of sexual appetite most common cause.

Treatment.—Remove cause (let engaged marry); counterirritation; out-door play and work; sea bathing or shower bath; nux vomica and ergot during day, bromid at night.—Skene.

*Prolapse of Ovary.*—Pain in sides of pelvis, sacral region or rectum, often shooting down to knee and up into hip; much increased on walking or long standing, and may be aggravated by sitting down; dyschezia, dyspareunia; great tenderness on palpation.

Treatment.—Thick, elastic soft ring pessary; knee-chest posture with loosened clothing, allow-



ing air to enter vulva for a few minutes several times a day, lying afterward on side as long as practicable—best with rest cure; abdominal brace.—Goodell.

*Salpingo-oophoritis*.—Pain referred to lower abdomen and affected side; deep-seated and increased by direct palpation; usually paroxysmal and lancinating during exacerbations—dull and heavy in intervals.

Gonorrhœal.—Pus from uterus shows gonococci.

Treatment.—Curet uterus; open tube or tubes and pack pelvis with gauze, or make ablation by vagina.—Wm. R. Pryor.

Septic.—Usually puerperal or following unclean operation; pulse disproportionately high.

Treatment.—Early curettage; if due to plastic operation rip out sutures and irrigate uterus with boric acid, paint raw surface with carbolic acid, open cul-de-sac and drain with gauze; ablation in relapsing cases.—Pryor.

*Intraligamentous Growths*.—Open abdominal cavity in usual way and withdraw a portion of the fluid from cyst if this is very tense and abdominal wall rigid. Then ligate and cut Fallopian tube and broad ligament down to near internal os on opposite side from growth, cut and clamp uterine artery, peel bladder back from uterus, amputate cervix (above supravaginal junction), clamp uterine artery in opposite side, clamp or ligate



ovarian artery on tumor side if possible, seek point of cleavage and rapidly enucleate tumor with fingers from below upward (along with uterus if growth large). Trim down sac and close tissues over stump of uterus with a continuous catgut suture, as in an abdominal hysterectomy for fibroid. Drainage is secured by a narrow strip of sterile gauze placed under flap, the end of which is carried through cervical canal into vagina—considerable packing when extensive denuded spaces.—Hawkins and Fleming.

*Chronic Salpingitis.*—Pain aggravated at menstrual periods; no intermenstrual pain of any account.

Treatment.—Treat causative ovaritis or chronic corporeal endometritis.—Skene.

*Acute Periovaritis.*—Sharp peritoneal pain and tenderness in region of ovary.

Treatment.—Moist abdominal dressings covered with rubber tissue; paint vaginal vault with 10-20 per cent ichthyol in boroglycerid; open bowels.—Pryor.

*Ovarian Abscess.*—Firmly adherent, dense, sensitive mass to one side or behind uterus; fever, pain, etc.

Treatment.—Evacuate.

*Ovarian Cysts.*—Occasional intermenstrual neuralgia; burning or boring pain on one or both sides of sacral region.



Treatment.—Laparotomy with removal of neoplasms; suppurative cysts may be treated by vaginal section and drainage; small, uncomplicated growths may be removed through vagina.—Hawkins.

*Parovarian Cysts.*—Slight progressive pain and early pressure symptoms; soft, fluctuating tumor low in pelvis, filling broad ligament flush with uterus.

Treatment.—Remove through abdomen, if large—otherwise open cul-de-sac and incise tumor with closed pair of blunt scissors opening same on withdrawal, or puncture and aspirate; wipe pelvis dry and rupture secondary cysts in cavity with finger; pack cul-de-sac and vagina with iodoform gauze, making first dressing in 7 to 10 days.—Pryor.

*Chronic Oophoritis.*—Persistent circumscribed pain in one or both iliac fossæ, radiating to hip, knee, bladder, rectum, breast; ovary enlarged and very tender.

Treatment.—Sodium bromid gr. xx-xxx and fluid ext. hydrastis m. x-xx t.i.d. during painful menstrual attacks; massage or reclining gymnastics; saline laxatives (if they do not cause flatulence); hot sitz-baths, counterirritation and hot vaginal douches; wet packs and baths (sedative to tonics); alteratives later; small doses of mercuric chlorid (with chlorid of iron if anemic), fol-



lowed by large doses of syrup iodid of iron.—Skene.

*Parovarian Varicocele*.—Peculiar dull ache passing up toward kidney; pain persists after ovary is removed—not much affected by menstrual periods.

Treatment.—Ligation and removal of pampiniform varices.—Geo. Halley.

Rest with pelvis elevated; open bowels; unconstricted waist; correction of displacements; repair of lacerations; astringent douches and boroglycerid tampons, followed by ring pessary.—Skene.

*Hydrosalpinx*.—Heavy, bearing-down pain in inguinal region and back; intermittent, colicky discharge of serous fluid; gourd-like swelling at side of and above displaced uterus.

Treatment.—Open cul-de-sac, free sacs and incise with scissors, catching fluid with gauze, plugging cul-de-sac with gauze and making first dressing in 8 days.—Pryor.

*Pyosalpinx*.—Similar to hydrosalpinx; swelling very tender; discharge of pus from uterus; hectic fever and chills.

Treatment.—Aspiration through vagina relieves pain and sometimes cures disease.—Richard Lomer.

Evacuation by broad incision through vagina; or vaginal ablation of uterus and adnexa.—Pryor.



*Hematosalpinx.*—Similar to pyosalpinx (pain in tubal abortion often colicky, about navel); constant, slight bloody discharge—always clotted if due to tubal pregnancy—seldom clotted when due to salpingitis.

Treatment.—Immediate operation; salpingo-oophorectomy usually necessary.—Penrose.

*Sclerosis of Tubes.*—Usually history of many attacks of endometritis; diminished menstrual flow; intermenstrual leucorrhea; continuous severe pelvic pain, with tenesmus on menstruation; common in old, stout prostitutes; tubes felt as cords; uterus fixed high up, often atrophied; sterility.

Treatment.—Ichthyol 10 per cent on tampons or injected into vagina sometimes relieves pain; curable only by ablation.—Pryor.

PERITONEAL AND CELLULAR.—Sharp and tearing; chiefly in lower abdomen.

*Acute Pelvic Inflammation.*—

Treatment.—Rest in most comfortable posture (sometimes raising foot of bed gives great comfort); regular administration of opium or morphin in sufficient doses to relieve pain (may be given in enema per rectum); absorbent cotton saturated with equal parts of tincture of belladonna and glycerin, applied hot and covered with rubber cloth; 10 or 15 gr. quinin on first day of inflammation; sips of cold or hot water for thirst



(enema of water and foods if vomiting continues); if lower intestine loaded employ a rectal injection of 3 oz. magnesium sulphate and 2 oz. each of glycerin and water, repeated as need be till the bowels move, then give  $\frac{1}{2}$  dr. sodium phosphate every 3 or 4 hours; whisky and quinin during this stage; when all acute symptoms have subsided and no evidence of pus or serum collection, apply small blisters repeatedly in iliac regions (one on each side) or paint roof of pelvis with tincture of iodine, or keep up continued irritation with croton oil 1 part, sulphuric ether 2, and tincture of iodine 3 parts, painted over lower abdomen and repeated when eruption disappears; nourishing food, quinin, iodide of iron, potassium iodide, chloride of iron and mercurial and other tonics; greatest care needed to prevent relapse—avoid any exercise which excites pain; promote absorption and lessen adhesions by pelvic massage.—Skene.

*Pelvic Congestion in Women*—Magnesium sulphate 30 parts; 8 parts each of iron sulphate, manganese sulphate and dilute sulphuric acid in 120 parts of distilled water: A tablespoonful in a glass of water before breakfast.—Roussel.

*Chronic Pelvic Inflammation.*—

Treatment.—Copious hot vaginal douches twice daily; tamponade posterior fornix with tampons



saturated in potassium iodid 1 ounce, glycerin and water each 2 ounces.—MacEuit.

*Tubal Pregnancy*—Marked pelvic discomfort with ordinary signs of pregnancy; or abrupt, violent, tearing, cramp-like paroxysms supervening on perfect health, referred, as a rule, to the womb, uterine gushes of blood, signs of internal hemorrhage and collapse on rupture; decidual cast from empty womb; tense, tender, pulsating, rapidly growing cyst beside or behind uterus.

*Treatment*.—Before rupture: Arrest of growth of ovum by galvanism or faradism, or better, abdominal section and removal of appendages.—Grandin and Jarman.

*After Rupture*.—Celiotomy, tying off ruptured tube and irrigation of peritoneal cavity with hot, sterile salt solution; expectant treatment (hot normal saline rectal irrigation, strychnin, etc.), if rupture into broad ligament—destruction of fetus, if living, after fourth month, or immediate abdominal section if septic symptoms.—Grandin and Jarman.

*Pelvic Hematocele*.—Sudden, sharp, hypogastric pain with faintness and pallor; often from ruptured tubal pregnancy.

*Treatment*.—See Ruptured Tubal Pregnancy, just above.

*Pelvic Hematoma*.—Sudden hypogastric pain,



quickly subsiding on lying down; signs of internal hemorrhage.

Treatment.—See Ruptured Tubal Pregnancy, above.

*Pelvic Neuralgia.*—Probably rheumatic when no local cause, especially after menopause.

Treatment of Rheumatic.—Salophen or salicylates.

*Pelvic Peritonitis*—Pain sudden, acute, continuous, with chills and fever; extreme tenderness; unilateral or bilateral.

Treatment.—Rest in bed; sexual rest in convalescence, especially at menstrual periods; depletion with magnesium sulphate, a teaspoonful every hour till six watery movements (if salts disagree with stomach, give a grain hourly of calomel till six doses, followed by one or two doses of salts and enema of soapsuds); hypodermics of  $\frac{1}{8}$  to  $\frac{1}{4}$  gr. morphin, only if pain is too great to be borne; poultices and counterirritation of little or no use; regulate diet and keep excretories functioning.—Baldy.

Suppurative.—Open posterior cul-de-sac, let out pus and fill pelvis with iodoform gauze; strychnin  $\frac{1}{50}$  gr. every 4 hours, gradually increasing; champagne; for local pain blood-letting from cervix and 10 per cent ichthyol tampons; wash out colon daily with a quart of normal salt solution; 1 oz. beef-juice every 4 hours and 2 oz.



chicken-broth every 4 hours; abundance of water (containing a few drops of lemon-juice if vomiting).—Pryor.

Tubercular.—No evidence of primary uterine and tubal disease; great emaciation and debility.

Treatment.—Open cul-de-sac, sever adhesions, irrigate pelvis with normal salt solution and apply high dressing of iodoform gauze; ablate if secondary tubal and ovarian disease.—Pryor.

*Pelvic Cellulitis or Parametritis.*—Moderate pain radiating to bladder or rectum and down one or both thighs.

Treatment.—In acute cases treat metritis (sharp curet sometimes) or salpingitis or cauterize exposed surfaces thoroughly when due to surgical or parturient wound; when acute symptoms subside apply Churchill's tinct. iodine to vaginal fornix and inguinal regions; also hot water vaginal douche, small doses of calomel ( $\frac{1}{20}$  gr. t.i.d.) with saline mineral water for bowels, sitz-baths and hot fomentations; if pus forms evacuate through vagina, using needle as a guide, introduce sharp-pointed scissors and spread blades on withdrawal; complete opening with finger, insert rubber tube or gauze drain and pack vagina with gauze; remove circumscribed collections of serum by aseptic aspiration; for chronic non-suppurative or atrophic cellulitis chief reliance must be in local



and general massage and systemic treatment.—Dudley.

*Pelvic Abscess*—Symptoms like those of peritonitis or cellulitis at first; hectic fever, chills and sweats after pus forms.

Treatment.—Expectancy in acute stage or exacerbations; absolute rest, freely open bowels, ice poultices to abdomen, diaphoretics, prolonged hot vaginal douches, some morphin; evacuate through uterus by massage when possible to squeeze pus out of sac by this route; vaginal incision, curettage and drainage when pointing there (puncture posterior to cervix in median line); evacuate through rectum if spontaneous rupture imminent; enucleation by vagina aided by abdominal incision, or enucleation of pyosalpinx and ovarian abscesses.—Kelly.

When pointing toward or readily accessible from vagina, make a free opening through the vault and cleanse and drain sac—secondary abdominal opening seldom required; evacuate through inguinal space above Poupart's ligament when large abscess raises peritoneum above this point; abdominal section usually indicated for small tubal, ovarian and appendiceal abscesses.—Wetherill.

*Broad Ligament Abscess*.—Labor or abortion; tender, tense, fluctuating, always sessile mass reaching from uterus to pelvic wall.



Treatment.—Evacuate through cul-de-sac and pack with gauze; also curettage.—Pryor.

*Pelvic Lymphangitis*—Pain deep, usually to right of middle line, extending to pubes or coccyx.

Treatment.—Free catharsis (magnesium sulphate), hot rectal and vaginal douches; curettage; vaginal section and cul-de-sac drainage.—Hawkins.

*Blind Herniæ and Peritoneal Cysts*.—Extremely painful; very thin walls; clear, yellow albuminous contents.

Treatment.—Laparotomy.

VULVO-VAGINAL.—Local symptoms very manifest.

*Acute Vaginitis*.—Dull pain (burning, itching or sticking in gonorrhœal) in pelvis or groin, with vaginal discharge and local signs of inflammation.

Treatment.—Cleanse mucous membrane thoroughly with a dram of borax in a quart of warm water and apply thoroughly equal parts of bismuth subnitrate (iodoform in specific cases), and prepared chalk, and introduce tampon of borated cotton; remove tampon in 24 hours, clean away discharge and replace tampon; in 24 hours more remove tampon and use douche of borax and water, followed by dry treatment as before.—Skene.

One ounce each of alum, borax, zinc sulphate and carbolic acid in 6 ounces of water: A tea-



spoonful in a quart of luke-warm water as vaginal injection twice daily.

Obstinate Cases.—Apply to entire canal every third day by means of Sims' speculum and atomizer with strong pressure, silver nitrate 1 gr. to ounce, or zinc sulphate  $\frac{1}{2}$  gr. to ounce, using in intervening days once or twice daily a vaginal douche of zinc sulphate 60 gr. to quart of warm water.—Skene.

Senile Colpitis.—Sticky secretion; yellowish, thin, shining mucous membrane.

Treatment.—Cauterize with weak solution of silver nitrate.—Lomer.

Vulvo-vaginitis.—Vaginal douche of warm water, t.i.d. at first, then less often—spray upper portion of canal once or twice a week with silver nitrate 1 gr. to oz. or zinc sulphate  $\frac{1}{2}$  gr. to oz.; keep cotton between labia after cleaning with borax, drying and applying a dry powder.—Skene.

*Inflammation of Vulvo-vaginal Glands.*—Throbbing pain radiating down thigh; tender, elastic tumor at lower part of one or both labia majora.

Treatment of Inflammation of Vulvo-vaginal Glands.—With tenaculum hook up most prominent part of the abscess and make gentle traction; with pair of scissors slightly curved on the flat excise elliptical portion as grasped per scissors (this will include the mucous membrane down to the gland proper); then hook up the gland or



abscess wall and remove a similar piece, which opens up the abscess thoroughly. Cleanse, mop out with gauze and boil out the cavity with peroxide. Then trim out and remove as much as possible of the cavity lining, or carefully curet and then wash out the cavity with pure carbolic acid, immediately neutralizing it with pure alcohol. Close the incision with a continuous catgut suture, passing the needle to the top through the tissues (not including the mucous membrane), and then pick up a portion of the bottom of the cavity and again through the opposite side (not including the mucous membrane). Continue this to the lower end of the wound, thus bringing the bottom of the abscessed cavity and the sides of the regional gland in close apposition, then reverse and close the mucous membrane and tie the catgut to the end where you first started.—Hawkins.

**Treatment.—Abscess.** After suitably shaving and cleansing parts, make abscess tense by pressure from behind on both sides, and open freely from below up; evacuate and wipe sac clean and touch whole inner surface with pure carbolic acid on absorbent cotton; pack cavity loosely with thin strip of iodoform gauze, replacing every 2 or 3 days until healed; no sutures or ligatures need be used.—Howard Kelly.

*Kraurosis Vulvæ.*—Itching and pain on walking; shiny, pale, smooth mucous membrane with



red, tender spots; parts crack and bleed readily.

Treatment.—Applications of pure carbolic acid or cocain or pure silver nitrate; cloths wrung out of hot water and placed over vulva; solution of lead acetate in glycerin on cotton between labia; forced dilation of vaginal orifice under ether; complete excision of diseased tissue under ether most satisfactory.—Penrose.

*Perineal Lacerations.*—Vague pains and difficulty in walking.

Treatment.—Immediate repair at time of confinement—under anesthetic, with aseptic vaginal tampon plug, trimming off any ragged portions with scissors and closing with silk-worm gut. Old lacerations may be repaired by Emmet's method, Tait's simple flap operation or Kelly's dissection and extension of loose fasciæ and muscles; catgut or silk-worm gut (external sutures).—Hawkins.

*Atresia of Vagina.*—Usually history of severe labor with subsequent amenorrhea, though severe menstrual colic, and impediment to sexual intercourse; fluctuating sac above atresia.

Treatment.—Open up channel and allow accumulated fluids to escape; remove scar tissue; unite sound upper and lower portions of vagina over defect.—Howard Kelly.

*Dyspareunia.*—Remove cause; if small vagina, pack it two or three times weekly with borated



cotton and leave in 36 hours, or use glycerin-wool tampons.—Byford.

*Urinary Fistulæ.*—Dribbling of urine from vagina; excoriation of vaginal mucous membrane.

*Treatment.*—Preparation: Prolonged repeated warm boric acid vaginal douches; repeated pain-taking cleansing of vulva and vagina with forceps and cotton; occasional application of weak silver nitrate to raw surfaces and incision of bands of scar tissue.—Kelly.

*Operation.*—Denudation of margins and approximation of edges with fine silkworm sutures.—Kelly.

*Fecal Fistulæ.*—Involuntary escape of flatus and thin fecal matter through vagina, vulva or uterus; excoriation of parts.

*Treatment.*—If fistula low down in sphincteric area, cut entirely through septum, denude margins of fistula and for some distance above and close the whole as in complete tear; if opening above sphincteric area and free from scar tissue, use funnel-shaped denudation and suture; if fistula above sphincteric area and surrounded by scar tissue, dissect rectum free from vagina, pass interrupted sutures through muscular coats of denuded bowel to close opening, leave long and allow to hang through fistulous vaginal opening, close incision in rectovaginal septum and use a dry dressing in vagina.—Kelly.



DYSMENORRHEA.—Ovarian pain, iliac and premenstrual; uterine obstructive, suprapubic; pelvic inflammatory, sacral.

*Mechanical*—*Paroxysmal* uterine *expulsive cramps*, sometimes with nausea, radiating through lower abdomen, inguinal region, to back and down thighs—begins a few hours before flow, and *subsides with escape of clots*; no intermenstrual uterine symptoms as a rule; may be difficulty in removing sound.

Causes.—Vaginal, hymeneal or *cervical stenosis* (obstruction to finger or sound); imperfect development of parts; congenital deviations (particularly anteflexion); extreme retroflexion or retroversion of flabby uterus; inflammatory swelling of endometrium (sounding very painful); unyielding point or tumor (polypus or fibroid) in cervix or lower uterine wall.

Treatment.—Divulsion and curet for cervical stenosis; intrauterine stem or artificial os for anteflexion; remove polypus or fibroid and curet; for vaginal or hymeneal obstruction incise, dilate and wear glass plug; specifics for syphilitic obstruction.—Am. Text-book of Gynecology.

Incise stricture and wear large intrauterine stem till healed.—Crockett.

*Congestive or Inflammatory*.—Soreness or sudden *burning or throbbing pain* in pelvis or lower



back, radiating up and down (may be confined to ovary in ovarian type)—if uterine, pain mainly central and begins with flow—if ovarian, pain chiefly iliac, beginning usually some days before flow, ovaries tender, enlarged, prolapsed; mamæ tender and painful; flow diminished; may be fever, headache, scanty urine or even delirium; intermenstrual pains, leucorrhœa, irritable bladder and other symptoms—general nervousness and depression marked in ovarian form; dysmenorrhœa usually preceded for a time by painless menses.

*Causes.*—*Delayed menstruation* from “catching cold” or overexertion at menstrual period; *inflammatory diseases* of uterus (fundus as a rule), adnexa (pain in salpingitis lasts through period), or pelvic tissues (particularly chronic peritonitis and ovaritis—dull pain radiating from tender, enlarged ovaries); cardiac valvular disease with venous stasis.

*Treatment.*—Remove cause; if congestion, scarify and use hot douches; if due to cold, give salines, diaphoretics and diuretics.—Am. Text-book of Gynecology.

R. Ext. ergotæ fl. m. lii; tinct. gelsemii m. vi; tinct. aconiti m. ii: Take every 2 to 4 hours.—Potter.

*Ovarian.*—Wool-glycerin tampons; bromids before flow; rest in bed after flow; pregnancy of



marked service; oophorectomy if organic ovarian lesions.—Am. Text-book of Surgery.

Ovarian.—If flow too scanty, scarify cervix or apply 4 or 5 leeches.—Crockett.

To relieve pain give codein and phenacetin or codein and antikamnia; high enemias of hot water.—Hawkins.

*Neuralgic or Rheumatic.*—Pain irregular and variable as to time and severity, usually disappearing in 48 hours after onset of period; hyperesthesia over lower abdomen and spine; neuralgia elsewhere (Valleix's painful points); nervous or neuralgic temperament; local disorders absent or insignificant.

Causes.—Neurasthenia, malnutrition, constipation, uricemia; urethral caruncle.

Treatment.—Correct constitutional dyscrasia; coal-tar antipyretics with or without digitalis; apiol 5 m. in capsules or tincture of pulsatilla m.v,t.i.d. for a week before flow; guaiac and sodium salicylate for a week before flow in rheumatic cases; rest in bed and warmth; if cerebral anemia give nitroglycerin and amyl nitrite till flushing; chloral hydrate gr. x hourly for 3 or 4 doses; for spasmodic pains, belladonna, hyoscyamus or stramonium till mydriasis; general hot bath for 15 or 20 minutes.—Am. Text-book of Gynecology.

Iron when flow is scanty and lacks color; ar-



senic if too profuse, prolonged or frequent.—  
Fordyce Barker.

Antipyrin, antikamnia, phenacetin, diaphoretics and salines always give more or less relief.

Fluid ext. gelsemium m.v-x every 2 hours.—  
Bartholow.

Spasmodic with pallor and coldness; glonoin with sufficient frequency to slightly flush face and overcome chilly feelings.—W. C. Abbott.

*Membranous.*—Labor-like pains commencing with flow and increasing in severity, ceasing largely with shedding of membranous shreds (no chorion villi) or triangular, shaggy cast of uterine cavity, followed by purulent or seropurulent discharge.

*Causes.*—Exact cause unknown; probably either a neurosis or an endometritis; most common in neurotic virgins and sterile women.

*Treatment.*—Repeated dilations, curettage and packing; applications of carbolic acid or zinc chlorid.—Am. Text-book of Gynecology.

General tonic treatment of great importance—iron, arsenic, quinin, strychnin; coal-tar products for relief of pain; dilation and curettage sometimes give temporary relief—after pack with iodoform gauze and repeat packing several times; artificial menopause.—Crockett.

*Hysterical*—No obstructive or inflammatory signs; visceral hyperesthesia; stigmata.



Treatment.—Galvanic current just strong enough to feel, with kathode usually intrauterine, or plus pole over sensitive ovary and negative on back.—Richard Lomer.

INTERMENSTRUAL PAIN.—When due to disease of fundus is referred to umbilicus—of cervix, to hypogastrium and sacrum.

Severe and sudden in pelvic inflammations, pyosalpinx, tubal gestation, ruptured cyst or torsion of pedicle of ovarian tumor or cyst; sudden and referred to back from displacement or inversion of uterus due to fall or strain; general acute abdominal pain at onset of pelvic inflammation; iliac and shooting down thighs in congestion or inflammation of uterine appendages and in neurasthenia; bearing down or pelvic aching, fullness and weight in pelvic congestion, uterine prolapse and retroversion; with tenesmus during action of bowels from pressure on rectum by retroverted uterus, inflammatory exudations, pelvic tumor (especially at back or left side), subperitoneal myoma, pregnant uterus or parovarian or broad ligament cyst; bearing-down pain in back passage due to anal fissure or hemorrhoids (constipation or pelvic congestion). Chronic endometritis and uterine displacements show a history of several years duration; new growths, a gradual onset; tubal disease, chronic ill health with periodic exacerbations.



Cirrhotic ovaries may cause regular intermenstrual pain, usually about midway between menses.

Treatment.—Much the same as for ovarian dysmenorrhea; remove cause if possible.



## CHAPTER IX.

### GENITO-URINARY PAIN.

GENERAL CHARACTERISTICS.—Caused mostly by diseases of bladder, prostatic urethra and blocking of ureter.

*Constant* in organic diseases, particularly ulceration and carcinoma.

*Crampy* from muscular effort or straining of inflamed surfaces.

*Aching* and rheumatoid in renal congestion.

*Burning* in prostatocystitis.

*Shooting*, lancinating, in rectal and vesical neuralgia, from gout, anemia, malaria or lead poisoning.

*Paroxysmal*, tearing, griping, lancinating in renal colic.

*Steady*, wearing, with spasmodic exacerbations in vesical carcinoma; may be painless until cystitis or infiltration of muscles.

*Constant*, burning, with reflexes to rectum, anus, perineum, inner thigh, in tubercular ulceration of trigonum.

*Continuous* and increased by motion, with violent retention exacerbations, in calculous pyelitis, acute hydronephrosis or blood clots in pelvis of kidney.



*Intermittent*, chiefly at the end of urination, in vesical calculus.

*Violent Colic* in ureteral inflammation due to stoppage and tension on renal capsule.

*Very little pain* in chronic cystitis—very intense in acute cystitis and acute retention.

*Dysuria* particularly in vesical diseases, but may be caused by renal or urethral disorders, irritating urine or any high fever.

*Neuralgias* and anginoid seizures common in Bright's disease.

#### DIFFUSED SUPRAPUBIC.

CONSTANT.—*Unrelieved atonies*. — Distended bladder.

*Chronic Prostatitis*.—Prostate tender and enlarged; difficult micturition.

*Advanced Carcinoma of Posterior Wall and Base of Bladder*.—Steady, wearing or lancinating pain—may be absent till late; unprovoked attacks of profuse hematuria.

Treatment.—Early eradication if possible.

*All Extra-Vesical Inflammations*.—Abscess, pericystitis, perforating apical carcinoma, etc.

*Primary Ureteritis*.—Rare; pain along course of ureter and tenderness on palpation.

Treatment.—Rest in bed; render urine bland with potassium bicarbonate; abundance of drinking water and diet of milk and gruels.



TRANSIENT.—*Relieved by Micturition.*

*Moderate Prostatic Enlargement.*—Started by micturition.

*Cystitis.*—All grades relieved by micturition.

*Acute.*—Pain deep in pelvis, radiating upward; burning, tenderness, frequent micturition and tenesmus.

Treatment.—Ammonium benzoate gr. x, 3 or 4 times a day in infusion of buchu; saline laxatives; liquid, non-stimulating diet; diaphoretics.—Skene.

R. Tinct. opii deod. m. ii; tinct. hyos. m. viiss; potassii acetat. gr. iv; aquam q. s.: A teaspoonful every 4 hours.—Fleming.

Iodoform pencil introduced into bladder may relieve pain and irritation in gonorrhoeal and tubercular forms.—Richard Lomer.

Oil of sandalwood m. x in capsules every 2 hours, decreasing dose as symptoms improve; also borax 4 gr. with benzoic acid 3 gr. every 4 hours till urine is acid.—Baldwin.

Women.—Irrigate with hot solution of potassium permanganate gr.  $\frac{3}{4}$  to the pint, or mercuric chlorid of the same strength, or silver nitrate gr. i-iv ad. oz. i.—Am. Text-book of Gynecology.

Rest in bed in warm room; open bowels; diet of liquids and soft foods; no stimulants; vaginal douches lasting 15 or 20 minutes t.i.d.; hot applications on lower abdomen; hot sitz-baths and



dry, hot bran bags; morphin hypodermically if necessary to produce sleep; codein or suppositories of hyoscyamus and belladonna or occasional rectal enema of 30 drops of deodorized tinct. opium in 100 to 120 Cc. of warm starch water in intervals; convalescence greatly promoted by washing out bladder 2 or 3 times daily with lukewarm water containing 2 per cent boric acid or ichthyol.—Kelly.

Following Catheterization.—Irrigate bladder with a pint (if patient will bear this much) of boiled water containing 2 dr. chloral hydrate; pass or draw off in 3 to 5 minutes; repeat application from 1 to 3 times a day.—G. Law.

*Exfoliative.*—Due to retroflexion of gravid uterus, protracted labor, myoma choking pelvis and retention of urine; frequent, straining micturition, with overdistention and often dribbling; urine turbid and fetid and contains pieces of membrane.

Treatment.—Treat cause (reduce uterine flexion, under anesthetic if need be, and keep in place with vaginal pack) and catheterize if necessary; after early acute symptoms, wash out bladder 2 or 3 times daily with warm boric acid solution till urine normal.—Kelly.

*Chronic.*—Pain slight and variable; pyuria and vesical epithelium; often triple phosphates.

Treatment.—Salol, 45-75 gr. daily in divided



doses; fluid ext. zea mais in  $\frac{1}{2}$  dr. dose best drug to allay irritation of bladder; milk diet; vesical irrigation with mercuric chlorid (1:100,000 up to 1:5,000) in normal saline solution, alternating daily or twice a day with boric acid solution; direct topical application to diseased patches of 5% silver nitrate, followed by 3% every 4 or 5 days; vesical balloon smeared with sterilized 10% ichthyol gelatin, left in bladder for 10 to 20 minutes.—H. Kelly.

Senile.—R. Ext. hydrastis fl., m. iv; tinct. gent. comp. m. viii; tinct. staphisag. m. ii; tinct. cannabis ind. m. ii; syr. aurantii q. s.: A teaspoonful t.i.d.—Hopkins.

*Irritable Bladder.*—Symptoms similar to cystitis, but no pus or objective signs.

Treatment.—Atropin sulphate gr.  $\frac{1}{120}$  before each meal.—Goodell.

Hyperemia of Trigonum.—Apply to red patches 5 to 10% sol. silver nitrate (through Kelly's cystoscope No. 10), repeated every 5, 6 or 7 days.—Hiram N. Vineberg.

Puerperal.—Ten gr. salol and 10 m. tinct. hyoscyamus in a tablespoonful of infusion of buchu t.i.d.—Fothergill.

Of Chronic Endometritis.—R. Tinct. belladonnæ m. iv; liq. potas. m. xv; aquam q. s.: A teaspoonful in a wineglassful of water t.i.d. between meals.—Garrigues.



Of Ovarian Disorders.—Ovary enlarged and tender; pain radiates down thigh.

Treatment.—Potassium bromid; teacupful of warm hop tea containing 20-40 drops of laudanum by rectum; counterirritation and attention to general health.—Skene.

Hysterical.—Psychical origin; hyperesthesia of one side of abdomen and other stigmata.

Treatment.—Suggestive treatment, reinforced by galvanism, hydrotherapy and Blaud's pill.

Malarial.—Periodic; abrupt.

Treatment.—Quinin.

*Vesical Tuberculosis*.—Increasing frequency of micturition, with pain and tenesmus; cystoscope shows red patches studded with tubercles; tubercle bacilli in sediment in early stage.

Treatment.—Copious instillations of ichthyol in 1 to 4% aqueous solution.—M. Nogues.

Iodoform emulsion 5 to 10% with glycerin, acacia and water, injected into bladder and applied evenly to whole surface under moderate pressure with Clark's balloon every 2 or 3 days; topical application through speculum of silver nitrate (20% to solid stick), then filling balloon with water and washing out repeatedly; curettage, cauterization or excision in obstinate cases.—Kelly.

*Prostatitis*.—Certain forms, especially onanitic.



INCREASED BY MICTURITION.—*Cramp of a Semitoneless Bladder.*—From stricture or perhaps sarcoma of prostate; bearing down pains.

*Cystalgia.*—Neuralgia of bladder; from urethral stricture or caruncle, anal fissure, gout, sciatica or ulceration.

Treatment.—Gentle passage of soft bougie or conical steel sound into bladder every 4 to 10 days to put deep urethra on stretch; injections of deep urethra with silver nitrate (gr. i-x ad. oz. 1); mineral waters, alkalies and tonic remedies.—Keyes.

*Benign Tumors of Bladder.*—Recurrent, unprovoked, profuse hematuria; may be portions of growth in urinary sediment; papilloma, fibroma adenoma, myoma; cystic follicles, dermoid cysts, myxoma.

Treatment.—Eradicate by operation whenever possible; as palliative for pain use instillations of cocain or morphin hypodermically.—White and Martin.

#### PERINEAL.

CONSTANT. — *Chronic Prostatitis.* — Weight, aching and burning; enlarged and tender prostate.

Treatment.—Patient urinates and lies down with head and shoulders elevated; pass soft rubber or woven silk catheter; with Ultzmann hard rubber syringe throw medicated fluid (4 to 8 oz.)



slowly and gently into urethra till bladder feels full, when patient passes out liquid; fluids should always be warm. Solution 1= alum and zinc sulphate of each 2 parts, distilled water 500 parts—dilute with 3 parts of warm boiled water and inject, increasing strength daily till equal parts are used. Solution 2= potassium permanganate 1 part in 500 distilled water—dilute as before, giving injection every other day. Solution 3= silver nitrate 1:500—increase strength slowly and tentatively.—Hayden.

*Prostatic Calculi.*—Symptoms of chronic prostatitis or posterior urethritis; rectal palpation, grating with sound, urethroscopy.

Treatment.—Removal with urethral forceps or by perineal urethrotomy; avoid constipation and sexual or alcoholic excesses.—White and Martin.

Painful and difficult urination, with hematuria and radiating pains; retention of urine; rectal tenesmus; hard, nodular growth felt by rectum; cachexia.

Treatment. — Catheterization or suprapubic drainage; opium or morphin hypodermically or by rectum.—White and Martin.

*Commencing Senile Prostatic Enlargement.*—Micturition frequent, especially at night; full but feeble stream.

Treatment.—Hygienic measure; ergot, salol,



boric acid, belladonna, bromids; sodium iodid, 3 gr. t.i.d., to retard arteriosclerosis; hyoscin or hyoscyamin as sedative for micturition; systematic dilation with full-sized steel sounds (10 or 15 minutes every 5th day) in early stage of hypertrophy; systematic catheterization once daily for 3 oz. residual urine—twice a day for 6 oz.; rectal irrigation with hot or cold water or normal saline solution; daily prostatic massage per rectum for 5 or 10 minutes in chronic inflammation; prostatotomy, prostatectomy, castration, vasectomy or suprapubic drainage.—White and Martin.

Sodium phosphate, hyoscyamus, kava kava, triticum repens and uva ursi; sitz-baths; rectal injections of hot saline solutions.—J. B. Murphy.

*Encysted Calculus at Base of Bladder.*—Pain radiating from neck of bladder, sharply increased at end of micturition; obstinate cystitis and hematuria.

Treatment.—Litholopaxy (crushing and evacuation with Bigelow's evacuator) or perineal or suprapubic cystotomy; preliminary rest in bed for 2 or 3 days, with salines for bowels, milk diet, diluents; salol and boric acid for urine.—White and Martin.

Prevention.—Regulation of stomach; systematic exercise; salines morning and evening for bowels; occasional stimulation of liver with



small doses of calomel or blue pill; abundance of water or bland liquids; plenty of salt with food; salicylic acid or potassium salts or 15 gr. piperazin in a pint of water in divided doses during day if gravel formation; full doses of potassium citrate for uric acid trouble; tonics and nitrohydrochloric acid for phosphaturia; regular catheterization if obstruction to free evacuation of urine; antiseptics by mouth and locally for cystitis.—White and Martin.

TRANSIENT.—RELIEVED BY MICTURITION.

*Acute Prostatitis.*—Heat, weight and burning pain much increased by defecation; prostate hot, doughy, enlarged and tender; prostatorrhœa.

Treatment.—Bed; milk diet;  $\frac{1}{2}$  dr. potassium citrate and fluid ext. kava kava in water 2 hours after meals and at night.—Hayden.

℞ Tinct. aconit., m. iiss.; tinct. gelsemii, m. v.; antipyrin, gr. v; ext. ergotae, fl. m xx; aquam, q. s.: A dessert spoonful every two or three hours in a wineglassful of water.—J. A. M. A.

Use of 5 or 10 grain ichthyol suppositories.—Freundenberg.

Rectal suppositories, each composed of 10-20 gr. ichthyol, 1 gr. opium and  $\frac{1}{4}$  gr. belladonna.—Leuf.

*Irritable Prostate of Gouty Persons.*—Same symptoms as in acute prostatitis, but no pus or



enlargement of gland; worse at night; hyperacid urine.

Treatment.—R. Potassii bicarb., potassii cit. aa; gr. viii; syr. simp. q. s.: A teaspoonful in a half tumblerful of water, adding 2 drams of lemon juice and drinking while effervescing.—Skene.

*Tubercular Prostate.*—Symptoms of chronic prostatitis; tubercle bacilli in discharge milked from prostate; gland thickened, nodular or with points of softening.

Treatment.—Improve general health; instillation of mercuric chlorid (1:6000) if infiltration begins in urethra or ducts of glands; parenchymatous injection of 10% iodoform-glycerin emulsion introduced through perineum by long needle guided by finger in rectum (10 to 15 drops every 3 to 5 days); incision, curettage and iodoform

*Quiescent Stage of Tubercular Disease of Bladder Base.*

INCREASED BY MICTURITION.—

*Suburethral Abscess.*

*Inflamed Stricture.*

*Impacted Urethral Stone.*

*Carcinoma of Bulb.*

*Active Catarrh or Tubercular Ulceration of Bladder Behind Trigone Calculus.*—Encysted at vesical base or low down on posterior wall or pouched behind upper part of prostate.



*Extravasation of Urine.*—Suddenly developed fluctuating tumor, with smarting or burning pain at seat of rupture; sloughing; sepsis.

Treatment.—Prevent further extravasation by external perineal urethrotomy or perineal section, dividing stricture thoroughly; drain entire infiltrated areas by long multiple incisions, squeeze out urine and wash with 1:4000 bichlorid; dress cuts with iodoform, pack loosely with iodoform gauze and cover with hot bichlorid compresses, changed every two hours.—White and Martin.

*Seminal Vesiculitis.*—Constant or shooting pains in perineum, hypogastrium and anus, often referred to hip-joint and down thigh; often painful erections with emission of blood-stained semen; rectal examination shows swollen, hot, tender vesicle; usually gonorrhoea.

Treatment.—Milk ducts every 5 to 7 days; hot rectal injections; bipolar rectal and inguinal faradism; non-stimulating diet; non-alcoholic tonics.—Bransford Lewis.

Acute Seminal Vesiculitis.—Rest and freedom from sexual excitement; bland diet, alkaline diluents and mild laxatives, with hot sitz-baths or hot applications to perineum; if abscess forms evacuate by rectal incision.—Chetwood.

#### URETHRAL.

*Irritable Urethra.*—A neurosis.

Treatment.—Dilate urethra.—Baldy.



*Acute Urethritis.*—Discharge in specific form contains gonococci.

Treatment.—Acute: To abort apply with meatoscope silver nitrate gr. xv ad. oz. i to first inch of urethra.—Taylor.

Hot quart irrigation with potassium permanganate solution in water (begin with 1:6000; increase by 7th or 14th day to 1:2000); hold syringe 2 feet above level of bladder for anterior urethra—4 or 5 feet for total urethritis; give as often as need be to prevent recurrence of purulent discharge.—White and Martin.

Methylene blue 1 or 2 grains with 3 m. oil of sandal, 3 m. oleoresin of copaiba and 1 m. oil of cinnamon in capsules t.i.d.

Total.—Irrigation back to bladder with 1:500 silver nitrate, using short meatus nozzle—inject after urinating, then urinate again; this treatment contraindicated in hyperacute cases—is especially rapidly curative in chronic cases not dependent on stricture.—Edward Martin.

Wyeth Method.—Irrigate as soon as diagnosed twice daily with 2 quarts of hot 1:3000 potassium permanganate solution (1 dr. to 6 oz. water—a tablespoonful to the quart); hang fountain syringe about 3 feet above level of urethra; use in males standing, females lying; if urethra very sensitive, inject previously 1 to 3 dr. of 2% cocain solution; use small-caliber glass catheter



with 2 or 3 lateral perforations near closed end (ordinary female catheter answers); lubricate catheter with glycerin, not oil or vaselin; hot hip bath morning and evening; avoid stimulating drinks and spicy foods; have bowels moved once daily; warn patient of danger to eyes (let him wash hands with 1:500 bichlorid); catch discharge in bag of oiled silk, rubber or thick cloth; internally give salol 1 part with 2 parts oil of wintergreen—20 drops 4 times a day, preferably in capsules; also citrate of potash, gr. xx-xxx 4 times a day for first week; this treatment cures without complications in from 6 to 25 days.

Lafayette Mixture.—R. Bals. copaibæ, spt. lavand. co., spt. eth. nitrosi aa.m.xv; liq. potassii m.ii; olei gaulth. m.viii; mucil. acaciæ q. s.: A dessertspoonful t.i.d. after meals.—Martin and White.

Acute Gonorrhœa.—In all stages: R. Hydrarg. chlor. corros. gr.ss. acidi carbol. gr.xii; zinci sulphocarb. gr.xii-lx; boroglycerid (25%) f. oz. ii; aquae ad. oz. vi: Inject after urination, making stronger or weaker according to indications.—White and Martin.

Acute Gonorrhœa.—Injections (anterior urethra only to 10th day of disease) of a mixture of 5 gr. of yellow muriate of hydrastin and protargol,  $\frac{1}{2}$  dr. glycerin and water to make an



ounce—use 4 to 6 times daily, retaining fluid 5 to 10 minutes and preceding injection by a hot-water flush. When symptoms indicate extension to deep urethra (usually not before 8th day) inject entire urethra, using at least an ounce for each injection.—Belfield.

To Prevent Chordee.—Two or three pills of camphor ( $2\frac{1}{2}$  gr.) and opium ( $\frac{1}{2}$  gr.) every night.—Ricord.

Gonorrhœa of Skene's Ducts.—Thiol in full strength applied to inside of duct with cotton on filiform bougie.—A. B. Tucker.

Vulvar.—Perfect quiet; wash parts with boric acid of 1:4000 mercuric chlorid, then dust with mixture of calomel and bismuth and keep piece of cotton between labia.—Horwitz.

*Acute Urethritis of Women.*—Usually due to gonorrhœa or foreign body; persistent intense burning; frequent, painful urination; sometimes discharge of blood; milk out pus and examine for gonococci.

Treatment.—Rest in bed; frequent hot vaginal douches; bathe parts externally with lead water and laudanum; belladonna or opium suppositories; iodoform suppositories once daily after acute stage has subsided.—Kelly.

Simple Urethritis in Females.—Irrigate with hot water and double catheter, followed by thorough application with applicator of silver nitrate



80 gr. to oz. 3 or 4 times, then dry and make final application; if tissue whitens carry in salt water.—Robt. C. Harris.

*Chronic Urethritis or Gleet.*—Occasional neuralgic urethral, perineal or pelvic pains; “morning drop” of pus or muco-pus.

Treatment.—Galvanization of granular patches for 5 minutes every 4 days, using Otis’ insulated sound and 2 to 5 m.a. of current.—J. M. Blaine.

Local application of 25% ichthyol salve by means of fenestrated steel sound.—A. Ravogli.

*Chronic of Women.*—Commonest in prostitutes; diffuse form marked by small abscesses (of Skene’s glands particularly) with deeply injected livid or grayish mucosa; circumscribed form shows groups of yellow points surrounded by reddened area and perhaps scar streaks.

Treatment.—Expose affected areas and apply 3 to 5% solution of silver nitrate every 3rd or 5th day; empty Skene’s glands daily by pressure from above downward on each side of urethra; apply ichthyol in glycerin (1 to 10 or 1 to 5) by means of absorbent cotton on fine roughened applicator.—Kelly.

*Urethral Stricture.*—Frequent, difficult urination, with dribbling; best diagnosed with bougies à boule.



Treatment.—Inflammatory: Same as for acute anterior urethritis.

Spasmodic.—Treat special cause (organic stricture, uric acid, sexual excesses, etc.); full-sized sounds at regular intervals.—White and Martin.

Organic.—Gradual or continuous dilatation; internal urethrotomy; external urethrotomy; combined urethrotomy; perineal section, division, electrolysis, etc.—White and Martin.

In Women.—Difficulty and pain in micturition; best detected with olive-point bougies; commonly of gonorrhoeal origin.

Treatment.—For cancerous catheterize regularly or make a vesico-vaginal fistula; for syphilitic, potassium iodid; for cicatricial contraction of anterior vaginal wall, make multiple incisions or dissect out scar, leaving catheter in bladder 4 or 5 days; for other strictures dilate gradually up to No. 10.—Kelly.

*Foreign Bodies or Calculi.*—History; grating; obstruction to urination.

Treatment.—Remove with urethral forceps and urethroscope, or push stone back into bladder, crush and evacuate, or cut down on and remove.—White and Martin.

*Cowperitis.*—Resembles prostatitis; deep, tender, pea-sized perineal tumor; complicates gonorrhoea.

Treatment.—Rest in bed; prolonged hot baths;







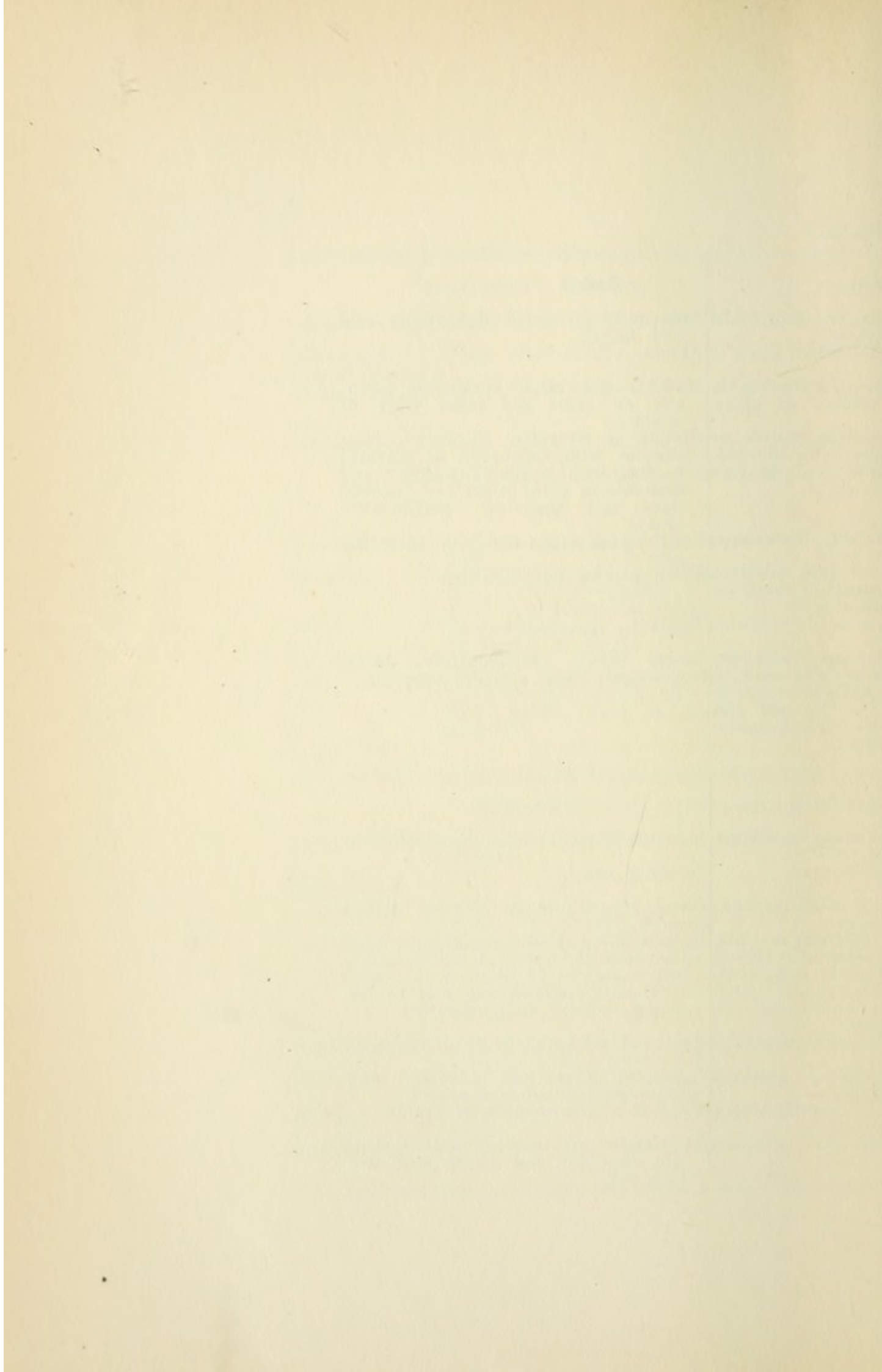
CHANCRE.		
Causes.....	Discharge from syphilitic lesion.	Inoculation discharge
Incubation....	10 days to 8 weeks—average 3 weeks.	Indefinite
Number and Location....	Usually <i>single</i> and anywhere on genitalia.	Often <i>multiple</i> and nearly always
Conformation.	Round, oval or symmetric erosion, papule, tubercle or ulcer (usually superficial, cup-shaped), with smooth, glazed, dusky red surface.	Round, oval, "punched" "worm-eaten" pultaceous
Secretion.....	<i>Scanty, serous, hardly ever autoinoculable.</i>	<i>Copious, abundant.</i>
Palpation.....	Cartilaginous or parchment-like <i>induration</i> , sharply circumscribed and movable; sore seldom sensitive.	Boggy feeling; adherent to pressure;
Course.....	Often spontaneous healing—hastened by specific treatment.	Variable and
Complications.	<i>Bubo constant, small, hard, multiple, painless, non-adherent, usually bilateral—appears a week after chancre; hard, beaded cord of dorsal lymphangitis.</i>	Bubo in only one side; usually in inguinal and usually lying skin hot; painful; phagedenic
BALANITIS AND POSTHITIS.		
Causes.....	Dirt and unclean discharges; friction; phimosis.	Specific or long continuing
Incubation....	Absent.	Indefinite
Number and Location....	Usually multiple, on glans or inner surface of foreskin or both.	Usually multiple on membrane
Conformation.	Hot and itchy redness about end of penis, becoming superficial, irregular or circinate erosions and ulceration of preputial orifice; thick, offensive coating of crusts.	Marked by mentous pink in brown in forming cockscomb
Secretion.....	Thick, creamy, profuse and highly offensive; often autoinoculable.	Slight amount
Palpation.....	Diffuse edema and inflammatory infiltration, usually quite painful.	Rarely hard; nearly always
Course.....	May be progressive and last for several weeks.	Spontaneous clean.
Complications.	Occasionally bubo—rarely suppurating.	Vary with



## SORES

CHANCROID.	HERPES PROGENITALIS.
with pus or chancroidal od.	Intercourse or acrid discharges; cold and fevers. Absent.
le (opposing surfaces); ys on prepuce or glans.	<i>Multiple and often coalescing</i> —gener- ally on glans and inner layer of prepuce.
or symmetric pustule or "ulcer" with uneven, " surface and grayish lough.	Groups of irregular, superficial, <i>clear</i> <i>vesicles</i> with polycyclic or serrated border, soon becoming pustules and then ulcers with bright red granula- tions and sometimes pseudo-mem- brane.
lent, readily autoinocu- ading off into adjacent ues; change in shape on ten painful. relapsive.	Small serous drops exude on squeezing sore. Often painful and sensitive.
hird of cases—large, ac- ed, <i>tender and painful</i> <i>single</i> , adherent to over- which is often red and l dorsal lymphangitis;	Rarely single inflammatory bubo; neuralgia often precedes eruption.
WARTS OR PAPILLOMATA.	EPITHELIOMA.
i-specific acrid discharges ed. od.	Local irritation and senility predispose. Insidious onset.
ole, on skin or mucous ascular tuberos or fila- rescences (moist, soft and ected parts—dry, hard, rts exposed to air), often sberry, cauliflower or egretations. on mucous surfaces.	Glans or prepuce as a rule; always <i>single</i> . At first like a small venereal wart, soon becoming indurated, forming irregu- larly excavated ulcer with hard, edematous margins, and may be lob- ulated nodular conglomeration.
formations; growths uite painless. disappearance if kept	<i>Infiltrated base and borders</i> ; only slight pain till far advanced. Fatal in a few months or years.
mary disease.	Infiltration of inguinal glands with late ulceration and discharge of san- ious pus.







laxative or saline purge; hot water bag to perineum or morphin hypodermically in perineum; cut into abscess or urethral extravasation at once, curette and pack with iodoform gauze, guarding against fistula by permanent catheterization.—White and Martin.

*Follicular and Periurethral Abscess.*—Distinct, small, rounded, tender follicular nodules on under surface of urethra; pus commonly evacuates externally; rapid increase in pain, especially on urination, and swelling if urinary extravasation.

Treatment.—Gentle pressure and massage to open duct; cloths wet with alcohol and diluted lead water about penis; curette and pack with iodoform gauze if softening or sinus; evacuate at once and use permanent catheterization for periurethral abscess.—White and Martin.

*Suburethral Abscess.*—Symmetric, rounded, extremely tender swelling of anterior vaginal wall beneath urethra; can be emptied by milking with finger; painful micturition, dyspareunia, and sense of foreign body in vagina; discharge of pus from urethra.

Treatment.—Longitudinal incision of sac under cocain; paint sac wall with strong tincture of iodine and pack with lint.—Kelly.

*Urethral Caruncle.*—Much local and radiating pain during urination and coitus; florid or dusky red, very sensitive excrescence at urethral orifice.



Treatment.—Complete extirpation with knife approximating tissues with fine continuous cat gut suture to cover raw surface as growth is cut away.—Kelly.

*Rupture of Urethra.*—Direct trauma; sudden hemorrhage, pain and swelling.

Treatment.—In least serious cases pressure, hot antiseptic compresses, urinary antiseptics, rest in bed, free purgation and mild antiseptic urethral irrigation; in severer cases check hemorrhage by cold and pressure, pass catheter after washing urethra with boric acid and leave in place, irrigating bladder and urethra by side of catheter twice daily with 4% boric acid solution; if catheter cannot be passed readily or if urinary extravasation and cellulitis, make perineal section.—White and Martin.

*Prolapse of Urethral Mucosa.*—Dysuria, followed by sharp pain, bleeding and difficulty in walking; small elevation or tender red zone in urethral opening; young girls and old women mostly.

Treatment.—Rest in bed; wearing of compress; excise with scissors and suture with catgut.—Doctors' Magazine.

*Chancre.*—See table.

Treatment.—R. Hydrarg. bichlor., gr. 1-10; zinci sulphocarb., gr. xx; ext. opii aq., gr. xii; aquæ rosæ, oz. iv: Apply by means of pledget



of cotton, changing every two hours; dilute if painful; if granulations sluggish, touch daily with 5 per cent. silver nitrate; cauterize with nitric acid or acid mercuric nitrate, if ulceration extending; iodoform most serviceable, dry powder (in mild lesions) may be applied in colloidion—10 per cent. iodoform, 1 per cent. sublimate.—White and Martin.

*Chancroid.*—See table.

Treatment.—Wash thoroughly with soap and water, spray with hydrogen peroxid, then wash or spray with carbolic acid 1:60 or bichlorid 1:3000, then use either nonirritant antiseptic applications or cauterizants.

Chancroids in Females.—Destroy with undiluted carbolic or nitric acid or Paquelin cautery under cocain; keep parts covered with pledgets of lint or cotton dipped in a solution of 20 to 40 m. carbolic acid,  $\frac{1}{2}$  oz. glycerin and water to make 4 oz.; use vaginal injections of borax or sodium bicarbonate, followed by mercuric chlorid (1:5000) several times daily; give tonics and stimulants if phagedenic.—Garrigues.

Cauterization.—White heat of heated iron, Paquelin's, or galvano-cautery, or nitric acid, after thorough cleansing and anesthesia with spray of 10 per cent. cocain and hypodermic injection of 1 per cent. cocain, 10 drops driven into cellular tissue around base of lesion; cleanse again thor-



oughly, dust with iodoform and protect with absorbent cotton; combat inflammatory swelling with strips of lint wrung out of dilute lead water and alcohol, equal parts.—White and Martin.

*Herpes.*—See table.

Treatment.—Antiseptic washings, careful drying, painting with silver nitrate, dusting with zinc oxid or bismuth; interpose thin layer of cotton between mucous surfaces; for pain of neuralgic form, apply mixture of 12 gr. cocain, 1 gr. menthol and 4 dr. lanolin, or try galvanic current.—White and Martin.

*Balanitis.*—See table.

Treatment.—Wash with mild antiseptic, dry with absorbent cotton and brush erosion with 10 per cent. silver nitrate solution; then dress with equal parts of bismuth and calomel, place thin layer of cotton over glans and draw foreskin forward, changing this dressing several times daily.—White and Martin.

*Venereal Warts or Papillomata.*—See table.

Treatment.—Complete removal with scissors under cocain, followed by cauterization with pure carbolic acid and dressing with iodoform.—White and Martin.

*Epithelioma.*—See table.

Treatment.—Total excision of involved area and cauterization of wound with caustic potash if slightly developed; amputation and removal



of enlarged lymph glands if at all extensive.—White and Martin.

*Paraphimosis.*—Prepuce retracted and fixed behind glans; great and rapid swelling of parts and severe pain.

Treatment.—Reduce at once, unless not serious and a result of previously existing inflammation (evaporating lotions, rest and elevation of parts), or reduce after use of ice-bag for half an hour or after use of rubber band with aid of grooved director; if necessary reduce under ether after puncturing thick, edematous collar in many places with needle and lubricating with carbolized oil; seize glans and draw forward, at same time drawing prepuce over glans; if glans purple-black or mottled and cold, divide constricting band immediately, draw foreskin forward and apply for a few minutes for a long time hot compresses wrung out in mild antiseptic lotions.—White and Martin.

*Inflammatory Lymphangitis of Penis.*—Usually secondary to peripheral venereal disease; indurated band (can be lifted up) often felt extending along dorsum of penis to first lymph glands.

Treatment.—Rest in bed; evaporating lotions; salines.—White and Martin.

CONSTANT pain in prostaticorrhea, catarrh of



prostatic canal, swollen verumontanum, and enlarged median or lateral lobe of prostate.

TRANSIENT.—*Before micturition* in clot retention or senile prostatic obstruction.

*During micturition* from local lesions; inflammation, granular patch, ulceration, wart, narrow meatus, or phimosis.

*After micturition* from stone in bladder, tubercular or other ulceration of posterior or lateral bladder, all forms of acute cystitis, especially at neck, vesical growth engaging in or impinging on urethral orifice, acute prostatitis, inflamed senile or onanitic prostate, severe vesical spasm of renal origin, renal tubercle or colic, and ureteral block or kink, as in floating kidney.

#### INTRASCROTAL PAIN.

DIRECT.—*Orchitis*.—Testicular pain, heat, and swelling; commonly of gonorrhoeal origin, sometimes from acute infections; chronic swelling, generally painless and syphilitic.

Treatment.—Rest in bed; elevate pelvis and testicles; evaporating lotions or ice-bag or hot fomentations; liquid stools; febrifuges, diuretics; morphin hypodermically for severe pain; this failing, make multiple punctures of tunica albuginea, with straight cataract knife; when out of bed (two or three weeks ordinarily) wear carefully fitted pressure suspensory bandage; early free in-



cision of abscess, followed by irrigation and gauze packing.—White and Martin.

Apply a solution of 2 dr. ammonium chlorid in 2 oz. each of alcohol and water constantly to inflamed testicle.

Spray 2 per cent. carbolic acid on part with steam atomizer.

Envelop testicles and cord in 30 per cent. ichthyol ointment and elevate; give 10 m. pulsatilla every hour; strap later with gauze bandage and apply suspensory.

Fluid ext. phytolacca, m. v. in water every two hours.—Med. Age.

Ointment composed of 1 part guaiacol to 6 of vaselin. Thick paste of bismuth subnitrate.—Med. Times.

Pilocarpin  $\frac{1}{8}$  gr. and codein  $\frac{1}{2}$  gr. every two to six hours, as needed, to produce copious sweating and relieve pain.—S. Harnsberger.

*Contusion of Testicle.*—Faintness or shock; intense, sickening pain, followed by constant aching, retraction of testis and swelling.

Treatment.—Morphin injection; rest on back with pelvis elevated and scrotum supported by pillow or handkerchief bandage; apply cloths constantly wet with lead water and laudanum, or small ice-bag (for three or four days, with piece of lint underneath); or hot compresses wrung out of dilute lead water and changed every fif-



teen minutes; wear suspensory bandage for a month; also use small doses of potassium iodid and mild counterirritation to skin of scrotum.—White and Martin.

*Tubercular Disease of Testicle and Epididymis.*—Apparently causeless outbreak of acute inflammation; tubercular infiltration of prostate and seminal vesicles; persistence of swelling after pain and other acute symptoms have subsided; formation of nodules, which break down, leaving fistula; discharge contains tubercle bacilli.

Treatment.—Palliative treatment includes tonics and supporting measures and pressure suspensory bandage; radical: incision, scraping and packing, or partial excision, or injections every third or fourth day of 10 per cent. iodoform in glycerin—5-15 m., driven into mass at a number of points, pressing needle punctures with iodoform collodion and supporting testis, with pressure suspensory bandage; castration in advanced cases.—White and Martin.

*Neuralgia of Testicles.*—Continuous or intermittent pain the only symptom; testicles extremely sensitive, testes may become hard during paroxysms; trouble may result from previous inflammation, hernia, gout, rheumatism, toxemia or varicose spermatic veins.

Treatment.—Pressure suspensory bandage; local heat or hold; counterirritation; freeze over-



lying skin with methyl chlorid; blisters, galvanism, ice-bag; internally aconitin, quinin, antipyrin, acetanilid, exalgin, valerian, hyoscin.—White and Martin.

Gouty Testicular Pain of Old Men.—Local heat; colchicum in full doses.

*Torsion of Testicle.*—Sudden symptoms like epididymitis during active muscular exertion; pain very severe if complete strangulation.

Treatment.—Reduce by manipulation or operation.—White and Martin.

*Benign Tumors of Testis.*—Usually painless; fibroma, enchondroma, adenoma, dermoid or hydatid cysts; all comparatively slow of growth.

Treatment.—Excision or castration.

*Malignant Tumors of Testis.*—Rapid growth with adhesions; may be painless at first; carcinoma begins as small, hard nodules, rapidly enlarging, with marked dilatation of internal and superficial blood vessels.

Treatment.—Early castration.

*Epididymitis.*—Aching or neuralgic radiating pain; worse on standing; rapid enlargement, with purple edema of back of scrotum; chills and fever; stooping, straddling gait; usually due to gonorrhoea; acute hydrocele accompanies.

Treatment.—Rest in bed; saline purge; wrap testicle in lead water and laudanum and elevate with handkerchief bandage; hot compresses and



hot water bag to inguinal region; properly fitted suspensory bandage strapped tightly in recumbent position over thick sheet of absorbent cotton or wool; in severe cases puncture vaginal tunic and cellular tissue at back of scrotum (introduce knife not deeper than one-half inch), and then apply suspensory bandage or elevate testes with handkerchief; keep testicle constantly wet with lead water and laudanum on lint; leeches along side of cord if pain still unrelieved; incise if pus suspected and drain with iodoform gauze; strapping or suspensory bandage after acute symptoms subside, followed later by application of ointment of iodoform, 1 part to 7 parts belladonna ointment.—White and Martin.

*Epididymo-Orchitis from Strain.*—Same treatment as for contusion of testicle.

*Funiculitis.*—Cord hard and usually tender and painful; from trauma (phlegmonous), gonorrhoea, syphilis or tuberculosis (cord like a rosary).

Treatment.—Rest, elevation and application of cold (evaporating lotions); if swelling threatens vitality of testicle, incision and drainage indicated.—White and Martin.

*Teratoma Testis.*—Ovoid, elastic, sometimes slightly translucent cystoid tumor of testicle; entire sac not filled with fluid and testis cannot be made out after exploratory puncture.



Treatment.—Ablation of diseased organ.—F. R. Sturgis.

*Varicocele*.—Dull ache and feeling of weight; soft mass like a bunch of earthworms, nearly always on left side; testis soft or atrophied; may be melancholia and psychic impotence.

Treatment.—Palliative; proper regulation of bowels; avoid violent muscular exercise or prolonged standing; daily application of cold douches to overlying skin; properly fitted suspensory bandage.

Radical.—Subcutaneous ligation of veins, or open incision, ligation and excision.—White and Martin.

*Hernia*.—Smooth enlargement, narrower above than below, usually reducible into abdomen with gurgling sound; impulse on coughing unless strangulated; severe pain and inflammation when strangulated.

*Hydrocele*.—Smooth, translucent, tense or fluctuating swelling—begins at testis ordinarily—at abdominal ring in hydrocele of cord.

Treatment.—Acute: Rest, elevation of parts; evaporating lotions; puncture if pain unbearable; later, suspensory bandage with mild absorbent ointments.—White and Martin.

Acute of Cord.—Compresses wet in dilute lead water and alcohol held in place by crossed perineal gauze bandage.—White and Martin.



*Hematocoele.*—Opaque and fluctuating or, later, hard, elastic swelling enveloping testis; follows trauma, tapping and chronic inflammations.

Treatment.—Rest; elevation of parts; evaporating lotions or ice-bag; if swelling rapid and progressive, remove clots through incision.—White and Martin.

*Pyocoele.*—Encysted collection of pus, usually tubercular, chronic and without inflammatory symptoms.

Treatment.—Free incision, thorough curettage of lining walls, and maintenance of drainage till cavity is well filled with granulations, which iodoform glycerin emulsion stimulates.—Eugene Fuller.

*Tumors of Cord.*—Cystoma, lymphadenoma, lipoma, mixed enchondroma.

Treatment.—Early operation; castration if tumor large and impossible to dissect free from structures of cord, and in malignant cases (with removal of as much cord as possible).—White and Martin.

*Referred Pain in Testicle.*—Pyelitis (same side); renal colic (with retraction); urethral obstruction; seminal vesiculitis (neuralgic); excessive sexual indulgence; long-continued sexual excitement without relief; rarely vesical and deep urethral inflammation; anal fissure or irritable rectal ulcer.



## PAIN AT SEAT OF DISEASE.—

*Before Micturition* from neuroses, congestion or inflammation (ceasing after act); ulceration (especially at vesical neck); full bladder (ceasing after act); acid, concentrated urine; rarely in diseases of renal pelvis or kidney (bilateral, dull aching in acute nephritis).

*During Micturition* from inflammation of urethra, bladder or prostate, greatly aggravated by defecation.

*After Micturition* from vesical stone (relieved by rest or dorsal position during act); vesical fissure, erosion, inflammation of tubercular ulceration.

*Constant or Intermittent*, with no distinct lesions and usually nocturnal remissions in irritable or neurotic bladder (sometimes a symptom prodromal of tabes; for treatment, see above under suprapubic pain).

*Local Renal Pain* from oxaluria or lithuria; see also renal pain under backache.

## REFERRED GENITO-URINARY PAIN.—

*Renal Disease*.—Groin, inner thigh, testis, healthy bladder and urethra, shoulder, calf, heel; small spot of tenderness to inner side of middle of Poupart's ligament after attack of renal colic.

*Vesical Disease*.—Suprapubic or umbilical region, sacrum, lower lumbar vertebræ or synchondroses, glandular urethra, groin, kidneys, peri-



neum, anus, inner and sciatic regions of thigh, sole of foot; stone in bladder causes pain in urethra a little back of meatus; inflammation of trigonum causes itching, tickling and painful spasm of anal sphincter; any irritation of vesical orifice may excite neuralgic pain from navel to bladder. More or less persistent post-scrotal pain in vesical tuberculosis.

*Prostatic Disease.*—Same as bladder with addition of heel.

*Testicular Disease.*—Along groin.



## CHAPTER X.

### PROCTALGIA.

Provoked or aggravated by defecation; great tenesmus; blood and pus in stools.

*Hemorrhoids.*—Venous variety most painful.

Treatment.—R. Liq. plumbi subac., oz. i; tinct. opii, dr. iv; a teaspoonful in a wineglassful of water; apply night and morning.—Allingham.

External.—Palliative: Avoid stimulants and condiments; keep bowels open with Vichy, Hunyadi, Friedrichshall, etc.; calomel parvules for congested liver; frequent hot baths; wash parts with castile soap and water; if pile contains hard clot (thrombotic) apply frequently following lotion, either hot or cold: Morphin sulphate, gr. iii; calomel, gr. xii; vaselin, oz. i; liq. plumbi subac., dr. iv; tinct. opii, dr. iiss; aquam dest., ad oz. iv; hot poultices relieve pain and reduce inflammation.—Gant.

Operative Treatment.—Thrombotic Variety: Incise, turn out clot, apply escharotic to inside and put patient in bed for several hours, keeping incision open with small pledget of cotton.—Gant.

Inflamed External Hemorrhoids.—Apply 2 or 3 times a day an ointment consisting of 5-10 gr.



morphin sulphate, 4 dr. ichthyol and 1 dr. each of ung. belladonnae and ung. stramonii.—Tuttle.

Cutaneous Variety: Seize tumor, after division, with catch-tooth forceps and snip off with curved scissors, taking care not to remove more skin than is absolutely necessary, for fear of contraction; if considerable space is left between skin and mucous mebrane, unite them with cat-gut sutures.—Gant.

Internal.—Palliative: Reduce protruded tumors; correct errors in diet or living; recumbent position if inflamed, applying constantly astringent ointments or lotions or poultices; if not large or strangulated, apply pure nitric acid to bases; wear pile supporter; correct constipation.—Gant.

Injection Treatment.—Only small, distinct, pendulous piles, situated above grasp of sphincter muscle should be injected: Solution freshly prepared with 12 gr. carbolic acid, 1 dr. glycerin and 1 dr. water; inject only one or two piles at a sittings—2 to 5 drops in small, 5 to 10 drops in large piles; leave needle in pendulous portion till pile turns white; as needle is withdrawn, make pressure with index finger; return all prolapsed piles; keep patient recumbent for a half hour afterward; only fluid or semifluid diet for a few days.—Gant.



Hemorrhoids of Pregnancy.—Equal parts of sulphur and cream of tartar as a laxative.—Da Costa.

*Anal Fissure.*—Smarting, burning pain after defecation; fissure may be visible only when parts are put on stretch.

Treatment.—R. Iodoformi, dr. i; ungt. belladonnæ, oz. ss; acidi carbol., gr. x; cosmolini, oz. ss. To be used daily.—Andrews.

Nitrate of silver, 10 or 15 gr. to oz., to be repeated two to six times; 6 per cent cocain on cotton will alleviate pain of application; cautery, divulsion, division or excision.—Gant.

A 10-grain iodoform suppository half an hour before expected movement and just after it.—Lewis H. Adler.

Paint fissure with 10% cocain and then dilate sphincters with Pratt's rectal dilators, beginning with smallest and increasing to largest size patient can bear at each treatment, then apply 10% silver nitrate solution. Have patient return in 3 days and apply in the interval, twice daily after bathing with hot water, an ointment of 20 gr. orthoform and 2 dr. ichthyol to ounce of lanolin.—Wm. L. Dickinson.

*Rectal Ulcer.*—Burning pain and sphincterismus on defecation; "sentinel" external pile; ulcer usually near sphincter at back of rectum.

Treatment.—Palliative measures: Simple diet;



rest; copious injections of warm water and castile soap, or carbolized water, at least twice a day; application of a mixture of 1 part balsam of Peru, 2 parts glycerin and 8 parts water; injections twice a week of silver nitrate, gr. xxv to 3 pints of water, or direct application to ulcer of silver nitrate, 20 gr. to ounce; astringent powders and ointments; etiologic treatment; divulsion, followed by applications of silver nitrate; for syphilitic dysentery or tuberculosis, use curettage, followed by stimulant or caustic, irrigation and to bed; division of base of ulcer sometimes useful.—Gant.

Divulse rectal sphincter thoroughly; curet edges of ulcer; pack with iodoform or nosophen gauze—to be kept in from three to five days; hot wet compresses locally for post-operative soreness; after packing is removed treat ulcers with aristol or with 1 dr. bismuth subnitrate to the ounce of castor oil.—Buchtel.

*Hard Feces.*—In women may be easily felt through vagina.

Treatment.—Copious enema of soap and water, followed by salines.

*Fistula in Ano.*—False opening into bowel with discharge, track of an unhealed abscess; often tuberculous.

Treatment.—Pass grooved director through sinus and incise intervening tissues to surface;



curet sinus, cut away diseased skin, irrigate with corrosive sublimate (1:1000), pack with iodoform gauze and dress with gauze and a T-bandage; change dressings in 48 hours and every day thereafter till healing nearly complete, using hydrogen peroxid, corrosive sublimate (1-5000) and iodoform.—J. C. Da Costa.

*Proctitis*.—Rectal weight and fulness, tenesmus and bearing down; often severe epigastric pain; small stools of mucus, pus and blood.

Treatment.—Antiseptic and anodyne suppository: Iodoform, gr. v; opium, gr. 5/6; ext. belladonnæ, gr. 5/12; cacao butter, q. s.—Andrews.

Injection for acute symptoms: Liq. bismuthi, dr. i; mucilag. acaciæ, oz. vi.—Andrews.

*Irritable Rectum*.—Hydrastis, 1 to 4 of water; white pinus canadensis, 1 to 6 of water; nitrate of silver; tannic acid preparations.—Agnew.

Chronic Catarrh of Rectum.—Absolute rest in bed in recumbent posture; keep bowels clear of irritating ingesta; inject through colonic tube a quart of water containing 30 gr. of silver nitrate twice a week, and inject every night weak alum water (two teaspoonfuls to a half gallon of water); flush rectum and colon daily with large quantity of boiled and filtered water—Davidson or hard rubber piston syringe best.—Gant.



*Dysentery.*—Chills and fever; straining, discharges of blood and mucopus.

Treatment.—Enemas of hot water or of silver nitrate sol., 1 gr. to 8 oz. water.—W. C. Abbott.

Powdered cinnamon, 1 dram, made up with a little water into pills, to be taken morning and evening.—Avetoon.

Pain and Tenesmus of Dysenteric Diarrhea:  
R. Cocainæ hydrochlor., gr. 1/12; ext. ergotæ aq. gr. i; aristol, gr. 5/12; ol. theobrom., q. s. Use suppository every hour or so.—Taylor and Wells.

*Prolapsus Ani.*—Soft, smooth, cone-shaped protruding ring, most marked after defecation.

Treatment.—Reduce after each evacuation and then inject 5 to 30 drops of fl. ext. hamamelis, dissolved in 2 to 6 oz. cold water.

Push in prolapsed mass with conical tampon (1 inch at thick end by 3 inches in length) of ice wrapped in iodoform gauze; leave ice in rectum and use a fresh piece after each movement of the bowels.—Hajeck.

*Anal Polypi.*—Hard or soft, smooth, pyriform tumor with bloody, mucoid diarrhea; painful when prolapsed.

Treatment.—Children: Evulse and tear off; stretch sphincter with two or more fingers till it grates.—Jacobi.

*Foreign Bodies.*—Treat each case according to its own merits.



*Intussusception Low Down.*—Straining pain and blood-stained mucoid discharge.

Treatment.—Hydrostatic pressure (oil or water) with fountain syringe to restore.

*Cancer of Rectum.*—Hard, infiltrating plates or nodules, soon breaking down into deep ulcers.

Treatment.—Excision if cancer circumscribed to lower 4 inches of rectum; inguinal colostomy if situated more than 4 inches above anus or if rectum immovable.—Kelsey.

Palliative.—Keep passages soft but not fluid by mineral waters and regulation of diet; rest in recumbent posture; opium and other anodynes locally and by the mouth; partial removal of growth with finger nail, curet or cautery; division of sphincter; colotomy; electrolysis.—Kelsey.

*Fibroid Stricture.*—Straining, liquid stools; cramps in lower limbs; stenosis shown by finger or olive-pointed bougies.

Treatment.—Milk and soups basis of diet; Rochelle or Glauber's salts or enema of warm water through long tube daily to move bowels.

Intermittent dilatation with bougies which readily pass obstruction, leaving in over night—must be continued indefinitely; sudden, complete divulsion with instruments rather dangerous; nicking of stricture with proctotomy knife, then packing rectum with picked lint, for a day or



more, a good procedure preliminary to dilatation; colostomy in very severe cases.—Kelsey.

*Periproctitis.*—Painful, fluctuating swelling usually in front of rectum; often tubercular.

Treatment.—Free incisions and antiseptic irrigations.—Kelsey.

*Pelvic Abscess.*—Chills and sweats; fluctuating swelling usually in Douglas' cul-de-sac.

Treatment.—Vaginal incision and gauze drainage when practicable.

*Neuralgia of Rectum.*—Pain in region of coccyx or sacro-coccygeal junction—paroxysmal, lancinating, burning, worse after violent exercise, sitting in one position long and during defecation; no heat, redness or swelling or local signs of disease; from neurosis, debility, constant sitting on hard seat, fall or kick or displaced coccyx, exposure to cold or damp, irregular habits, scar tissue, enlarged or displaced uterus, prostate, etc.; lesions most frequently overlooked and mistaken for neuralgia are erosions, pockets and small internal fistulæ.

Treatment.—Treat special cause; divulsion for neuroses.—Gant.

Attend to general health and regulate bowels; local application of cold water and belladonna ointment and blistering over sacrum; ordinary antineuralgics—quinin for malaria, colchicum for gouty cases.—Kelsey.



Recumbent posture; rectal irrigation with very hot water; dry heat; counterirritation or thorough cauterization over seat of pain; attention to local lesions; forcible divulsion.—Pennington.

*Reflex* to ovaries, uterus, prostate, back, abdomen and down limbs in beginning rectal ulceration, stricture or malignant disease.



## CHAPTER XI.

### LIMB AND JOINT PAINS.

ORGANIC ARTHRALGIA AND OSTALGIA.—Pain usually worse at night and augmented by passive motion or pressure; local stiffness and swelling and sometimes heat and redness.

*Trauma.*—History and physical signs.

*Sprains.*—Sudden, very intense pain and loss of function, followed by forcible stretching and twisting of joint; diffuse swelling and, later, bluish-red, bluish-green and yellowish discoloration.

Treatment.—Early massage, intermittent bandaging of joint with elastic bandage, and methodical movements; rest and immobility only in complicated cases (fracture or rupture of tendons).—Tillmanns.

Cold applications at first, best by affusion, stopping this when joint ceases to swell and skin begins to look dull and livid—can be applied indefinitely if inflammation; early bandage pressure (filling depressions with cotton-wool pads) to prevent swelling (ice-bag may be laid over bandage); if cold does not seem advisable, place limb in hot water, adding more and hotter up to the limit of endurance for two or three minutes; later soak in hot water along with massage; still



later, heat and cold alternately; passive movements should usually be begun on second day.—Moullin.

Rest; faradism for a half hour once daily for five to seven days, followed by five-minute massage, rubbing distally, and repeated later each day.—L. A. Bridges.

Sprains and Contusions of Joints.—Prompt, frequent and long continued immersions of inflamed joint in water as hot as can be borne and containing 1 tablespoonful of powdered mustard to each gallon of water; keep this treatment up for 8 to 36 hours, surrounding joint in intervals between immersions with plenty of cotton-wool held in place by supporting bandage not tight enough to give pain, and keep joint elevated; after end of first 24 or 36 hours, begin gentle but gradually increasing massage and friction with some pressure by means of flannel bandage over a little cotton-wool; when most of swelling has disappeared (5 days to 2 weeks) give support with flannel bandage or adhesive plaster dressing, and allow gradually increasing use of joint, or if passive motion followed by active pain or violent reaction immobilize with plaster of paris for 10 days to 3 weeks and then remove, using support and massage, and allow gradual use of joint.—John E. Summers, Jr.

Compression by means of narrow strips of ad-



hesive plaster, applied quite firmly; the first begins at base of great toe and passes across dorsum of foot, along its outside, around lowest portion of posterior surface of heel, then along inside of foot and finally crosses itself in the center of dorsum and ends at base of little toe; the next strip should pass from a point about 4 inches above internal malleolus and at back part of internal surface of leg, around under the heel, to end at a point on the outside of the leg corresponding to that of its commencement; the third strip should correspond in direction to the first and overlap it about  $\frac{1}{4}$  inch, and the next should be vertical and overlap the first strip applied in this direction; in this way cover entire ankle and dorsum of foot, and complete support with muslin bandage; a satisfactory ambulant treatment.—Gibney.

Obstinate Cases.—Keep in bed and apply every half hour cloths wrung out of boiling water by means of a wringer; follow with salicylate rubbings.—Wm. H. Buchtel.

Acute Sprains of Ankle Joint.—Daily hot air bath pushed to tolerance, followed by application of a firm bandage or stockinet.—Gould and Pyle's Cyclopedia.

*Contusions.*—Subcutaneous laceration with effusion of blood; heat, tenderness, swelling and



numbness followed by pain; discoloration quickly in superficial cases, days after in deep ones.

Treatment.—Bed or rest to part; soap liniment with a little laudanum.—Heath.

Ice-bag or evaporating lotion, such as 1 part each of brandy and spt. mindererus and 8 parts of camphor water; do not cover rag on which evaporating lotion is applied.—Heath.

Wash injured part with ether and apply 1:4 or 1:8 solution of menthol in collodion twice a day; good in all but joint cases.

Ecchymoses.—Cold, wet cloths; incise if great amount of blood; lead and opium wash if much pain; to promote absorption apply a mixture of 1 dr. ammonium chlorid, 1 oz. tinct. arnica, 2 oz. alcohol and 3 oz. water.—Howe.

*Fractures.*—Pain often limited to particular spot and much aggravated by pressure; abnormal mobility, crepitus.

Treatment.—Reduction of displacement to as near the normal as possible (anesthesia may be required); absolute retention of parts as replaced; free drainage with openings and counter-openings in compound fractures—fragments should be reduced even when necessary to remove projecting ends with forceps or saw.—Wyeth.

Extemporaneous plaster of paris splints; in ordinary fractures of lower end of radius use



only a wristlet of adhesive plaster, after complete reduction; when reduction of fragments is impracticable, make aseptic incision and hold fragments in place if need be with wire or catgut sutures; when difficult to keep parts in position drive wire nails or special fracture nails through soft and bony tissues.—Roberts.

Old Fracture Pain.—Potassium iodid internally; iodine or mercurial ointment externally.

*Dislocations.*—Pain immediate, severe, persisting till after reduction; diminished mobility and abnormal position of head of bone.

Treatment.—Reduction (usually under chloroform) and keeping in place with bandages or other light, immobile appliances; passive motion after 8-14 days.—Tillmanns.

Dislocated shoulder (sometimes elbow, knee or hip) can be replaced by having patient lie on cot with arm hanging through 6-inch opening and attaching to arm a 10-pound sandbag.—Stimson.

Habitual.—Restrict movement of joint by suitable bandage, or expose joint and suture rent in capsule, or resect head of bone.—Tillmanns.

Irreducible.—Expose site of dislocation by incision and bring head of bone into place, resecting if necessary.—Tillmanns.

*Punctured Wounds.*

Treatment.—Disinfect, dust with iodoform and cover with iodoform or bichlorid gauze and ster-



ilized cotton; immobilize with splints; if fever and pain open freely, disinfect all pockets with 1:1000 bichlorid, remove blood clots and drain with short, thick glass drainage tubes, changing antiseptic dressing often; resection, amputation or disarticulation in cases very extensive and serious.—Tillmanns.

*Gunshot Wounds of Joints.*

Treatment.—Check hemorrhage and remove all foreign bodies; immobilize with or without occlusive dressing; antiseptic drainage if necessary to explore and operate; amputation if extensive mangling.—Tillmanns.

*Acute Articular Rheumatism.*—Acute pain and tenderness; usually multiple and in large joints; fever and sweating.

Treatment.—Aspirin in daily dosage of 60 to 90 grains, best given in divided doses during waking period every 2 to 4 hours in capsules, tablets, cachets or rubbed up with sugar.

R. Sodii salic., gr. xv; tinct. lavand. co., dr. ss; syr. aurantii. q. s. A tablespoonful every 3 or 4 hours.—Shoemaker.

Fl. ext. piscidia erythrina, m. xv, every 4 hours for pain.—Rouse.

Ichthyol ointment, 25 to 50 per cent. in lanolin; wrap in lint after smearing joint.—Hare.

Rub affected joints as often as need be with a piece of ice wrapped in flannel.—Wm. Ewart.



R. Sodii salic., gr. xv; acidi citrici, gr. ss; liq. ammon. cit., m. xxx; tinct. ferri chlor., m. xv; olei gaulth., m. ss; glycerin, q. s. A deserts- spoonful every 2 hours.—Solis-Cohen.

Pale, Feeble, Anemic Patients.—R. Strych. sulph., gr. 1/60; tinct. ferri chlor. m., xv-xxx; liq. ammon. acet., oz. ss. Take every 4 hours in a glass of water.—Hughes.

Wrap the swollen joint in cloths wrung out of ice water.

*Gout*.—Like vise or red-hot iron in acute attacks; ball of great toe usually; slight fever; nocturnal.

Treatment.—Acute: Five to 10 drops t.i.d. of a mixture of equal parts of tinct. aconite and wine of colchicum.—Rust.

Elevate limb and wrap joint in cotton-wool; warm fomentations, or Fuller's lotion, or steaming joint; wine or tincture of colchicum, m. xx-xxx, every 4 hours, with potassium citrate, till pain relieved.—Osler.

Chronic (joints successively stiff, enlarged and deformed; often unilateral and symmetric; chalk-stones (tophi) about small joints in middle line tendons and in lobe of ear).—Daily application to enlarged joints of pure ichthyol, protecting after inunction with double layer of flannel.—Bulkley.

Apply following ointment to painful finger



joints: 20 m. each of guaiacol and oil of winter-green; 15 gr. each of camphor, menthol and oil of cloves; one dram each of glycerin, petrolatum, cerate and lanolin.—Solis-Cohen.

R. Potassii iodid., gr. v; vini colch. rad. m. x; aq. dest., q. s. A teaspoonful well diluted after meals and at bedtime.—Hughes.

*Lithemia*.—Chronic and irregular gouty symptoms; lithuria; high blood tension; puffy fingers and hands.

Treatment.—Potassium iodid, guaiac, quinin; tonics combined with alkalies; open air life; active skin (morning cold bath or evening warm bath); dress warmly; avoid alcohol; eat less and more slowly; restrict meat and salt; 3 to 5 glasses of water daily.—Osler.

Colchicin, 1/60 gr., with 1 gr. calomel in pills, t.i.d.—Clinical Review.

*Plumbism*.—Usually distinct gouty deposits, especially in big toe joint; later rheumatoid pains in flexures of joints.

Treatment.—Potassium iodid, 5 to 10 gr., t.i.d., with occasional morning purge of magnesium sulphate.—Osler.

*Gonorrheal Arthritis*.—Pain often severe in acute; usually ankle or knee; blenorrhoea or gleet; ankyloses common; similar condition at times from instrumentation of normal urethra.

Treatment.—Potassium iodid, 5 gr. in a table-



spoonful of water every hour or two.—Schaller.

Syrup of iodid of iron, half dram doses, gradually increased.—J. C. Wilson.

Treat focus of infection in urethra.

Apply to joint an ointment of  $2\frac{1}{2}$  dr. each of lanolin, turpentine and salicylic acid in 3 oz. lard.—Balzer.

Injection into joint of mercuric chlorid solution (1 part mercuric chlorid, 10 parts sodium chlorid, 500 parts distilled water), 3 to 5 hypodermic syringefuls at intervals of 3 days.—Vogt.

Aspiration of seropurulent effusion, followed by compression of joint and fixation of limb in immovable dressing; massage and hot and cold douches to aid absorption.—Senn.

A teaspoonful of 1 part guaiacol and 3 parts olive oil, rubbed into skin over inflamed joint 4 times daily.—Belfield.

*Tubercular Arthritis.*—Pain slight or severe, often starting, nocturnal; most common in hip and knee; spindle-shaped, pseudo-fluctuating swelling, with atrophy of related muscles, and often ankylosis with contracture.

Treatment.—Constitutional treatment for tubercular diathesis; local rest maintained for many weeks with splints, plaster of paris bandages or extension appliances; aspiration for fluid accumulations; caseous masses may be removed



with aspirator, joint drained, washed out with boiled water and injected with 10 per cent. iodoform-glycerin emulsion; injections about joint once a week of balsam of Peru or iodoform emulsion; if these measures fail or delay is dangerous, operate and remove entire diseased area by erosion, excision or amputation.—J. C. Da Costa.

Early Stage.—Hot air application at not more than 275° F. (protecting limb to be treated with 2 layers of Turkish toweling, wrapped rather loosely about it) twice daily, not longer than an hour, alternating with Bier apparatus (see below).—Knopf.

Early Stages.—Local venous hyperemia produced by ligating (only tight enough to impede venous circulation) member above affected joint with elastic band of medium width, several times a day, for 10 minutes to an hour at beginning, gradually increasing duration of treatment to 4 or 6 hours or the whole night; protect skin by a band of linen or other soft material and by changing site of ligation in successive applications.—Bier.

*Multiple Secondary Arthritis.*—Smallpox, measles, scarlet fever, typhoid, erysipelas, dysentery, cerebrospinal meningitis, bronchiectasis, scurvy.

Treatment.—Keep parts quiet, enveloped in



cotton, secured with bandages, or make hot applications.—Am. Text-Book of Surgery.

Scarlatinal Rheumatism.—R. Ammon. salic., gr. viii; elix. simp., m. xv; syr. simp., m. xxx; tinct. cardam. co. q. s. A teaspoonful diluted 4 times daily.—Hughes.

*Pneumococcic Arthritis*.—Fever generally high; danger of suppuration and grave metastases; pneumonia.

Treatment.—Hot air baths, hydrotherapy, massage, douches; if pus forms, open joint, flush, fix and drain.—E. J. Cave.

*Septic Arthritis*.—Very severe pain in suppurative form; pyemia, particularly puerperal fever; rapid suppuration and more or less destruction of joints.

Evacuate pus by aspiration, followed by washing out with antiseptic solution till fluid returns clear, or, better, incision and drainage under strictest antiseptic precautions; long pair of hemostatic forceps indispensable in draining joint; in draining knee-joint cavity employ 4 tubular drains and wash out with a stronger antiseptic solution; apply copious antiseptic dressings and immobilize on splint; repeat irrigations, shorten drains gradually and remove them with cessation of suppuration.—Senn.

Joint Abscess.—Inject liquid carbolic acid into cavity and allow to remain 2 minutes, then wash



out abscess with alcohol followed by sterile water.  
—Phelps.

*Acute Arthritis of Infants.*—Usually hip or knee; rapidly purulent; may develop from gonorrhoeal ophthalmia or vaginitis of new-born.

Treatment.—Aspirate joint under strictest antiseptic precautions, and if pus is found lay open. Drain and dress antiseptically; counter-openings with packing of joint or even resection sometimes necessary; explore shaft of bone with incisions, sparing epiphyseal line as much as possible.—Warren.

*Alcoholic Arthritis.*—Swellings of small joints; enlarged liver and spleen.

Treatment.—Stop liquors; relieve with phenacetin, antipyrin or papine; encourage elimination.

*Syphilitic Arthritis.*—Slight pain as a rule; history, eruption or scars.

Treatment.—Extension, rest, counterirritation and antisyphilitic remedies.—Roberts.

Proper local treatment and inunctions of ungu. hydrarg. ciner.—Tillmanns.

Hot air baths for an hour at 160°-180°F. or higher; potassium iodid internally.

*Neuropathic or Atrophic Arthritis.*—Pain slight or absent; often begins as sudden effusion in knee; rapid destruction of bones and cartilages; creaking, grating and great laxity of



joint; great deformity liable to ensue; locomotor ataxia.

Treatment.—Etiologic treatment; immobilize and substitute supporting apparatus if patient receives a sprain.—Tillmanns.

*Arthritis Deformans* (Rheumatoid Arthritis; Rheumatic Gout).—Moderate pain with slow enlargement and distortion of many joints (metacarpophalangeal first), distinct creaking on motion; wasting, contracture, deformity, enfeebled women; Heberden's nodes on sides of distal phalanges; usually bilateral.

Treatment.—Tincture of iodine locally or small blisters frequently repeated; friction with stimulating liniments, passive movements, burying joint in hot sand, dusting with sulphur and wrapping in flannel, or galvanism at least once daily; good nutritious mixed diet; flannel clothing; warm, equable climate; iron, arsenic and cod-liver oil internally for weeks or months.—Taylor.

Guaiacol carbonate, gr. v-xv, t.i.d.; also paint affected joints every night with equal parts of pure guaiacol and olive oil.—Bannatyne.

Long-continued use of Fowler's solution in small doses; sodium salicylate in early stage.

Baths at 92°-94°F. for 10 or 20 minutes—through which constant galvanic current is passed, when excessive pain and irritability.—Stevenson.



Early systematic massage and passive movements of joint; generally lukewarm baths, steam baths combined with cold douches, etc.; fresh air, tonics; resection for severe pain.—Tillmanns.

Lay joint widely open, wash out antiseptically and pack with iodoform gauze.—Sonnenburg.

Dietetic, hygienic and hydrotherapeutic measures; 5 gr. each of sodium salicylate and sodium benzoate in glass of hot water, t. i. d.; potassium iodid of great service in some cases—in others sodium bicarbonate in repeated doses, well diluted; continue alkaline treatment for 3 months, then 3 weeks out of 4 for another 3 or 6 months.—B. C. Loveland.

Local injection into surrounding tissues of  $1\frac{1}{2}$  to 3 grains of sodium salicylate dissolved in 30-60m. of water.—Bouchard.

Prolonged use of syrup of iodid of iron, a dram thrice daily.—J. R. Clemens.

Blisters on either side of cervical or dorsal vertebræ.

*Chronic Articular Rheumatism.*—Pain sharp but variable; much affected by changes in weather; usually multiple in larger joints, with crepitus and restricted function; disease persistent and progressive, often with secondary changes in joint.

Treatment.—R. Lin. terebinth., tinct. opii, aa.



oz. i; lin. saponis oz., iii. For external use with friction.—Shoemaker.

Massage; superheated air-baths; ointment of mercury, belladonna and ichthyol, well rubbed in; blisters or light applications of actual cautery.—Stevens.

R. Potassii iodidi, gr. xx; vini colch. rad. m. v; syr. sarsap. co. q. s. A teaspoonful t. i. d. after meals.—Hare.

R. Liq. potassii ars. m. v.; potas. iodidi, gr. v; syr. simp. q. s. A teaspoonful in water t. i. d. between meals.—Da Costa.

Thirty grains each of sodium bicarbonate and potassium acetate, one dram Rochelle salt and 5 m. spt. chloroform in water; tablespoonful 3 or 4 times a day, 2 hours before or after meals.—International Clinics.

Mild, Noninflammatory.—Fowler's solution in 5-drop doses, increased to physiologic limits, then give half of last dose for weeks or even months.—Pettyjohn.

Aged and Debilitated.—R. Quin. sulph., gr. iss.; tinct. ferri chlor. m. xii; elix. casc. sag. q. s. A dessertspoonful 3 or 4 times a day.—Shoemaker.

R. Potassii iodidi, gr. x-xx; spt. chloroformi, m. v; tinct. cinch. co. q. s. One-half to a tablespoonful in water 3 or 4 times a day.—Shoemaker.



Chronic Rheumatism and Gout.—Salicylic acid 15 gr. in 4 dr. elix. casc. sagrada 2 or 3 times a day.—Shoemaker.

Ointment of 5 dr. salicylic acid, 3 oz. alcohol and 6 oz. castor oil.—Arendt.

*Recurring Subacute Rheumatism.*—Slight attacks of arthritis with some swelling and effusion at moderate intervals.

Potassium iodid 5-10 gr., and fluid ext. black cohosh 5-20m. t.i.d.—F. R. Millard.

Liniment composed of 6 dr. each of turpentine and soap liniment and 12m. mustard oil.

Rheumatic Ointment.—One part each of salicylic acid, turpentine, and lanolin, and 9 parts of lard.—Bourget.

Rheumatic Post-Traumatic Pain.—Acetic ext. of colchicum 1 gr., comp. powder of ipecac 10 gr., and comp. ext. colocynth 4 gr. in pills.—Erichsen.

*Abarticular Rheumatism.*—Fleeting joint pains, often with slight swelling; may be replaced by chorea, recurring tonsillitis, erythema nodosum or peliosa rheumatica.

*Bursitis.*—Considerable pain in acute; limited globular swelling connected with tendon.

Treatment.—Rest of limb by elevation and splints; anodyne and refrigerant lotions; leeches or blister; if suppuration suspected, make early free incision, followed by curetting; if pus evacu-



ates spontaneously, open sinuses, use antiseptic irrigation and drainage; dropsy of bursa best treated by aspiration or tapping, followed by injections of strong carbolic acid solutions or tincture of iodine, or by pressure.—Roberts.

Properly adjusted shoes; protect parts with a simple cotton and collodion dressing; tinct. iodine applications; bathe foot twice daily in starch water.—Isadore Dyer.

*Bunion*.—Bursitis of the great toe, with dislocation, from wearing tight or narrow shoes.

Treatment.—Broad-soled shoes with a straight inside border; warm foot-wear in winter; adhesive strip carried from phalanges of great toe around inner border of foot; "bunion plasters" or felt rings to protect; painting with tinct. iodine, with silver nitrate solution (10-60 gr. per ounce), or with 50 per cent ichthyol-lanolin ointment; for inflammation use very hot water, elevation of limb, distilled ext. witch-hazel or lead water and laudanum; if ulcer deep, lay bursal cavity open and heal from bottom.—Burdick.

*Acute Synovitis*.—Severe, throbbing pain; swelling under and around patella. Crepitus and rice-body fibrinous shreds in dry form; position midway between flexion and extension.

Treatment.—Immobilize joint in semi-flexion, apply leeches, use ice-bag or Leiter coil, followed by lead water and laudanum; after a day or two



apply gentle pressure (rubber bandage over thick layer of cotton or wool), intermittent heat, iodine and ichthyol.—J. C. Da Costa.

Put patient to bed; suspend limb at nearly a right angle; splint and elastic bandage; hot air bath.

If effusion under great tension, puncture aseptically and wash out joint with 3% carbolic acid or 1:1000 bichlorid; immobilize with antiseptic pressure bandage.—Tillmanns.

*Purulent Synovitis.*—Recurrent rigors, persistent high local temperature, constitutional disturbances; hypodermic aspiration.

Treatment.—Aspirate and wash out joint, or incise and drain, or excise membrane if this alone involved.—Roberts.

*Syphilitic Synovitis.*—Very little pain; some swelling and effusion; may be "melon seeds" or "loose bodies" in joints.

Treatment.—Antisyphilitic remedies; excision of membrane for fibroid changes.—Roberts.

*Acute Epiphysitis.*—Childhood; intense pain and tenderness over articular end of long bone; soft parts and joint soon swollen and hot and limb flexed; marked constitutional symptoms with pus formation.

Treatment.—Absolute rest with splints; cut to bone and trephine if need be when much swelling; if pus in joint, open freely, wash out



with 1-1000 mercuric chlorid and secure ample drainage; scrape out diseased points in bone with Volkmann's spoon; evacuate all burrowing matter, disinfect, drain and dress; supporting treatment with free use of stimulants.—Chas. T. Poore.

*Subacute and Chronic Epiphysitis.*—Subjective symptoms much less marked than in acute form; enlargement of end of bone and gradual stiffening of joint.

Treatment.—Absolute rest in early stage with splints; fly blisters or light applications of Paquelin cautery; evacuate pus when formed.—Chas. T. Poore.

*Simple Bone Cysts.*—Usually single and about puberty; originates in shaft of long bones near epiphyseal line or in jaws at roots of teeth; thin layer of bone over cyst becomes soft and compressible in places; intermittent pain and lameness; fracture from slight trauma or slight bending of bone; cyst contents cloudy yellow or bloody fluid.

Treatment.—Maxillary: Extraction of tooth and curettage; incise wall of dentigerous cyst with a strong bistoury or chisel; cleanse with hot water and disinfectant solutions and pack with 5 per cent iodoform gauze; if cystic cavity large and much deformity exists, obliterate cavity by crushing in walls.—J. Ewing Mears.



*Osteosarcoma*.—Pain acute and throbbing; roundish, soft or hard swelling near end of long bone following injury.

Treatment.—High amputation.

*Abnormal Adhesions in Joints*.—Pain sometimes violent.

*Tenosynovitis*.—Pain along course of tendon—severe in suppurative—slight in tubercular; spindle-shaped swelling.

Treatment.—Non-suppurative: Rest and pressure by splint and bandage; hot or cold water applications at first; tincture of iodine; opiates may be needed.—Am. Text-Book of Surgery.

Suppurative.—Elevation and complete rest of part; hot applications; free opening of sheath, curetting and thorough antiseptic drainage and dressing; other and freer incisions if suppuration extends.—Am. Text-Book of Surgery.

*Osteotuberculosis*.—Moderate variable pain; tenderness over affected foci, usually epiphyseal; late, soft, circumscribed boggy swelling with pseudo-fluctuation and wandering abscess; overlying skin normal in appearance till itself affected; muscular atrophy; exploration with strong steel needle.

Treatment.—Physiologic rest with mechanical appliances (plaster of paris dressing or jacket); ignipuncture into cavity in early stage with Paquelin cautery under strict antiseptic precau-



tions, protecting puncture with an efficient antiseptic dressing until it is completely closed by cicatrization and epidermization; complete removal of limited infected foci; excision of portion of shaft; amputation in diffuse.—Senn.

*Osteoperiostitis*.—Pain always present, more or less severe; acute forms very sensitive; tibial nodes in syphilitic.

Treatment.—Felon: Free early incision through periosteum and dry antiseptic dressing.

Syphilitic: Rest, elevation of part, local use of iodine and mercurial ointment and bandaging; specific treatment by stomach or hypodermically.—J. C. Da Costa.

Friction with 20 per cent oleate of mercury ointment containing morphin.—P. A. Morrow.

Other Forms: Rest in bed with limb elevated in splint and bandage; leeches, cold, lead water and laudanum; salines and potassium iodid; morphin for pain; if these means fail, use counterirritation with iodine and blue ointment or blisters and heat locally; in severe cases slit periosteum subcutaneously to relieve tension and pain; some cases demand longitudinal osteotomy with Hey saw; diffuse form requires early free incisions, antiseptic drainage, rest and elevation of limb and strong supporting and stimulating treatment—amputation sometimes demanded—



subperiosteal resection of shaft if entirely necrosed.—J. C. Da Costa.

*Acute Osteomyelitis.*—Deep-seated, gnawing, boring pain in shaft or epiphysis, with greatest tenderness at this point; deep swelling of soft parts; profuse offensive purulent discharge containing bone-fragments and tissue-sloughs; rigors, sweats and fever if pyemia or septicemia.

Treatment—Early opening of bone with chisel, removal of all infected tissues (including sequestra) with curet and disinfection of cavity by irrigation with corrosive sublimate 1-1000; then dry and mop out with 10-per-cent solution of chlorid of zinc or hydrogen peroxid and pack with iodoform gauze, which is left to hang out of the wound; apply copious antiseptic dressing and immobilize limb on splint.—Senn.

*Chronic Osteomyelitis.*—Pain most prominent symptom—aching, gnawing, boring, often intermittent; syphilis, sarcoma, carcinoma, tuberculosis, pyemia.

Treatment.—Chisel in direction of center of bone by making a track perhaps an inch square; if abscess not found at a certain depth, explore surrounding tissue with a small drill till found, then excavate with chisel; wash out pus and scrape out all of infected tissues with a sharp spoon; iodoformization of cavity and implanta-



tion of decalcified antiseptic bone-chips.—Senn.

*Rachitis*.—General soreness and dread of being handled; epiphyseal enlargements and tenderness; badly fed children.

Treatment.—Fresh air; nourishing mixed diet; outdoor exercise; cold baths; iodids; cod-liver oil.—Jacobi.

Open air; good sanitary conditions; baths ( $90^{\circ}$  under 6 months,  $80^{\circ}$  in second year,  $75^{\circ}$  in third year,  $70^{\circ}$  subsequently); keep extremities always warm; proper feeding with breast milk or rich cow's milk as basis; phosphorus,  $1/200$ - $1/100$  gr. t. i. d. after meals with cod-liver oil and iron.—J. Lewis Smith.

Take of phosphorus 1 part, ether 9 parts, almond oil 90 parts: One minim contains  $1/1000$  gr. phosphorus.

Take the yolks of 10 eggs, 2 pints cod-liver oil, 1 pint syrup of wild cherry and 1 pint sherry wine: A teaspoonful or more three or more times daily.—J. Lewis Smith.

R. Ferri phosphat., calcii phosphat. aa. gr. iii; ext. nucis vom. gr.  $\frac{1}{8}$ ; olei eucalyp. m.  $\frac{1}{8}$ : Two pills t. i. d.—Shoemaker.

*Osteomalacia*.—Persistent pain in multiple areas; progressive deformities; phosphaturia; pregnancy chief factor.

Treatment.—Good hygiene; rest; avoid pregnancy; nourishing food; cod-liver oil, iron, lime,



quinin, phosphorus, arsenic; stop nursing; removal of ovaries.—Tillmanns.

*Dengue.*—General severe, “bone-breaking” pains, with sudden high fever and rarely hemorrhages; swollen joints, skin eruption; very contagious.

Treatment. — Salicylates or antipyrin or opium; potassium iodid and tonics during convalescence.—Osler.

*Glanders.*—With slight swelling and redness; pustules; ulcerating nodules in nose and profuse nasal discharge; fever and eruption like small-pox about joints and on face.

Treatment.—Incise abscesses freely, lay open fistulous tracts and remove as far as possible infected tissues with a spoon; then disinfect entire surface with 12 per cent chlorid of zinc; repeat curetting and disinfection as need be; keep scraped surfaces covered with moist antiseptic compress gauze wrung out of 1/2000 mercuric chlorid or 2 per cent carbolic solution or strong iodine water; supporting, tonic and stimulating treatment.—Senn.

*Pain of Hip-joint Disease* may be simulated by aneurism of femoral or iliac arteries, abscess in Scarpa's triangle, caries of lumbar vertebræ with psoas abscess (pus external to femoral vessels), sacroiliac disease, cancer of rectum or gluteal bursitis (moderate pain back of hip and knees,



aggravated by exertion; may be fluctuation in upper gluteal region).

*Flatfoot*.—Foot and calf tire; heel brought down forcibly; tendency to eversion of toes.

Treatment.—Place a wedge of felt on inner side of foot; appropriate massage and passive motion.—James J. Walsh.

NEURALGIC ARTHRALGIA.—Usually symptomatic and outside of joints—knee or ankle mostly; superficial, diffuse, dull, aching, or sharp, shooting, constant or periodic, with neuralgia in other parts; tenderness on pressure, soreness on active motion—not in passive; often transient swelling without redness; sometimes numbness of extremities; *joint mobile*, especially under ether; common in young neurotic females and after trauma.

General Treatment.—Find and remove exciting cause; give a long course of iron, quinin and strychnin or of arsenic; phenacetin during attack; morphin occasionally without patient's knowledge in severe cases; locally frictions, aconite ointment and heat; keep on part a piece of flannel soaked in a mixture of soap liniment, laudanum and chloroform; prevent stiffening by daily massage, frictions, passive motions and hot and cold douches.—J. C. Da Costa.

*Disease or Injury of Central Nervous System.*



—Often bilateral; acute multiple in central myelitis.

Treatment.—Antipyrin, antikamnia, phenacetin; warm baths.

*Neurasthenia*.—Functional varying nervous depression.

Treatment.—R. Tinct. ferri chlor. m. v.; hydrarg. chlor. corros. gr. 1/16; liq. ars. chlor. m. v.; acidi hydrochlor. dil. m. x.; aquam q. s.; A teaspoonful in water t. i. d.—Goodell.

*Anemia*.—With pallor, palpitation and shortness of breath.

Treatment.—R. Massæ ferri carb. gr. ii; ext. hyos. alc. gr. ss.; podophyllotoxini gr. 1/12; quininae sulph. gr. i: Four to 6 pills a day.—Shoemaker.

*Hysteria*.—Patient complains more when skin is pinched than when head of bone is pushed into joint (hip, knee or ankle); frequent variation in position of limb.

Treatment.—Faradic or static electricity and suggestion.

*Malaria*.—Pain more or less periodic.

Treatment.—R. Liq. potass. ars. m. iv; tinct. dioscor. villos. m. xv; tinct. card. co. q. s.: A teaspoonful in water after meals.—Shoemaker.

*Syphilis*.—History, eruption, scars; therapeutic test.

Treatment.—Ordinary antisyphilitic measures.



*Gout and Rheumatism.*—Much influenced by changes in weather.

Treatment.—Salol gr. xx; ether q. s. ad solv.; collodii dr. iss.: Apply to painful joints once or twice daily.—Shoemaker.

*Malassimilation.*—With poor nutrition and perhaps dyspepsia.

Treatment.—A pill every 3 or 4 hours of 1/10 gr. zinc phosphid and ¼ gr. ext. nucis vomicæ.—Shoemaker.

*Specific Infections, Particularly Influenza.*—Sudden, general, with great depression and catarrhal fever.

Treatment.—Phenocoll hydrochlorid in 10 or 15 gr. doses.—Potter.

*Post-Typhoid Neuralgia.*—May very rarely pass on to suppuration; more than half of all cases of typhoid arthritis followed by spontaneous dislocation—nearly all in hip-joint.

Treatment.—Keep leg in abduction and external rotation with two lateral sand-bags or lateral splints and bandages or adhesive plaster fastened to external sand-bag or splint; if effusion threatens dislocation, aspirate—if pus found, open and treat according to existing conditions.—Keen.

*Brachialgia.*—Sore arm with consequent disability, from overuse as in “writer’s cramp”



and in ladies calling and shopping, holding up their skirts.

Treatment.—Rest, massage, alternate hot and cold douches, faradism.

Brachialgia of Motormen: Salicylates (depressing); use body weight more and arm energy less.—James J. Walsh.

*Epicondylagia of Humerus.*—Nervous women from carrying umbrella; waitresses carrying dishes.

*Neuritis.*—From nerve injury or pressure on proximal branches by tumor or inflammation.

Treatment.—Rest to part; removal of exciting cause; coal tar antipyretics.

*Taking Cold.*—Sudden onset after exposure.

Treatment.—Warm baths and antineurotics.

*Old Bone Cicatrices from Previous Inflammations.*—Follows syphilis, caries, necrosis, old dislocations, improperly treated, tubercular arthritis, osteomyelitis and osteoperiosteitis or sclerosis of bone.

Treatment.—Chiefly antineurotic, but varies with cause; warm baths generally useful; massage and exercise for abnormal adhesions.—Tillmanns.

*Reflex.*—Ovaries, uterus and rectum chiefly.

*Traumatic Neuroses.*—Condition of sensitiveness to external influences, with no other remaining trace of injury.



Treatment.—Systematic local massage.

SCIATICA.—From buttock (sciatic notch) down back of thigh to popliteal space or even to ankle or heel; sudden or gradual onset, fairly constant, usually worse at night; nerve traced downward from sacroiliac joint by its sensitiveness.

Treatment.—Nerve-stretching by following movements: Stand with feet together and legs straight; bend forward at hips, keeping legs straight, and touch toes with tips of fingers of both hands simultaneously; or sit on a firm, flat surface with legs extended forward, bend forward, keeping knees unbent, grasp a foot by each hand, and firmly flex it upon leg.—Vernon A. Chapman.

*Sciatic Neuritis.*—Increased by motion, relieved by rest; greatly increased by flexing thigh on abdomen; from lead, trauma, cold, syphilis, alcohol, rheumatism, gout, diabetes.

Treatment.—Rest to limb; saline purgative in gouty cases; hot linseed poultices along course of nerve in acute stage of severe attacks; series of mustard plasters or small blisters applied over seats of pain; a grain of blue pill twice daily if active inflammation; potassium or lithium salicylate and nitrous ether at outset; morphin for severe spontaneous pain; cocain injected deeply near nerve— $1/12$  gr., rapidly increased to  $1/3$  or  $\frac{1}{2}$  grain; belladonna liniment mixed with



equal parts of chloroform liniment and aconite ointment rubbed in until distinct tingling; nerve stretching in very obstinate cases.—Gowers.

Acute.—Absolute rest; acetanilid and salicylate of sodium for pain; envelop leg in flannels or thick layers of cotton batting, in conjunction with hot water bags or bottles; in 3 or 4 days carefully massage affected leg unless it makes it worse—also continuous barely perceptible current with anode over sacrum and cathode on sole of foot—seance not to last longer than 5 minutes; massage with greater vigor as inflammation becomes less acute and move cathode up and down course of nerve.—Moyer.

Chronic.—Counterirritants, especially actual cautery to tender points along limb—or (less efficient) cantharidal collodion, a circle of  $1\frac{1}{2}$  inches diameter over these points, renewing vesicant when sores heal; if gout or syphilis present, modify treatment accordingly.—Moyer.

Obstinate Cases.—Wine of colchicum root, m. v-x t. i. d.

Stockholm Gymnastic Procedure.—Patient stands in front of long beam with indentations half a meter apart; she lifts her foot until pain ensues and supports heel in notch most comfortable; she now bends forward as much as possible and rotates about 10 times to right and to



left; she lifts foot to next notch and rotates as before until pain warns her to be cautious.

*Sciatic Neuralgia.*—Pain not increased by motion or relieved by recumbent posture; common in hysteria; often excited by pressure of legs on hard seat.

Treatment.—See under neuritis just above.

Galvanic current in rather long seances several times a day—anode on sacrum, cathode along course of nerve.—Roth.

Glonoïn 1/200 gr. every 1 to 3 hours.—Southern California Practitioner.

Atropin or morphin subcutaneously in neighborhood of nerve, or acupuncture or “firing.”—Bartholow.

R. Lin. ammoniæ oz. ii; spt. chloroform oz. i; lin. menthol oz. ii; tinct. opii oz. i: Apply well over surface as necessary.—Shoemaker.

*Muscular Rheumatism.*—Diffuse soreness and pain, chiefly on motion.

Treatment.—Complete rest; hot poultices and fomentations; belladonna and aconite applications; massage; vapor or Turkish bath; galvanic or faradic current; full doses of potassium citrate, acetate or tartrate; potassium iodid in 5 to 7-grain dose; salicylic acid in 15 to 20-grain dose.—Taylor.

*Hip Disease of Children.*—Limping gait, pain in knee and muscular rigidity; pain much in-



creased by pressing head of bone against acetabulum.

Treatment.—In early period absolute rest and removal of deformity (if present) by extension with weight and pulley; apply long splint to opposite or sound side to keep patient on back; support affected limb in position to which disease has brought it, making extension in long axis of thigh; for adduction make counter drawing on sound limb toward head of bed; in long-standing fixed cases, straighten limb  $2^{\circ}$  or  $3^{\circ}$  under chloroform and reapply weight; weight extension must be continued for at least 3 months after all pain and tendency to muscular contracture disappears, and then be gradually discontinued; evacuate abscess as soon as detected, using drainage tube and antiseptic gauze “protective.”—Howard Marsh.

*Renal or Pelvic Tumors, Pregnancy and Rectal Ulcers.*—

#### DOUBLE.

*Rectal Ulcer.*—Cramps in legs and numbness; dyschezia; local signs.

Treatment.—See under proctalgia above.

*Locomotor Ataxia.*—Wide range, fugitive character of fulgurating pains; may be girdle sensation and loss of knee-jerk.

Treatment.—Antikamnia, acetanilid, antipyrin, phenacetin.



*Malignant Pelvic Growths.*—Pain steady and wearing; other pressure symptoms.

Treatment.—Operation or opiates.

*Lumbar Abscess.*—Pus from lumbar caries descends beneath outer arcuate ligament or flows backward between last rib and iliac crest in triangle of Petit.

Treatment.—Open with aseptic care, curet walls, wash out with 1/1000 mercuric chlorid solution, pack with iodoform gauze and dress antiseptically; remove gauze in a day or two, but continue mercurial dressings; if slow in healing, inject or swab out with a stimulating fluid as in acute abscess.—J. C. Da Costa.

*Lumbosacral Spondylitis.*—One or both sciatic nerves; not tender for some time; pain on pressing ilia together.

Treatment.—Strict rest, extension, proper diet; blisters, cautery or iodine paintings locally; later, if all goes well, a hip case or splint or crutches; if disease not quickly arrested and if abscess supervenes, lay joint open and scrape or chisel away diseased portions of membrane or bone, keeping wound well packed with antiseptic materials until it heals.—Roberts.

DIVERS NEURALGIAS.—Sharp, shooting, paroxysmal, along nerve-trunks.

General Treatment.—Treat cause if possible; quinin in full doses for malaria; iron, quinin



and cod-liver oil generously for anemia—or arsenic, strychnin or gelsemium; colchicum, alkalies or potassium iodid for gout and rheumatism; potassium iodid and sometimes mercury for gout and syphilis; leeching if nerve tender; heat or cold—freezing mixture to tender spots; ointment of belladonna or veratrin; menthol pencil, croton-chloral, Paquelin cautery occasionally; long-continued daily use of constant galvanic current; nutritious, digestible food; regulate bowels and other functions; change of climate.—Am. Text-Book of Surgery.

R. Ext. belladonnæ gr.  $\frac{1}{4}$ ; quin. sulph. gr. iss.; ferri sulph. exsic. gr. ss.; strych. sulph. gr.  $\frac{1}{60}$ ; acidi arsenios. gr.  $\frac{1}{48}$ ; oleores. pip. m. ss.: A pill thrice daily.—Shoemaker.

R. Caffeinæ cit. gr. ii; ammon. brom. gr. x; elix. guaranæ q. s.: A teaspoonful every hour or two.—Shoemaker.

Baltimore Liniment. R. Tinct. aconiti, chloroformi aa. dr. ii; lin. saponis ad oz. iii: To be applied along course of affected nerve.—Shoemaker.

*Brachial Neuritis*.—Severe pain in region of scalp, wrist, back of forearm or in plexus itself (above clavicle or in axilla) often extending along nerves of arm or to region of heart; persistent tenderness of affected nerve-trunks; ultimately more or less dull, wearying pain in



whole arm—with severe exacerbations of lancinating, stabbing or burning pain, often with tingling of skin; movements of arm, especially upward, cause distress; hyperesthesia or anesthesia dolorosa in severe, prolonged cases; flabbiness and slight wasting of muscles; subcutaneous edema; arthritic changes in finger joints; five-sixths of all cases above 50 years old—gouty subjects.

Treatment.—Abstain from movements; cocain subcutaneously—2 injections (1/10-1/3 grain) twice daily during height of disease; gentle rubbing after tenderness has subsided; electricity for degeneration and after pains.—Gowers.

*Polyneuritis.*—Numbness, “pins and needles,” paresthesia or anesthesia and muscular weakness of extremities; tender toes in typhoid—no discoloration or swelling but very sensitive.

Treatment.—Complete rest; nutritious diet; no alcohol; sodium iodid and mercury for syphilis; sodium salicylate for cases following cold; relieve pain with cannabis indica, belladonna or morphin, and locally chloroform or wrapping limb in cotton-wool; galvanism to muscles, slowly interrupted; massage if comfortable.—Taylor.

*Wounds and Injuries of Nerves.*—Pain slight or severe; shock and loss of function (reflex



palsy); trophic changes with burning pain (causalgia); may be neural arthropathies.

Treatment.—Cold water applications; repeated blisters over course of nerve; morphin very carefully; stretching, division or exsection of nerve.—Am. Text-Book of Surgery.

*Diseases of Spinal Cord.*—Pain chiefly peripheral; little or no tenderness in nerve.

Treatment.—Rest, warm baths, coal tar analgesics.

*Neuralgia from Scars and Stumps and Thickened Bursae.*—May simulate hip disease.

Treatment.—Incise and liberate nerve—this failing, excise a portion of nerve; if no known nerve involved, excise entire irregular scar; excise cicatrix of stump, draw down bulbous ends of nerves and sever clean—reamputation may be required; if ascending neuritis has developed, resect a portion as high as tenderness traced.—Am. Text-Book of Surgery.

*Dentist's Neuralgia.*—Spastic neuralgia of leg on which body weight is borne while working lathe or dental engine.

*Painful Subcutaneous Tubercle.*—Pea-sized fibrous tumor just under skin, connected with sensory filament of cutaneous nerve; great tenderness and paroxysmal pain extending up and down limb, sometimes with spasms of muscles.



Treatment.—Excise tumor together with portion of nerve-twig.—Am. Text-Book of Surgery.

*Erythromelalgia*.—Obscure nervous disease marked by red flushing of lower extremity and burning pain in sole of foot, increased by hanging down or walking.

Treatment.—Rest, elevation, ice applications; hydrotherapy, massage, electricity; ichthyol or ethyl chlorid locally; salicylates, antipyrin, ergotin, morphin.—M. Kohane.

MUSCULAR PAINS.—Dull, aching, much increased by movement.

*Flat-Foot*.—Perhaps most common cause of pains in feet; sense of fatigue followed by aching, often extending to calf or even thigh; discomfort increased by exercise, relieved by rest; tender points over inferior calcaneo-navicular ligament, bases of metatarsi, etc.; often obesity and varicose veins.

Treatment.—Proper wide shoe with broad, flat heel, and inner border of sole and heel of shoe slightly thicker. Instruct patient to throw weight on outer side of foot; to hold feet parallel with each other in walking; to press down sole of shoe with toes; employ active lift of calf muscles by fully extending leg and raising body on foot from time to time; and avoid long continuance in passive posture. Tip-toe exercises (bicycling) especially useful, but proper walk the best



of all exercises. Passive movements in all directions (particularly dorsal flexion and adduction) to limit morning and night. Plantar steel brace

*Polymyositis*.—Almost always a result of exposure to cold in rheumatic individuals; bilateral symmetric distribution; muscles very tender at first—undergo hardening and contraction in time.

Treatment.—Diaphoretics, salicylates and perhaps small doses of mercury in early stage.—Gowers.

*Gonorrhoeal Myositis*.—May be severe pain accompanying blenorrhoea.

Treatment.—Wrap member in compresses wet with boric acid solution at 35°C., covering with rubber cloth and cotton and renewing as often as needed; if pain persists use partial baths at 30°-35°C.; when acute stage passed paint macerated skin with equal parts of guaiacol and oil of sweet almonds.—Braque.

*Trichinosis*.—Early pain, nausea, vomiting and serous diarrhoea; in 1 or 2 weeks muscles become swollen, firm and extremely painful and tender; edema of face; high fever, profuse sweating: eosinophilia.

Treatment.—Purgatives at first; after migration use opium, warm fomentations and stimulants.—Stevens.

Sodium sulphocarbolate, 2 to 10 gr. in water 3 or 4 times daily.—Furey.



*Muscular Rheumatism.*—Pain chief symptom; made worse by use of muscles and associated with tenderness most marked at tendinous origins and insertions of muscles.

Treatment.—Ten gr. Dover's powder and 5 to 10 gr. saltpetre night and morning.—Hughes.

Sodium bicarbonate gr. xx-xxx often relieves in 3 or 4 hours when slight; no meat, beer, sour wines nor much sugar; sal volatile of use with alkalies; massage, warmth, dryness, flannels.—Beale.

Sodium salicylate, salophen or antikamnia and salol.

*Obscure Muscular and Nervous Pains.*—Often due to autointoxication or deficient elimination.

Treatment.—Aqua pura 3 or 4 pints daily for a few weeks.—Beale.

Any Local Pain: R. Atropinæ sulph. gr. ss.; aconitinæ gr. iss.; olei tiglii gtt. ii.; petrolati dr. ii: Rub in a piece about size of pea.—Ludlow.

*Recurrent Cramps of Legs.*—From constipation, gouty diathesis or weakened circulation.

Treatment.—Cholagogues, uric acid solvents and circulatory tonics.

*Bruises.*—Soreness following crushing injury; extravasation of blood, swelling and color changes.

Treatment.—Equal parts of ammonia water,



fl. ext. arnica, soap liniment and turpentine: Rub in well several times a day.—Shoemaker.

*Sprains.*—Severe pain in joint following wrench; tenderness, swelling, loss of function, discoloration, joint crepitus.

Treatment.—Lead water and laudanum or silicate dressing in mild cases; in severe cases splint extremity and apply to joint flannel kept wet with lead water and laudanum, iced water, tinct. arnica, alcohol and water or solution of ammonium chlorid; ice-bag on flannel from time to time for 20 or 30 minutes; judicious bandaging; hot applications after a day or two; stimulating liniments later and firm compression with bandage.—J. C. Da Costa.

*Chronic Sprains.*—Rest, massage, hot air, douches and proper restricted use of joint.—R. W. Lovett.

*Relapsing Fever.*—Severe muscular pain; spirochetæ in blood.

Treatment.—Salol gr. iiss. and phenacetin gr. v every 2 hours.—Thornton.

*Tired Feet.*—Treatment: Hot foot bath with an ounce of salt; plunge feet in ice-cold water until sensation of warmth; spirit foot baths.—*Doctor's Magazine.*

Plunge feet in ice-cold water and keep them immersed until there is a sensation of warmth.—Butler.



VASCULAR PAINS.—Distinctive signs in veins and arteries.

*Varicose Veins.*—Dull, heavy ache, worse toward evening; may be little surface varicosity.

Treatment.—Elastic stocking or bandage; tonics; massage; laxatives; recumbency on side with limbs elevated.—Ayers.

Prophylaxis.—Avoid standing still; prevent constipation; when skin tends to break down apply lead and opium wash gently on a cotton swab morning and night, and wear a bandage.—International Clinics.

*Senile and Angiosclerotic Gangrene.*—Due to thrombosis, embolism or arteritis and often preceded for a time by uncomfortable sensations or severe pains in feet or toes, with numbness and paresthesia.

*Phlebitis.*—Pain and tenderness in and around vein; discoloration; solid edema below seat of disease; thrombus sometimes palpable; pyemic symptoms in suppurative cases; *alba dolens* a result of puerperal sepsis.

Treatment.—*Alba Dolens*: Absolute rest of affected limb in a felt-lined splint for 25 or 30 days; soothing liniment of belladonna and opium at first, covering limb with soft lint and oiled silk, taking care not to blister; after second week gentle inunctions with mercurial ointment or belladonna salve; slight compression



later with bandage; do not use limb freely till after fortieth day.—Debove and Gouvin.

*Typhoid Phlebitis.*—Keep limb elevated and at rest; anoint with equal parts of ointments of belladonna, mercury, and iodine compound and vaselin; apply pressure with flannel bandage; cautious massage as swelling subsides.

*Intermittent Lameness.*—Intermittent painful paralysis due usually to atheroma (lithemia, alcohol, lead, malaria, diabetes, syphilis, senility), less often to aneurism or tumor; symptoms come on during walking and are usually entirely relieved by lying down; during attacks arterial pulsation in affected member is diminished and skin is blue, cold and discolored; at later stage often extreme numbness with sensation of burning and itching or intolerable cramp and marked contracture.

Treatment.—Sodium or potassium iodid; careful regulation of diet.—Bourgeois.

*Achillodynia.*—Pain or pressure over insertion of tendo Achillis; inflammation of retrocalcaneal bursa from sudden trauma or friction of badly fitting shoes, gonorrhoea, syphilis, gout, rheumatism or rarely tuberculosis.

*Podalgia.*—Fasten a small ring of rubber to foot with plaster, surrounding the tender spot.—Bettmann.

*Lymphangitis.*—Sepsis of inflamed wounds;



chills, fever, local pain; red, wavy, knotted, tender streaks, or diffuse edematous redness.

Treatment.—Thorough disinfection of wound—lay open if need be; apply hot pack of mercuric chlorid (1:2000) in early stage; let out any poison by free incision; keep bowels and kidneys active; check pain with anodynes; keep up strength with easily digested food and other supportives.—Gerrish.

PERIUNGUAL PAINS.—Inflammatory pain in tissues about nails.

*Onychia or Onychitis.*—Inflammation and ulceration of matrix of nail, which is discolored, loosened and cast off; due to injury, ill health or syphilis.

Treatment.—Antiseptic lotion and dressing, anodyne solution and ointment in simple cases; constitutional states require potassium iodid, mercury and tonics; cauterize with stick silver nitrate or nitrate of lead, or apply iodoform or citrine ointment or arsenious acid ointment (gr. 2 to the ounce.)—Roberts.

*Paronychia, Whitlow or "Felon."*—Suppuration usually around nail in superficial; in deep felon finger very hot, tense and painful—pulsatile and much increased by pressure, motion or dependent position—pus soon forms.

Treatment.—Immediate incision—in deep felon to bone alongside the tendon; drainage, irriga-



tion, antiseptic dressing and splinting of extremity; give morphin if patient cannot sleep; have bowels move once a day; give quinin, iron and milk punch.—J. C. Da Costa.

For ulceration apply iodoform 10, balsam of Peru 20 and petrolatum to 100 parts.—Fox.

*Ingrowing Toe Nail.*—Lateral border buried in or overlapped by soft parts.

*Treatment.*—Allow nail to grow forward, scrape away thickened cuticle and keep square corner elevated with pledget of cotton; wide long shoes with high toes; treat ulcer with nitrate of silver or lead; in inveterate cases pare away soft parts obliquely or remove part of nail.—Roberts.

Pare it thin, soak foot in hot water and place strip of lead or cotton under edge of nail, drawing back flesh with adhesive plaster (may cure in a month); if ingrowing slight, soak in hot water and pare nail far back.—Fox.

*Subungual Corns and Warts and Exostoses*—Nail very sensitive.

*Acute Eczema, Erythromelalgia, X-Ray Dermatitis.*—Pain in nail an initial symptom.

REFLEX PAINS.—Referred to knee in hip, spinal or sacroiliac disease, pronated or flat-foot, and disease of colon or lesion obturator nerve (instrumental labor); to inner side of knee in metritis; to hip in vesiculitis, uterine disease, curved sacrum and disease of ovaries or broad



ligament; to shoulder in hepatic and middle-ear disease or cerumen in auditory meatus; to ankle in hip disease; to heel in rectal, uterine, ovarian, renal, vesical and prostatic disease, (urethral stricture), lithemia or gout; to ball or sole of foot (podalgia) in toxic neuritis, vesical stone or sciatica, sacrolumbar spondylitis or deep varicose veins of lower limbs (much increased by standing or walking); to big toe in hip joint disease; to hand in dislocation of shoulder; to wrist in ovarian disease; to thumb in uterine disease; to fingers in bladder trouble; to back of arm in chronic cough; down ulnar side of arm to little finger in cardiac and aortic disease (may take reverse direction); to front of upper thigh in renal and ovarian disease; down sciatic or obturator nerve in constipation.

*Obturator pain* down front of thigh to knee in chronic ovaritis.

Treatment.—Massage to liberate fixed ovary; also have patient stand with arms akimbo and painful lower limb stretched backward as far as possible, the toes resting on a low foot stool; while in this position the woman makes about 10 low, gentle genuflexions, raising herself each time; repeat maneuver morning and evening, gradually increasing distance and height of footstool.—Zeigenspeck.

*Persistent Pain in Legs.*—(Spinal lumbar



lesion), in trunk (dorsal) or arms (cervical) from irritation of posterior nerve roots; often dull, rheumatoid and affected by changes in the weather.

*Painful Cramps in Calves.*—In cholera morbus or Asiatica, early diabetes, late stage of consumption (thrombi), gout, prostatitis, neurasthenia, corrosive or irritant poisoning, rectal ulcer and chronic endarteritis; calf-tire from overstrain of muscles in flatfoot or weak foot.

Treatment.—Cholera Morbus: Rub over affected muscles with ointment containing 4 dr. chloral to the ounce of petrolatum.—Braque.

Cholera Asiatica: R. Chloral dr. iii; morph. sulph. gr. iv; aquae laurocerasi oz. i; 15 to 30 minims by hypodermic injection.—Bartholow.

Arteriosclerosis: Spirit of glon oin m. i., gradually increasing to m. v.

Nocturnal Tetany: Viburnum or digitalis.

Pregnancy: Massage of extremities.—Grandin and Jarman.

*Nocturnal Cramps.*—Due to irritation of muscle fibers by circulatory irritants or by deficient nutrition or over-stimulation; most frequent in plantar and gastrocnemii muscles.

Treatment.—Correct any gout, rheumatism, anemia, diabetes, dyspepsia or constipation; prevent cramps by tying a tape about each thigh just above the knee on retiring; evening dose of



bromid with alkalies, or 5 gr. each of lupulin and camphor—codein or opium may be given in severe cases, particularly in pregnancy; massage and faradization or small doses of strychnin sometimes ward off attacks; at onset affected muscles should be vigorously rubbed and kneaded; jumping up and putting muscles on stretch often breaks up the cramp.—Dana.

*Reflex Traumatic Neuralgia.*—May be quite distant from causative lesion.

Treatment.—Persevering use of hot water douche to parts first affected for an hour three times a day, followed by hypodermic of morphin and atropin.—Thomson.

*Locomotor Ataxia.* — Paroxysmal, darting, rheumatic or neuralgic pains in legs; girdle sensations in limbs and trunk; loss of knee-jerk.

Treatment.—Superficial pains, hypodermic injection of 1-6 to 1-4 gr. of cocain at upper part of region to which pain is referred; local application of chloroform sprinkled on spongiopiline; warm bath; a course of chlorid of aluminum may prevent recurrence.—Gowers.

Neighboring injection of 2 Cc. or less of solution containing 1/6 gr. mercuric iodid and 60 gr. potassium iodid.—Bouchard.

Deep Pains.—Acetanilid, antikamnia, antipyrin, phenacetin, hyoscyamin; counter-irritation.

*Cerebral Hemorrhage.*—Prodromal pain in



legs, sudden, excruciating, unmodified by pressure, posture or local applications.

*Syringomyelia*.—Dissociated sensations.

Treatment.—Cocain hypodermically in region to which pain is referred.—Gowers.

*Metatarsalgia*.—Pain about head of fourth metatarsal bone and middle of foot (sole very tender at this point), increased by walking, cold or wet; pinched nerve, periostitis, rheumatism, syphilis, contracted plantar fascia, slight club-foot, scar of flat-foot.

Treatment.—Shoe of proper width snugly embracing arch of foot and with depression in sole to relieve pressure on particular painful point; excision of metacarpal head or neurectomy in severe cases.—Church.

Injection of 1 Cc. of 2 per cent cocain at point of greatest tenderness, pushing needle point down to bone; repeat as needed.—H. Vurger.

“GROWING PAINS.”—

*Rachitic Epiphysitis*.—General soreness; rachitic rosary; sweats.

Treatment.—R. Phosphori gr. i; alcohol absol. m. cccl; spt. menth. pip. m. x; glycerini oz. ii. Six drops increased to 10 t.i.d. to a child of 2 to 4 years.—Thompson. Cod liver oil and syrup of iron iodid.

*Myalgia*.—From fatigue (near knees and an-



kles; relieved by rubbing upward); incipient fevers or intestinal autoinfection.

Treatment.—Intestinal Sepsis: Guaiacol or guaiacol carbonate with a vegetable tonic; laxatives if necessary; correction of hygienic conditions.—D. S. Hanson.

*Non-Rachitic Diseases of Joints and Bones.*—See special diseases above.

*Acute or Subacute Articular Rheumatism.*—Often only slight pain and fever in children; heart lesions common.

Treatment.—Rest in bed till all symptoms have subsided, the chief consideration.

R. Acidi salicyl. gr. x; sodii bicarb., potassii bicarb. aa. gr. viiss.; syr limonis m. xxx; aquam q. s.: a dessertspoonful to a child of 10.—Roosevelt Hospital.

*Coxitis or Pericoxitis.*—Dull pain, limp, impaired range of motion, contracture.

Treatment.—Build up general health and secure absolute rest for joint until all acute symptoms have vanished; keep strictly on back in bed with pulley extension (at first line of flexion over wedge-shaped pillow, gradually lowering to axis of body) and lateral sandbags.—Roberts.

*Neuroses about Joints.*—Traumatic particularly.

*Tardy Hereditary Syphilis of Bones.*—Usually between 6 and 10 years; rheumatism-like pains



in shaft of bones or neighborhood of joints sometimes worse at night and varying with weather; continued fever in acute type; sabre-like deformity of tibia and periostitic nodes.

Treatment.—Potassium iodid in as large doses as patient will bear for long periods, alternating with mercurials, tincture of iron, hypophosphites, syrup of iodid of iron, cod liver oil and other tonics and alteratives.—Young.

DERMATALGIA. — Spontaneous pain in skin, increased by pressure or friction; usually small, circumscribed hairy areas; nearly always due to functional nervous diseases.

Treatment.—Treat exciting cause; galvanic current and applications containing belladonna and aconite, or iodine and blisters may be tried.—Duhring.

*Psychroalgia*.—Cold pain in circumscribed areas; overworked women.

Treatment.—Antirheumatic drugs, nux vomica, exercise and electricity; a little liniment containing mustard oil; warm applications; friction.—Dana.

*Meralgia Paresthetica*.—Burning, painful sensations in region of lowered sensibility.

*Frost Bite*.—Treatment: Remove to cold room and rub parts thoroughly with snow or with cloths dipped in ice water; raise temperature of applications gradually and finally rub with bare



hands; give some alcoholic when reaction manifest; perfect dryness and elevation of part if gangrene.—*Medical World*.

*Bed Sores*.—Treatment: Ointment containing 45 gr. zinc sulphate, 30 gr. lead acetate, 20 m. tinct. myrrh, and sufficient petrolatum to make 2 oz.—*Clin. Review*.

Prevent by frequent change of position and scrupulous cleanliness; air-cushion around local redness; harden skin with alcohol (alum may be added), spt. camphor or distilled ext. witch-hazel, then dry carefully and dust with salicylated talcum, aristol or euophen.—*Burdick*.

*Bubo*.—Venereal inflammatory enlargement of lymph gland in inguinal region; single or multiple, hard or soft. (See table.)

Treatment.—Apply every other day on lint, antiseptic or alterative medicaments (equal parts of ichthyol, lanolin and mercurial and belladonna ointments), cover with large pad of cotton, and hold dressing in place with tight bandage; evacuate pus (if present) thoroughly and wash out with hydrogen peroxid, followed by irrigation with bichlorid solution (1:5000).—*Burdick*.

*Stings of Wasps and Bees*.—Immerse part in cold water, or apply a cold paste of soda; camphor-chloral locally for pain.—*Burdick*.

Crude petroleum, covered loosely with cotton.—*Medical Times*.



*Snake Bite.*—Intermittent ligature about limb above bite; excise or cauterize bite and suck or cup wound; inject into and about wound potassium permanganate (8 gr. to ounce of water), chlorinated lime (8 gr. per ounce) or tinct. iodine; Calmette's antivenene; alcohol, strychnin, ammonia, coffee.—Burdick.

*Dog Bite.*—Slight enlargement of wound to cause free bleeding; thorough cleansing with soap and water and irrigation with an antiseptic solution; if any fear of rabies, cauterize with caustic potash or fuming nitric acid; keep dog closely confined and watch for hydrophobic symptoms; Pasteur treatment.—Burdick.

*Furuncle.*—Single or multiple, circumscribed, fluctuating or elastic, brawny, dusky red, inflammatory swelling, with wide areola and tendency to point centrally (at a single point) in line of least resistance; deep slough of central greenish core; throbbing pain and tenderness, fever and chill (sometimes); from debility, errors in diet, fevers, local irritants or pyemia; acute form matures in a week or ten days; "cold abscess" (tubercular) usually near spine, Poupart's ligament or in inner part of thigh.

Treatment.—Cold, wet applications to prevent.—Shoemaker.

Ichthyol in 50 per cent ointment.—Cantrell.



A 10 to 50 per cent solution of menthol, applied with brush.—*Medical Summary*.

Plaster of 1 part salicylic acid, 2 parts diachylon plaster and 4 parts soap plaster. Spread on cloth.—Heitzmann.

Leave alone except to protect with a ring of thick felt and plaster on summit; tonics internally.—Beale.

Poultice in incipient stage; then apply carbolic acid on a splinter to interior; Rochelle salts may prevent recurrence; calcium sulphid during time of eruption.—Fox.

To abort boils cover affected spot well with a coating of collodion containing  $\frac{1}{2}$  to 2 gr. salicylic acid to the dram, and repeat two or three times within 12 hours.—Oehme.

Abortive.—Six parts each of ether and ichthyol, with 7 parts of dilute alcohol. Apply twice daily.—Glikman.

Local applications of solution of sodium bicarbonate.—Brunton.

*Chilblain*.—Livid red, circumscribed, slightly raised, hot or cold, hard or pultaceous, itching and burning areas on toes, fingers, ear or nose; often blisters and ulcers.

Treatment.—Ointment of 1 dr. carbolic acid, 2 dr. tinct. iodine, 1 dr. tannic acid and 4 oz. simple cerate. Apply twice a day.—Morrow.

Slightly stimulating application like balsam of



Peru or spt. turpentine or flexible collodion, or this ointment: iodoform, 2; balsam Peru, 3; petrolatum, 20.—Fox.

*Corns.*—From ill-fitting shoes mostly.

Treatment.—Salicylic acid, gr. x to 2 drams of cerate. Apply to corn at night.—Thornton.

Hard Corns.—Soak foot well in sufficient hot water containing a teaspoonful of borax and a tablespoonful of common salt—then scrape away loosened epithelium with a dull knife, and apply a scruple each of salicylic acid and ext. cannabis indica, in sufficient collodion to make a solution; leave film on for 3 days, then bathe, remove loose tissue and reapply.—Beaseley.

Soft Corns.—Bathe parts well, pack between toes a mixture of equal parts of boric acid and common salt; allow to remain over night, when the growth can usually be peeled out; if not, powdered stearate of zinc and bismuth may be applied until evening and the salt and boric acid again applied; to prevent return of corn, keep toes apart and apply some absorbent powder.—Beaseley.

Corns on Sole.—Soak a piece of lint or cotton-wool the size of the corn with acetic acid, forming a compress; cover with gutta-percha sheeting and bandage lightly for three consecutive nights.—*British Medical Journal*.

Superficial Burns.—Collodion, 2 parts, with



1 part of castor oil painted over affected area; or saturated solution of baking soda, or silver nitrate, 15 gr. to ounce of water.

Persistent Furunculosis.—Arsenic sulphid, 1/100-1/25 gr., t.i.d.—Cantrell.

Recurrent Boils and Carbuncles.—Creamy brewer's yeast, a dram or more at each meal—obtained fresh every day in summer—every other day in winter.—Brocq.

Chronic Sepsis and Furunculosis.—Credé's colloidal silver (in glycerin and albumin), 1/6 gr. 2 or 3 times daily.

*Carbuncle*.—Single (usually), flat, ill-defined, firm, deep-seated, hard-based, dark red to blue-black inflammatory swelling 1 to 6 inches in diameter, usually on back of neck; sieve-like surface exuding sanious pus; extensive gray slough, leaving large, slow-healing ulcer; tense pain and burning but no tenderness; initial chill, fever and exhaustion; from malnutrition, nephritis or diabetes; lasts 4 to 6 weeks.

Treatment.—Nuclein, 15-45 gr. in tablets, t.i.d.—Thornton.

Hypodermic injection of pure carbolic acid into and about affected area—1 to 3 drops in early stages, 15 to 30 drops in suppurative stage.—Manley.

Keep up strength of patient; morphin usually needed to secure rest; good hygiene; nutritious,

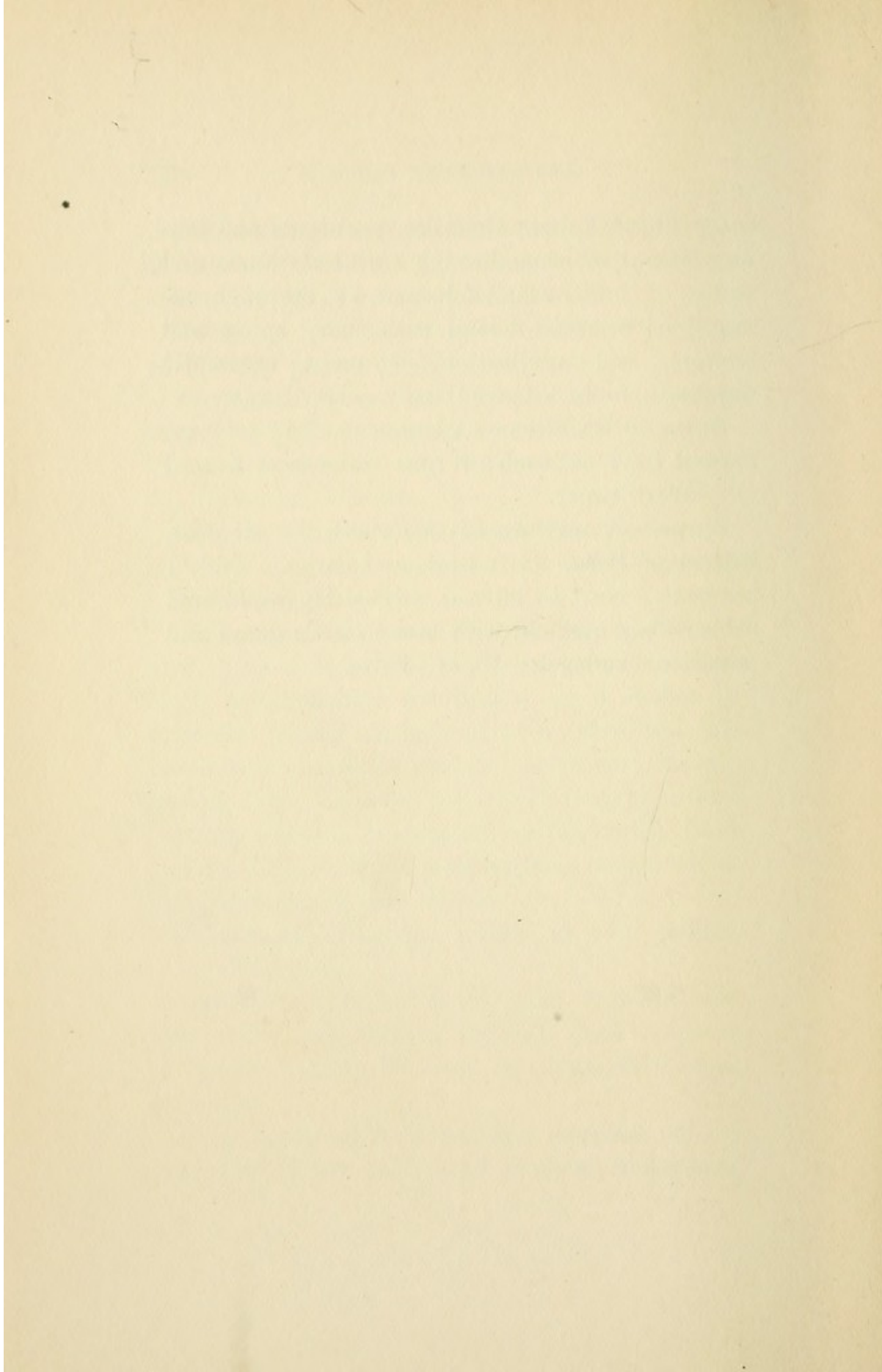


easily digested diet; alcoholic stimulants and tonics; crucial incision through entire thickness and width of infiltration, followed by thorough removal of necrotic masses with sharp spoon and scissors, and application of moist antiseptic dressings, to be changed daily.—Hardaway.

Burns in Children.—A liniment of  $1\frac{1}{2}$  or 2 gr. thymol in 3 oz. each of lime water and linseed oil.—Wertheimer.

Burns.—A mixture of castor oil, 94 per cent, balsam of Peru, 5 per cent, and carbolic acid, 1 per cent. Next to burned surface lay perforated rubber dam, overlaid with moist sterile gauze and retention bandages.—W. N. Yates.







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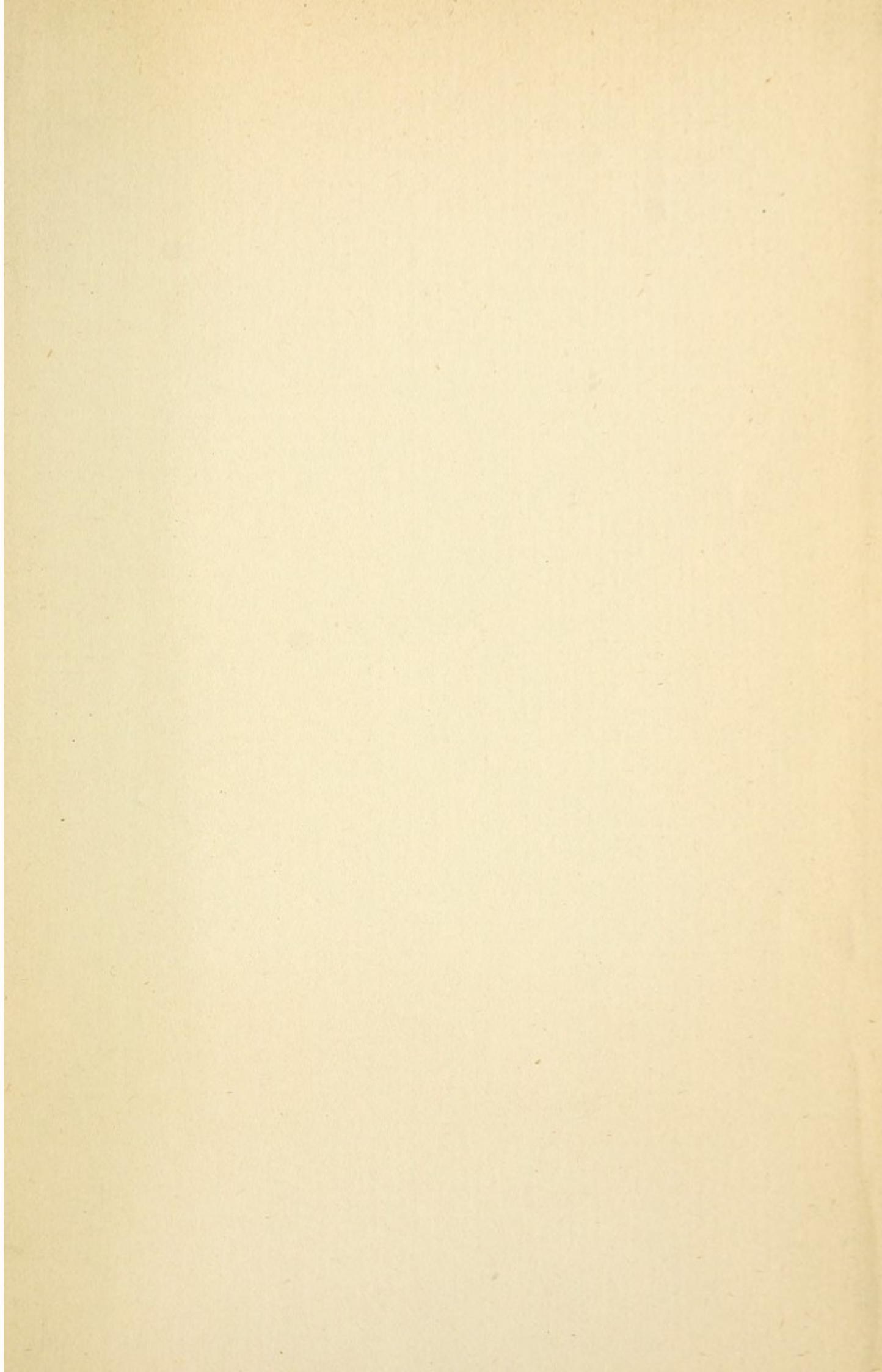


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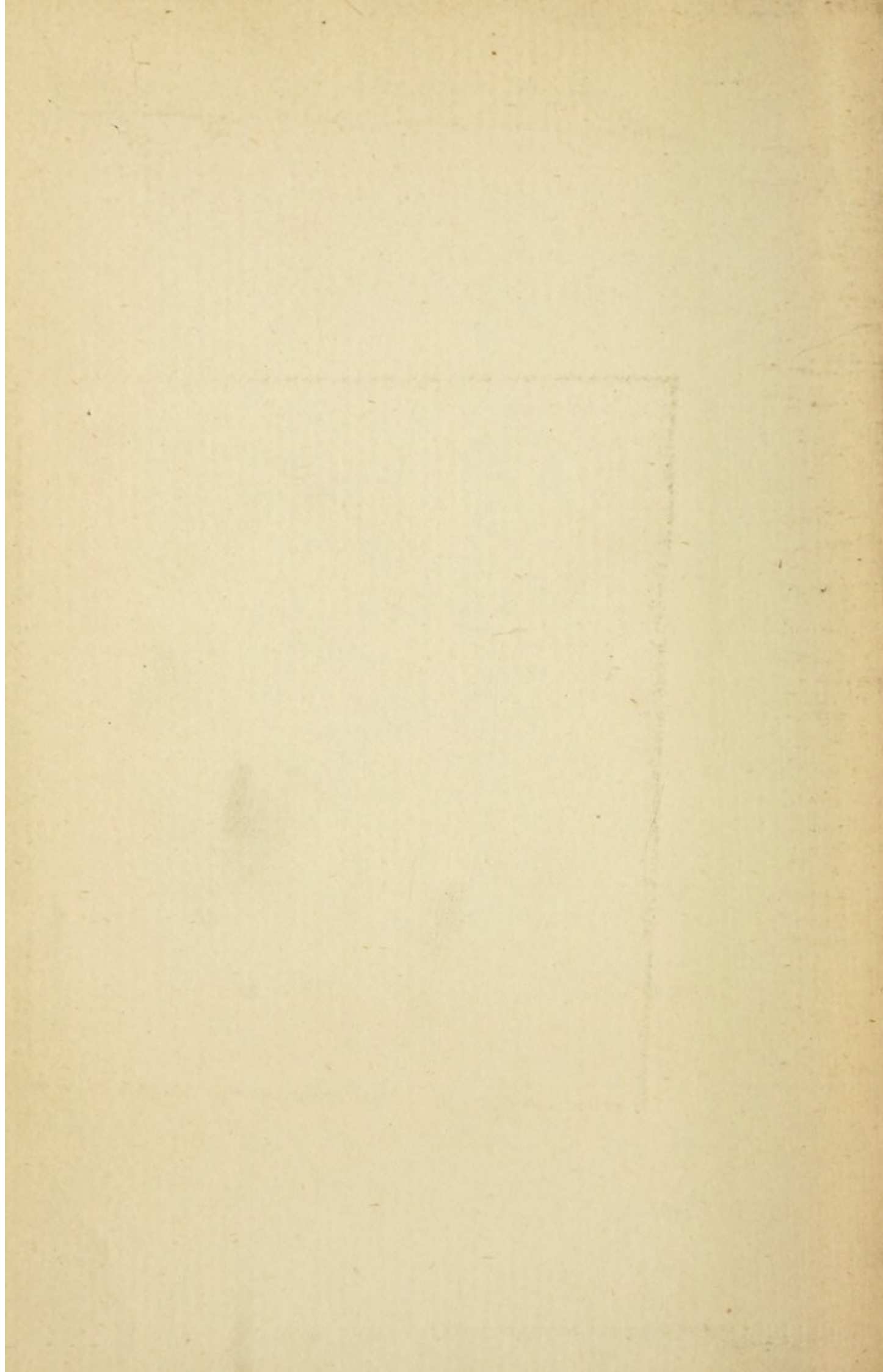


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