Syllabus of the lectures on the principles and practice of surgery : delivered in the University of Pennsylvania / by Henry H. Smith.

SYLLABUS OF LECTURES

ON THE

PRINCIPLES AND PRACTICE OF SURGERY.

BY

HENRY H. SMITH, M. D.

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PRINCIPLES AND PRACTICE OF SURGERY,

DELIVERED IN THE

UNIVERSITY OF PENNSYLVANIA.

BY

HENRY H. SMITH, M.D.,
PROFESSOR OF SURGERY.

PRINTED FOR THE USE OF THE CLASS.

PHILADELPHIA:
T. K. AND P. G. COLLINS, PRINTERS.
1855.

TO THE

Medical Class

OF THE

UNIVERSITY OF PENNSYLVANIA,

THE FOLLOWING PAGES,

PREPARED FOR THEIR ESPECIAL USE,

ARE RESPECTFULLY INSCRIBED

BY THEIR FRIEND,

THE AUTHOR.

NOTICE TO THE CLASS.

THE following pages have been written amidst various distractions, in order to aid the class in taking notes of the surgical lectures delivered in the University of Pennsylvania. Being intended merely as *outlines*, their value will depend chiefly on the industry shown by the student in filling them up. They have therefore been so printed—each right-hand page being blank—as to facilitate additions in the lecture-room, the paper being prepared so as to admit of the use of pen and ink.

PHILADELPHIA, *September*, 1855.

SYLLABUS

OF THE

LECTURES ON THE PRINCIPLES AND PRACTICE OF SURGERY.

DELIVERED IN THE

UNIVERSITY OF PENNSYLVANIA.

PRELIMINARY REMARKS—ORDER OF THE COURSE.

PRINCIPLES of Surgery defined
Practice of Surgery
Importance of a thorough knowledge of the Principles of Surgery illustrated by examples of its bearing on Practice.

INFLAMMATION.

Inflammation defined as "that change in the natural preservative action of any structure which is generally characterized by increased redness and heat, as well as by pain, swelling, and modification of secretory action."

VARIETIES OF INFLAMMATION—Acute and Chronic. Healthy and Unhealthy; Circumscribed and Diffused, &c. Objections to such a division.

ACUTE INFLAMMATION is one characterized by

CHRONIC INFLAMMATION is

SYMPTOMS OF INFLAMMATION.

The symptoms of inflammation are both local and constitutional.

Local symptoms—redness, heat, pain, swelling.

Constitutional symptoms—disturbance of function, fever, &c.

All the symptoms not always present in inflammation.

REDNESS—this is usually above the natural standard.

Color due to—change in position of red corpuscles, increased circulation, &c.

Varieties of tint and extent seen in acute and chronic inflammation.

Redness alone is no evidence of the existence of inflammation. Example—blushing.

HEAT—usually above the natural standard.

Hunter's experiments on heat and the formation of new bloodvessels; rabbit's ear, frog's foot, &c.

Sensations of the patient not always reliable.

Origin of the term Inflammation—*in* within, and *flamma* a flame.

Cause of the heat—increased circulation in the part; nervous disturbance.

PAIN—due to disordered nervous sensations in the part.

Varieties of pain—burning, tingling, itching, throbbing, lancinating, sharp, dull, obtuse.

Changes of sensibility in inflamed parts shown in—intolerance of light in ophthalmia; loss of taste and smell in inflammation of mouth and nose; increased sensibility of certain membranes, as the periosteum, &c.

Diagnosis of neuralgic from inflammatory pain.

Absence of pain no evidence of the absence of inflammation. Examples of this.

Location of pain no evidence of the locality of the inflammation. Examples of this.

Causes of pain—influence of the tension of a part in irritating the nerves, &c.

SWELLING—due to the increased flow of blood to the part.

Different effusions seen as the products of inflammation. Structures concerned in these effusions.

Various kinds of swelling—œdema; fluctuation; emphysema; induration.

Characters of each—pitting, moving, crackling, hard swelling.

Causes of each of these.

Theories of the changes in the capillary circulation in connection with the symptoms of swelling, pain, redness, extravasation, &c.

CHANGES IN THE BLOOD in Inflammation.

Buffy coat; serum; fibrin; crassamentum; cupped blood.

CONSTITUTIONAL SYMPTOMS OF ACUTE INFLAMMATION.

Chills, fever, checked secretion, &c.

FEVER.

Synonymes of Inflammatory Fever—sympathetic, symptomatic, irritative.

Symptoms of Inflammatory Fever.

ETIOLOGY OF INFLAMMATION.

Causes—exciting, predisposing, proximate.

Exciting causes are friction, pressure, irritants, wounds, &c.

Predisposing are

Proximate

THEORIES OF THE PRODUCTION OF INFLAMMATION.

Hunter's views. Van Helmont, Stahl, Haller, Thompson, &c., in relation to the increased action or tone of the capillaries.

Views of Vacca and Wilson Philip as to the debility of the capillaries.

Doctrine of Vital expansibility.

RESULTS OF INFLAMMATION—Resolution, delitescence, metastasis.

PRODUCTS OF INFLAMMATION—Effusion of serum, of lymph, of pus; ulceration, sphacelus, gangrene.

Details of each hereafter.

LOCAL AND CONSTITUTIONAL TREATMENT OF INFLAMMATION.

1. Prophylactic. 2. Curative.

Local prophylactic means; importance of protecting parts from irritation.

Constitutional prophylactic means;

LOCAL TREATMENT of inflammation.

Preventive in cases of injury—Warm and Cold Water dressings; advantages over poultices; Spongio-piline; Irrigation, how practised; its advantages as a promoter of adhesion. Antiphlogistics—local bloodletting; leeches; cups; scarification. Astringent applications; lead-water; sulphate of zinc. Pressure. Bandaging. Position. Rest. Anodynes. Nitrate of Silver. Iodine. Cautery. Issues. Moxa. Counter-irritants.

CONSTITUTIONAL TREATMENT—Antiphlogistic: general bloodletting; Purgatives; advantages of Saline Cathartics; rationale of; Colchicum, when useful; Emetics, cases in which specially useful; Antimonials; Mercurials—Salivation, effects on fibrin. Opiates; Aconite.

DETAILS OF THE RESULTS AND PRODUCTS OF INFLAMMATION.

1st. RESOLUTION.

RESOLUTION—defined as "cessation of inflammatory action, and the speedy restoration of a healthy condition of the bloodvessels and tissues."

Symptoms of a termination by Resolution—subsidence of redness, heat, pain, and swelling.

DELITESCENCE defined.

METASTASIS defined.

EFFUSIONS OR DEPOSIT as the result of inflammatory action; tendency to relieve the congested vessels.

EFFUSION OF SERUM—effects of.

Regulation and treatment of this effusion.

EFFUSION OR SECRETION OF LYMPH OR PLASMA.

Characters of coagulable lymph. Healthy nutrition as explained by Paget. Fibrin and liquor sanguinis. Eu-plastic and Caco-plastic lymph.

Organization of lymph—importance of this process to the surgeon.

ADHESION—three stages of: 1. Unorganized plasma. 2. Organized and vascular. 3. Takes the specific character of the tissues to be united or reproduced.

Microscopic views of each.

Success of operations, especially Taliacotian or plastic, due to adhesion.

Results of effusion of lymph in wounds.

1. Union by "the first intention." 2. Union by adhesion. 3. Union by granulation, or "the second intention" of the old writers.

GRANULATION—physiology of the formation of granulations; characters of healthy and unhealthy granulations.

Local and constitutional treatment of the effusion of lymph; importance of regulating it.

CICATRIZATION—inodular tissue.

EFFUSION OR SECRETION OF PUS—suppuration.

Characters of pus under the microscope—characters of healthy or laudable pus; of sanies; of ichor; of sordes.

Uses of pus in protecting sores, &c.

Causes of suppuration; theories of.

Local signs of suppuration—fluctuation.

Constitutional symptoms of suppuration.

ABSCESS defined.

Varieties of—Acute and Chronic abscess.

Purulent infiltration—importance of lymph in limiting the extension of effusions of pus.

Tendency of the different tissues to suppurate, as shown in the areolar and mucous tissues.

ACUTE ABSCESS—symptoms of; causes of.

Diagnosis—caution in; "tactus eruditus."

Prognosis—dependent chiefly on its position and extent.

Treatment. Indications are, 1st, to remove the general and local causes of irritation; 2d, to promote the approach of the pus to the surface; 3d, to evacuate it.

Means of accomplishing these indications; advantages of the warm water dressing in the fulfilment of the first two indications.

Three methods of opening abscesses—1, by incision; 2, by caustic; 3, by the seton. Advantages of each, and their special application.

Sinus—Fistula.

Constitutional and local treatment of large open abscesses or suppurating surfaces, as burns, &c.; importance of sustaining patient's strength under free suppuration.

CHRONIC OR COLD ABSCESS.

Cold abscess often due to diseased bone or chronic inflammation of a tissue.

Varieties—lumbar and psoas abscess.

Pyogenic membrane often found in chronic abscesses; its character and function.

Character of the pus in a chronic abscess; how it differs from that of acute abscess.

Amount of pus often very large; results.

Evil effects of its sudden evacuation; effect of the entrance of the atmosphere into the cavity of an abscess; chemical changes.

HECTIC FEVER.

Symptoms of;

Etiology;

Diagnosis from Intermittent;

Prognosis;

Treatment; indications are to remove the cause, and support the system; antiphlogistics not usually admissible.

PYÆMIA.

Symptoms;

Treatment.

TREATMENT OF CHRONIC ABSCESS, local and constitutional.

Local treatment—when small, similar to that of acute abscess, only more stimulating. When large, we should delay the evacuation of the matter as long as is possible by favoring the absorption of the liquor puris. Advantages of plasters, iodine, &c., in large abscesses.

Constitutional treatment of the abscess when opened—build up the system.

Means of evacuating a Chronic Abscess.

Abernethian method, or the gradual evacuation, without admitting the atmosphere.

Valvular opening—puncture under water by a trocar and canula; counter opening.

Constitutional and local treatment if air enters the cavity of a large abscess and typhoid symptoms ensue.

ULCERATION, one of the results of inflammatory action, may be defined as, 1, "a breach of continuity effected by the action of the absorbents;" or, 2, "molecular death in a part."

1st. The theory of Hunter, explained. 2d. That of Miller and Paget—details of.

Ulceration cannot take place in *healthy* tissue, but is always evidence of previous degeneration.

PHYSIOLOGY OF ULCERATION.

Ulceration generally due to ejection of particles—explain how.

The tissues specially liable to ulceration are—

ULCER OR SORE—defined as "a granulating surface, secreting pus."

Origin of the term.

Importance of a correct knowledge of ulcers.

Popular term of "drawing salves" explained in connection with the former theories of ulceration.

Ordinary varieties of Ulcers—Acute and Chronic; Healthy and Unhealthy; Weak; Indolent; Inflamed, Sloughing and Phagedenic.

Simplest and best division of this complaint for the purposes of study is into ulcers of three kinds.

1. Simple, including the Acute or Healthy.
2. Irritable, or Inflammatory and Unhealthy.
3. Chronic ulcers, or the Indolent and weak ulcer.

CHARACTERS OF THE SIMPLE HEALTHY ULCER.

Appearance of its edges; of its granulations; of its pus, and of the surrounding skin.

Seat of this ulcer—anywhere.

Patients—young, and of good constitution.

CHARACTER OF THE IRRITABLE ULCER.

Varieties of the irritable ulcer.

Phagedenic or sloughing ulcer is a form of the irritable; characterized by

Seat of the Irritable ulcer—usually on the leg above the ankle.

Patients—generally of bad habits.

CHARACTERS OF THE INDOLENT ULCER.

Its seat.

Character of the patients with Indolent ulcers.

Varieties of the Indolent ulcer—Fungous, Scrofulous, Scorbutic, Varicose, Sinuous, of writers.

CHARACTERS OF THE CONSTITUTIONAL OR MALIGNANT ULCER.

SPECIFIC ULCER; TOE-NAIL ULCER.

Healing process as seen in the cure of ulcers—adhesion; growth; modelling; granulation; cicatrization.

Treatment of each stage—constitutional and local, detailed.

Importance of position in the treatment of leg ulcers.

Baynton's plan. Crichet's.

Advantages of the water-dressing, &c.

Objection to ointments and poultices. Eczema.

Use of the nitrate of silver—forms in which it may be applied.

MORTIFICATION—defined as "the death of a part;" may be, 1, imperfect, or, 2, perfect.

1. Imperfect is termed Gangrene.

2. Perfect is generally called Sphacelus.

A Slough defined—its sensible characters.

GANGRENE—local signs of—change of color; of temperature; phlyctæna, vesication; effusion of serum, change of sensation, change of nutrition in part; death.

SPHACELUS—local signs of.

Diminution of volume—cause of.

Color—dark brown or black.

Efforts of nature to separate dead from living matter—how accomplished.

"Line of demarcation" means

"Line of separation" or ulceration designates.

Amputation by nature—steps of the process.

Difference in the vitality of the different tissues.

Character of the stump left by natural amputation—objections to it.

Constitutional symptoms of Gangrene.

Varieties of Gangrene—acute and chronic; dry and humid; inflammatory; idiopathic and traumatic. Each explained.

Causes of Humid Gangrene—inflammation; injury; pressure; obstruction to venous circulation; obstruction to arteries; injury to nerves; heat and cold (as seen in burns and frost-bite); general debility.

Diagnosis—from bruise, &c.

Treatment of Humid Gangrene varies with the cause.

Indications are—to remove the cause, favor the separation of the mortified structure, and support the patient's strength.

Local means—generally stimulating.

Use of blisters in checking the progress of gangrene; act on what principle.

Causes of Dry Gangrene—improper diet; old age; ossification of the arteries; injuries of the bloodvessels; diseased valves of the heart; use of the Secale Cornutum.

Symptoms of Dry gangrene—appearance of the part.

Progress of the complaint, and its stages.

Prognosis, as to final result

Treatment of Dry Gangrene.

Question of the propriety of amputation, to be referred to hereafter.

EFFECTS OF HEAT.

BURNS—defined as "all injuries following the application of a high degree of heat."

SCALDS—the result of heat applied through liquids.

Serious character of these injuries when extensive.

Dangers resulting from Burns—1. From the shock to the system. 2. Reaction. 3. Effects on the internal organs. 4. From the character of the ulcer left by the injury.

Dupuytren's division of Burns into six classes, based "on the extent of the injury."

1. Burns with superficial inflammation or redness, but without vesication.
2. Those with redness and vesication.
3. Those in which the cuticle and papillary surface of the cutis, is destroyed or converted into an eschar.
4. Those with entire carbonization of the skin and subcutaneous cellular tissue.
5. Those attended with destruction of the subjacent structures.
6. Those in which the entire structure is carbonized, or burnt to a coal.

Diagnosis of Burns and Scalds.

Prognosis—usually regulated by the extent of the injury and the age and habits of the patient.

Generally a burn of the 1st and 2d class, involving half the body, will prove fatal; of the 3d class, one-fourth

of the body will be fatal; of the 4th, 5th, and 6th, fatal if the eschar comprehends more than a square foot.

Treatment—Local and Constitutional. Varied according to the degree of injury.

Peculiar treatment of each class of burn detailed—cold water, ice, Gross's white lead plaster; Stimulating plan; Kentish ointment, &c.

Guard against the contraction of fingers, limbs, and surfaces burned; especially orifices of canals—as mouth, ear, nose, eye, anus, vagina, &c.

Treatment of the Cicatrices from burns—Prognosis of all operations for the relief of these cicatrices.

EFFECTS OF COLD.

Effects of cold upon the local and general circulation, as shown by loss of local vitality, general stupor and death.

Varieties in the local effects of cold—Chilblains and Frost-bite.

Parts most liable to suffer from each.

PERNIO, or CHILBLAINS—effects of cold on the surface of the body; effects of the reaction.

Symptoms of Chilblains—congestion or chronic inflammation; swelling; heat; tingling; burning; stinging pain; vesication; fissures; ulceration.

Treatment—Prophylactic and Curative.

Prophylactic—avoiding exposure; or, if exposed, guarding against reaction by the very gradual application of warmth, commencing with a heat only equal to the temperature of the affected part, that is, with articles which are positively *cold.*

Curative treatment—stimulate gently, by nitrate of silver, sulphate of copper, &c.

Warm water dressing for the ulcerated chilblains—advantages of; utility of bandages in the ulcerated form.

Treatment of Suspended Animation as the result of intense cold.

Accounts of the French army in retreat from Moscow illustrative of the effects of cold, on mind and body.

FROST-BITE—a more destructive degree of cold, which results in mortification and sloughing.

Portions mostly affected.

Class of patients who mostly suffer—sailors, coach-drivers, &c.

Appearance of a part prior to and after reaction from cold which has induced Frost-bite; similarity to gangrene in the last stage.

Treatment of Frost-bite—indications the same as in chilblains and mortification, and before described.

ERYSIPELAS—defined as "an inflammation of the skin and subjacent cellular tissue, characterized by the deep red color and swelling of the affected part, and a marked tendency to spread."

Origin of the name—ερυω I draw, and πελας adjoining, signifying its tendency to spread to adjoining parts.

Popular name—St. Anthony's fire and the Rose.

Varieties—Primary, Symptomatic or Idiopathic, and Secondary or Accidental.

Explanation of the terms "Bilious and Erratic" erysipelas.

Phlegmonous erysipelas explained.

Symptoms of Erysipelas—local and constitutional—each described.

Causes of Erysipelas.

Treatment in the different varieties.

Results. Question of the propagation or contagious character of Erysipelas.

Importance of a pure atmosphere and clean wards in hospitals.

Connection of erysipelas, phlebitis and peritonitis alluded to.

REPAIR OF INJURIES.

General remarks on the means employed by nature in the repairing of injuries, as shown in the Soft Tissues.

Physiology of the special repair and reproduction of the soft tissues.

Action of the atmosphere in influencing the repair of Wounds.

Subcutaneous surgery—why so little irritation from.

The repair of Bones to be explained hereafter in connection with the subject of Fractures.

WOUNDS defined—as "solutions of continuity in a soft tissue, communicating externally, and produced by violence."

Varieties of wounds—Incised; Lacerated; Contused; Punctured; Poisoned, and Gunshot.

These are sometimes subdivided according to the region which they occupy—into wounds of the Head, Face, Neck, Chest, Abdomen, and Extremities.

Each variety of wound shown.

Characteristics of each.

Why Incised wounds bleed freely, and Punctured do not.

Difference between Venous and Arterial blood.

Is effused blood useful as a bond of union?—Hunter's opinion—modern views.

Explain the modes in which wounds heal.

1. Immediate union, or that by the first intention of M'Cartney.
2. Adhesive inflammation.
3. Granulation or second intention; Scabbing.

Views of Hunter on Adhesion in wounds.

Organization of lymph explained, as seen in the formation of new structure; in the healing of extensive wounds, &c.

Importance of an immediate union of wounds when practicable.

General remarks on the union of wounds.

Views of Travers and Wharton Jones; of Quecket, Paget, &c., on the formation of new bloodvessels.

Explanation of the Scabbing process in the healing of wounds, &c.; advantages of not removing a scab.

HEMORRHAGE FROM WOUNDS.

Two kinds—arterial and venous. Describe each.

Descriptions of the three coats of the arteries; characters of each.

Effects of the division of the coats of the arteries.

Means of arresting hemorrhage—natural, and artificial or mechanical; also local and constitutional.

HÆMOSTATICS.

Temporary are—retraction and contraction of the artery; coagulum; beneficial effects of faintness.

Permanent are—inflammation and exudation on the inner coat of the artery; plasma and the formation of a clot, &c.

Solidification of the vessel; what becomes of the artery subsequently.

Artificial hæmostatics—ligature; torsion; pressure; styptics.

Effects of a Ligature upon the arterial coats.

Length of the clot in an artery which has been ligated.

Effects of Torsion as a means of arresting hemorrhage, shown.

Pressure by the fingers; by the Tourniquet.

Varieties in the Tourniquet.

Application of the instrument.

Tampon.

Effects of Cold; of Position.

Styptics—varieties shown.

Cauteries and escharotics—varieties exhibited.

Secondary hemorrhage—result of; dangers of.

Effects of hemorrhage on the constitution—how shown.

General treatment of hemorrhage—internal use of astringents, opiates, &c.; venesection, when proper.

Hemorrhagic diathesis.

Transfusion—how practised; when proper.

Anæmia.

UNION OF WOUNDS—means employed to favor it.

Suture. Adhesive plasters and Pressure. Uniting Bandages.

Varieties of Sutures—Interrupted, Continued, and Twisted or Hare-lip; Dry suture; Serres-fines of Vidal.

Each described and shown.

SPECIAL CONSIDERATION OF THE VARIETIES OF WOUNDS.

1. INCISED WOUNDS—how made.

Effects of incisions on the coats of the arteries.

Dangers of a partial division of an artery.

Treatment of Incised wounds.

Four indications to favor union.

1. Arrest of the hemorrhage.
2. Removal of the foreign matter and clots.
3. Coaptation of the edges and sides of the wound.
4. Prevention of excessive vascular action.

How accomplished.

Advantage of the water-dressing.

Importance of rest and proper position in the union of incised wounds.

2. LACERATED WOUNDS—how made.

Characters of

Effect of these injuries on the hemorrhage.

Tendency to slough.

Difficulty of obtaining immediate union in lacerated wounds.

Treatment of lacerated wounds—indications very much the same as in incised wounds, but sutures not generally admissible—why.

Water-dressing especially serviceable.

3. CONTUSED WOUNDS—how made; Gunshot wounds a variety of contused.

Appearance of contused wounds.

Effect of the primary effusion of blood in these wounds.

Danger of secondary hemorrhage; of sloughing; of gangrene.

Treatment. Local—cleanse them of foreign matter; useless to attempt primary union—why. Give free vent to suppuration. Warm or cold water dressing—which preferable, and when.

Constitutional treatment of contused wounds.

4. PUNCTURED WOUNDS—how made.

Nature of these wounds—a compound of contused and lacerated wounds.

Dangers of punctured wounds.

1. Injury to important parts.
2. Inflammation of the wound; deep suppuration and infiltration of the tissues.
3. From presence of any foreign body left in the wound.

Treatment—dilatation essential under certain conditions, as in hemorrhage, &c.

Importance of insuring a free exit to the pus which collects in Punctured wounds.

5. Poisoned Wounds—defined as wounds in which there is also the introduction of noxious matter.

The poison affects the system both through the circulation and the nervous centres.

Rapidity of its effects in certain cases.

Variety in the incubation of poisons.

Its delay in Hydrophobia.

Effects of poisons on the blood—Zymosis.

Varieties of poisoned wounds—Stings of Insects; Bites of Serpents; Bites of Rabid Animals; Dissecting wounds; Diseased animals, both living and dead.

(1.) Stings of insects act by introducing into the part a certain amount of

Appearance of the wound.

Treatment. Advantage of the external use of Alkalies.

(2.) Bites of serpents—Rattlesnake; Copper-head; Cobra de Capello.

Poison—how introduced by the serpent.

Local affection after the wound is inflicted.

Constitutional symptoms.

Treatment—local and constitutional.

Object of each. Question of the advantages of the alcoholic treatment.

(3.) Bites of rabid animals.

Rabies canina.

History of Rabies as shown in the dog, by Youatt's experiments.

Protection afforded by the clothes when a patient is bitten through them.

Hydrophobia—period of the incubation of the poison; condition of the wound.

Symptoms of the constitutional disturbance.

Effects on the nervous system—dread of fluids; cold air; insomnia; affection of the throat; spasms; change in larynx and voice, &c.

Pathological appearances in cases of death from Hydrophobia.

Diagnosis from Tetanus—question of the identity of the two complaints. Arguments to disprove their identity.

Treatment of Hydrophobia—two stages: immediately after the bite, or the preventive treatment, and when hydrophobia is threatened, or the curative or attempts at cure. Each explained.

6. Dissecting Wounds—how produced; cautions respecting dissections.

Cases of disease most liable to the production of these wounds. Dangers resulting from certain autopsies.

Local symptoms—angioleucitis; inflamed lymphatic glands; erysipelas; abscesses.

Constitutional symptoms—languor; chill; fever; diarrhœa; typhoid condition.

Treatment—prophylactic; abortive; curative. Explain each.

7. Wounds from Diseased Animals.

Glanders, or Equinia—rare in the United States.

Farcy—where seen.

Malignant Pustule, or Charbon, arises sometimes from skinning diseased animals.

Symptoms of each of the above.

Treatment of each—danger from bloodletting in all of them; dangers of contagion.

8. Gunshot Wounds—defined as all wounds created by the explosion of powder or of firearms.

Belong to the class of contused and lacerated wounds, and are nearly always followed by sloughing.

Characteristics:—

1. Seldom or never heal except by granulation.
2. Hemorrhage not marked at first, unless large vessel is wounded.
3. Chief danger is from hemorrhage and the drain of suppuration.

Extent of the injury very varied, even under apparently similar circumstances.

Cases illustrative of this, cited by Larrey, Guthrie, &c.

Prognosis of gunshot wounds—always grave.

Severity of the wound not always due to the character of the projectile.

Laws of projectiles.

Difference in the injury inflicted by a slow and rapid ball.

Difference in the course of such a ball through a part.

Slough—how caused; why greatest at the point of entrance of the bullet.

Slough apt to separate at a certain day after the wound is received: this time is usually ——; dangers of hemorrhage at this period.

Difference in the healing of a wound at the point of exit and entrance of a ball.

Caution in examining the course of a bullet; position of the patient.

Effects of a rib, &c., on the course of a bullet.

Bullets may rest in the body for years—important bearing of this fact on the treatment of gunshot wounds.

Constitutional shock from gunshot wounds.

Local symptoms of these wounds.

Importance of an early examination of the wound.

Indications of the course of a bullet beneath the skin.

Question of the possibility of wounds from the wind of a ball—cases disproving it.

Character of the wounds inflicted by Shells and Splinters.

Dangers from these wounds.

Prognosis difficult till suppuration is thoroughly established.

Treatment of gunshot wounds—the indications are, 1, to examine the wound carefully and promptly; 2, to remove or expedite the removal of foreign matter, as clothing, splinters, ball, &c.; 3, to moderate the inflammation; 4, to place the part in a good position to permit the escape of pus; 5, to favor the separation of the slough.

Treatment of the reaction—of the irritative fever; necessity of watching for accidents, as hemorrhage, &c.

How to extract a bullet—various forceps; counter-openings, when proper.

Question of the advantages of primary or secondary amputation in gunshot wounds.

Guard against Tetanus by an appropriate prophylactic treatment.

TETANUS defined—as a nervous affection characterized by muscular contraction.

Symptoms—true spasm and rigidity of the muscles.

Which muscles generally first affected.

Trismus—what.

Opisthotonos; emprosthotonos; pleurosthotonos. Each described.

Effects of climate; of habits of the patient, age, &c.

Character of the wounds which are most likely to induce it.

Diagnosis of Tetanus from Myelitis, &c.

Prognosis unfavorable—"so many cases so many deaths."

Treatment—importance of the prophylactic treatment; means of dressing wounds best adapted to the prevention of tetanus; danger of general bleeding; character of the purgatives demanded in the treatment of tetanus.

Value of opium and stimulants—employ them by inhalation if it is impossible for the patient to swallow.

Advantages of Anæsthetics as Euthanasial means.

9. Wounds of Regions—as wounds of head, chest, abdomen, &c.

General considerations of these wounds.

Prognosis of each.

Wounds of the Head, why dangerous—erysipelas and proximity of the brain, inducing meningitis.

Wounds of the Neck—why dangerous; injury to the vessels, trachea and œsophagus.

Wounds of the Chest—why dangerous; injury to the heart and large bloodvessels; inflammation of the lungs, pleura, &c.

Wounds of the Abdomen serious from—peritonitis.

Wounds of the Stomach, why serious.

Wounds of the Duodenum.

Wounds of the Liver. Colon. Kidney. Ureter. Bladder.

Wound of the Extremities—the chief danger is from injury to the circulatory vessels and to the joints, or bones.

Circumstances influencing the Prognosis of all Wounds.

1. Their nature. 2. Their extent. 3. Age. 4. Constitution and habits of the patient, especially important in wounds likely to suppurate very freely.

Wounds of the Head—varieties of—Incised, Lacerated, and Punctured.

Prognosis—generally serious.

Why erysipelas is so apt to attack the scalp.

Wounds of the Scalp, how treated—shave the part; cleanse; no sutures; difficulty in ligating arteries of scalp due to.

Dangers of an abscess under the scalp—how treated.

Bloody tumors of the scalp—how treated.

Danger to the bones from effusion beneath the pericranium.

Treatment of neuralgia of the scalp from contusion of its nerves.

Treatment of lacerated wounds of the scalp.

Prognosis of gunshot wounds of the head.

Course of a ball when it strikes the os frontis; effects of the position of the frontal sinuses.

Occasional effects of a ball on the inner table of the skull.

Treatment of a bullet in the cranium—no probing.

CONCUSSION OF THE BRAIN.

Nervous connection of the brain and stomach; sympathy.

Causes of concussion of the brain—direct or indirect violence.

Indirect violence acts—through medium of the spine, as seen in falls upon the feet, &c.

Degrees of injury from concussion—shaking, bruising, tearing.

Symptoms—from a simple stun, or confusion of ideas, up to complete unconsciousness and convulsions.

Character of the pulse—of the respiration; of the pupil of the eye—usually contracted or irregular.

Diagnosis—from compression; drunkenness, &c.

Post-mortem appearances in concussion of the brain.

Prognosis in concussion of the brain—great caution

in forming a prognosis, the simplest injury often resulting fatally; screaming said to be a fatal sign.

Results to be feared—meningitis, cerebritis, compression.

Eccentric phenomena—loss of usual language; suspension of certain mental faculties; inability to pronounce certain portions of a word, &c.

Indications in the treatment—guard against inflammation of the brain; caution as to early depletion in cases of concussion of the brain; importance of mercurials with a view to salivation in threatening of meningitis, &c.; danger in the use of opiates generally; purgatives; counter-irritants.

COMPRESSION OF THE BRAIN.

Explanation of the term.

General anatomy of the cranium.

Causes of compression—depressed bone, effused blood, pus, serum, &c.

Symptoms—vary as to degree; dull headache; faintness; pulse slow; pupils dilated; skin hot; peculiar whiff of breath from the side of the mouth, and stertorous breathing.

Condition of the mind.

Seat of the compressing body—may be external to the dura mater; beneath it; or beneath the pia mater.

Compression may be confounded with drunkenness, &c.

Diagnosis of Concussion and Compression.

Concussion—skin pale; no stertor; pupil contracted; pulse weak.

Compression—stertorous breathing; dilated pupil; hot skin; slow pulse; insensibility to titillation.

Dangerous results from the continuation of compression.

Prognosis varied.

Treatment—if compression is sudden, and apparently due

to a depressed bone, then it may be proper to trephine; if it occurs several hours after an accident, it may arise from a blood-clot, then what is to be done? if several weeks subsequently, it may be due to the formation of pus.

The operation of Trepanning to be referred to in connection with fractures of the skull.

INCISED AND LACERATED WOUNDS OF THE BRAIN—how made—gunshot wounds, sabre-cuts, circular saws, broadaxes, &c.

Dangers attending wounds of the brain.

How cured by nature—adhesion, granulation, &c.

FUNGUS CEREBRI, and FUNGUS OF THE DURA MATER, due to.

Symptoms—their effects upon the bones of the cranium.

Diagnosis of each. Pathology.

Treatment—compress with lime-water ligature, &c.

HERNIA CEREBRI—what?

Symptoms. Pathology.

Abscess in the Brain, often the result of what?

WOUNDS OF THE FACE.

Character of these wounds.

Prognosis of gunshot wounds of the Nose; of the Eye; of the Cheek; of the Antrum.

Treatment of each.

Risk of paralysis of the nerves of the face; of lachrymal and salivary fistula in these wounds.

Treatment of wounds of the Face.

Treatment of wounds of the Ear—caution in the use of sutures.

Treatment of wounds of the Eye.

Treatment of wounds of the Mouth—of the Teeth; of the Tongue.

Hemorrhage from the tongue—how controlled.

WOUNDS OF THE NECK.

Effects of wounds on the back of the head and neck.

Dangers from wounds on the front of the neck.

CUT THROAT—most frequent seat of the injury; how treated.

Caution as to the use of sutures.

Position of the head.

Emphysema from wounds of the throat; extent of,

If the patient cannot swallow—food must be administered by the stomach tube.

Wounds of the vertebral artery—possible by patient's own hands?

WOUNDS OF THE CHEST.

Prognosis—always serious if they involve the thoracic cavity.

Symptoms of a wound in the chest.

Wounded lung—symptoms of.

Hemorrhage—where from in wounds of the chest.

Pneumothorax—how treated; results.

Empyema—best means of relieving it.

Indications in the treatment of all wounds of the chest.

Treatment of these wounds—importance of activity in.

Constitutional treatment—bleeding and antimonials; arrest of hemorrhage.

Caution as to probing these wounds.

How dress a wound of the chest.

Treatment of prolapse of the lung.

WOUNDS OF THE ABDOMEN.

Dangers of, as a class; Peritonitis.

Prognosis—generally serious.

Why intestines sometimes escape perforation when a bullet enters the abdomen.

Dangers of sloughing.

Treatment—when purge; when is it proper to search for the bullet?

Symptoms of a wound of the intestine.

Signs of internal hemorrhage.

Wounds of which intestine the most dangerous—the upper and small intestine.

How a bullet may escape from the abdomen.

Treatment of wounds of the intestine.

Various sutures employed in uniting wounds of the intestines; each shown.

Protrusions of the intestines—how returned into the abdomen; advantages of anæsthetics.

WOUNDS OF THE STOMACH—varieties of.

Prognosis—always grave.

Treatment—close as soon as possible; favorable results from sutures.

WOUNDS OF THE LIVER—danger from.

Hepatitis—symptoms; results.

ABSCESS OF THE LIVER—symptoms.

Treatment—by caustic, incision, &c.; importance of constitutional remedies.

WOUNDS OF THE KIDNEY—dangers from.

Prognosis—nearly always fatal.

Treatment—combat inflammation.

WOUNDS OF THE BLADDER—dangers of pelvic infiltration.

Prognosis.

Treatment—catheter; antiphlogistic, &c.

Effects of a ball left in the bladder; how remove foreign substances from the bladder.

MALIGNANT DISEASES.

Defined as a class of complaints in which the natural efforts to repair injured structure, or those of normal nutrition, result in an unnatural growth, the tendency of which is to destruction and invasion of the surrounding healthy tissues. This degeneration in one form, is designated under the general term of Cancer.

CANCER OR CARCINOMA.

General characters of; stages of.

SCIRRHUS—what; special characters of.

VARIETIES OF CARCINOMA.

1. Ulcerated or open cancer—characteristics of the cancerous ulcer; appearance of its edges; character of its pus, &c.
2. Medullary or Encephaloid cancer; general characters of.
3. Fungous Hematodes; stage of encephaloid cancer.
4. Colloid cancer.
5. Melanosis.

Physiology of the development of these deposits.

Müller, Carswell, Walshe, Lebert's views.

Microscopic characters of each deposit—1. Irregular caudate cells. 2. Large cells with nuclei. 3. Granular cells. 4. Double walled cells. 5. Pigment cells.

GENERAL LAWS OF MALIGNANT DEPOSITS.

1. Tendency to transform and destroy the tissue in which they are deposited.
2. Tendency to invade and destroy adjacent tissues.
3. Tendency to travel along lymphatics and attack the nearest lymphatic glands.

4. Tendency to affect several organs at the same period.
5. Tendency to reappear at, or near, the cicatrix, when extirpated.

Special seats of cancer—the glands.

Cancerous diathesis; symptoms of.

CANCER OF THE SKIN, OR EPITHELIAL CANCER.

Characters of this form; its seat—angle or alæ of the nose, edge of the lips, &c.

Class of patients affected.

Diagnosis.

Prognosis—this form not often or rapidly fatal; most favorable of all the malignant diseases.

Treatment of carcinoma.

Indications in the treatment of all forms of cancer are—1. To remove any general derangement. 2. To remove any local derangement. 3. To pursue constitutional treatment even when local fails.

Advantages of caustics in the treatment of Epithelial cancers.

Various formula for caustics, applicable to cancers.

Frère Cosme's paste, is composed of,

Helmund's caustic.

Chloride of zinc.

Importance of chalybeates, iodine, &c. in connection with the local treatment of every form of cancer.

CANCER OF THE LIP, its seat—especially the lower.

Symptoms—slight swelling; cracking of the skin, &c.

Causes of the irritation are of various kinds, as

Varieties in the form of the disease—epithelial; shot-like tumors; tuberculated, &c.

Diagnosis from ulcers of the lip; from chancre of the lip, &c.

Prognosis—"apt to terminate life within three years."

Treatment—caustics, excision.

Operation—how performed.

Cheiloplasty—object of all operations; various methods for the formation of a new lip shown.

CANCER OF THE TONGUE—symptoms of; seat; causes.

Importance of removing sharp teeth, &c.

Treatment—excision; ligature; caustics.

Operation of the ligature; of the knife.

After-treatment in both operations.

CANCER OF THE PAROTID AND SUBLINGUAL GLANDS.

Effects of cancerous deposits on the structure and position of the Parotid Gland, and on the bloodvessels near it.

Diagnosis of Cancer of the Parotid, from Fungus Hæmatodes.

Treatment—operation of extirpation of the parotid shown.

Character of the operation.

Hemorrhage—why but little, in some instances.

CANCER OF THE BREAST.

Stages of cancer in this gland—scirrhus; movable tumor; ulcerated, and immovable tumor.

Symptoms detailed.

Etiology; manner in which injuries tend to develop cancer in this gland.

Course of the pain—why it tends to the axilla.

Diagnosis from fibrous and encysted tumors of the breast; from milk abscess; irritable breast, &c.

Age, &c., of the patient.

Prognosis of the disease.

Treatment—antiphlogistic; importance of avoiding all irritation from handling, &c.; caustics; the knife; compression by Arnott's plan—each shown.

Prognosis of the operation.

CANCER OF THE MALE MAMMA—progress of the complaint.

CANCER OF THE PENIS—symptoms.

Causes—injuries; syphilis; irritating discharges, &c.

Diagnosis from syphilis.

Prognosis—unfavorable.

Treatment—caustics and the knife; which preferable.

Operation of amputation of the penis, shown; prognosis of this operation in cases of cancer.

After-treatment.

CANCER OF THE TESTICLE.

Symptoms.

Diagnosis—from hydrocele; epididymitis; sarcocele.

Prognosis—unfavorable.

Treatment—castration; operation shown; prognosis of the operation—unfavorable.

After-treatment.

CANCER OF THE RECTUM.

Seat; causes.

Symptoms.

Diagnosis—from simple stricture of this bowel.

Prognosis—fatal.

Treatment—chiefly constitutional; objections to all operations.

MEDULLARY SARCOMA OR FUNGUS HÆMATODES.

Synonymes—soft cancer; spongy cancer; encephaloid disease.

Best name—Medullary sarcoma.

Anatomical characters of this complaint—appearance of a section of the tumor under the microscope.

Symptoms—rapid progress of the tumor; its vascularity; appearance of the vessels in the skin over the tumor; appearance of the fungus after the tumor has ulcerated.

Diagnosis from cancer—difference in size, progress, &c. of the deposit; special diagnosis of medullary sarcoma from cancer of the eye; of the breast and of the testicle.

Prognosis—decidedly unfavorable.

Treatment. Local—leeches, &c. Constitutional, same as in cancer.

Operation—results unfavorable.

COLLOID OR GELATINIFORM CANCER.

Characters of; appearance under the microscope; seat of.

MELANOSIS characterized by—deposit of brown or black substance in the reticulated structure of various parts, such as the

MAMMARY AND PANCREATIC SARCOMA.

Characters of.

TUMORS.

A tumor is defined by Hunter as "a circumscribed substance produced by disease, and differing in its nature from the surrounding parts."

Origin of Tumors—"perverted nutrition;" amorphous cytoblastema, &c.; Vogel's opinion.

Exciting causes—unknown.

General seat of tumors.

Varieties in tumors—Analogous or Homologous, Heterogeneous, Benignant, Malignant, Cystic, Fibrous, &c.

Description of each.

Degeneration of tumors due to generally—peculiar diathesis of the patient.

SIMPLE SARCOMA.

Characters of—smooth surface; firm, doughy feel; no fluctuation; is loosely attached, &c.; progress; results in what sometimes?

FIBROUS TUMORS.

Characters of—dense and firm; globular shaped; nodulated surface; circumscribed, movable, &c.; inconvenience and dangers from.

CHONDROID TUMORS—their character.

ENCYSTED TUMORS, or WENS.

Characters of—surrounded by a sac—contents of the sac; origin of the tumor.

Treatment.

CYSTO-SARCOMA—characters of.

MELICEROUS, ATHEROMATOUS, or FATTY.

Sometimes due to obstruction of the orifice of a follicle in the skin; contents of some of these tumors.

FATTY, or ADIPO-SARCOMA.

Characters of—lobulated or not; flat; globular; oval, or cylindrical; elastic; almost fluctuate; tendency to become pedunculated.

Varieties of; appearance of a section.

LIPOMA—characters of; seat.

CHOLESTEATOMA—consistence of; few bloodvessels; a section shows what?

CARTILAGINOUS TUMORS, and ENCHONDROMATA—described in full.

OSSEOUS TUMORS—again alluded to in connection with diseases of the bones.

TUBERCULAR or SCROFULOUS TUMORS.

Course of these tumors.

Symptoms—local and general.

Incisions required in the removal of tumors generally.

Rules for the extirpation of all tumors.

Benefits derived from the Microscope in the study of tumors, especially in reference to their malignant character; its bearing on the treatment, discussed.

DISEASES OF THE BONES AND JOINTS.

General remarks on the origin, causes, and effects of these diseases on the usefulness of the limbs.

Similarity in the changes created in the bones and soft tissues, by disease.

General anatomy of the Bones—relations of the external and internal periosteum; importance of these membranes in the growth and diseases of the bones, &c.

Two varieties of Diseases of the Bones.

1. Those affecting their substance in the diaphysis or in their continuity.
2. Those affecting the articulating surfaces, or their contiguity.

Varieties of the first—Fractures, Periostitis, Ostitis, Caries, Necrosis, Exostosis, Spina-Ventosa, Osteo-Sarcoma, Rickets, Fragilitas, Mollities, Osteo-Aneurism.

Varieties of the second—Dislocations, Anchylosis, Sprains, Hydrops Articuli.

FRACTURES.

General Observations on the frequency of these injuries, and their importance in practice.

Definition of a fracture—"a solution of continuity in a bone, which is the result of mechanical or muscular action."

Causes—1. Predisposing. 2. Immediate.

1. Predisposing are—exposed position; function; a certain constitutional diathesis; period of life; occupation; sex, &c.
2. Immediate—external violence; muscular contractility.

Fractures have been classified—1. According to the nature of the injury. 2. According to the direction in which the bony fibres yield.

KINDS OF FRACTURES.

1. According to the nature of the injury—Simple; Compound; Comminuted; Complicated.

2. Direction of the Fracture—Transverse; Oblique; Longitudinal, Fissured; Stellated; Depressed.

Simple Fracture—defined, as one in which a bone is broken without an external solution of continuity in the soft parts.

Compound Fracture is one attended with a wound that *communicates* with the fractured ends of the bone.

Complicated Fracture is one attended by some other injury.

Transverse Fracture one in which the bony fibres have yielded in a direction transverse, or perpendicular to the axis of the bone.

An Oblique Fracture is

A Longitudinal Fracture is one in which the fibres yield parallel with the axis of the bone.

Direction of the Displacement seen after the occurrence of a fracture. Five kinds—1. In the length of the bone, or *longitudinally*, producing marked shortening of the limb; this is most frequent in oblique fractures. 2. Externally, in the *thickness* of the bone, as in transverse fractures, when one fragment rides the other. 3. According to its *circumference*, or where one fragment rotates on the other. 4. According to its *axis*, or angularly, as seen in the projection of one fragment forwards or backwards. 5. Impacted, in which one fragment is locked in the other.

Causes of Displacement—muscular action, principally.

Symptoms of Fracture—1. Rational. 2. Physical.

1. Rational signs—pain; impaired sensibility; inability to use the limb.

2. Physical signs—crepitation; deformity; mobility.

Mode of producing crepitation; evidences of crepitation.

Other conditions producing crepitus—action of tendons

in dry sheaths; collections of air in the cellular tissue; rubbing of the bones in luxations, &c.

Diagnosis—from luxations; malformed bones; sprains.

Differential diagnosis of each.

Prognosis—depends on the age, the bone, and portion of the bone involved; the number and strength of the muscles connected with it; the variety of the fracture; its complications; the circumstances and health of the patient; the relation of the bone to one of the cavities, &c.

THE PROCESS OF REPAIR IN FRACTURES.

Condition of the surrounding tissues.

The soft parts are generally lacerated in the immediate neighborhood of the fracture, and the smaller bloodvessels ruptured; the periosteum is lacerated, but rarely separated to any great extent from the bone; the part it plays in the formation of callus, &c. described.

CALLUS—defined. Varieties of; provisional, and definitive or permanent.

Circumstances necessary to its formation.

Effects of movement upon it.

Physiology of the formation of Callus. The process of repair is divided into two periods—1. Uniting. 2. Modelling.

1. Uniting—stage of inflammatory exudation from two to four days after the injury; apparent inaction for four or five days, and decline of inflammation; then ten or eleven days consumed in forming the reparative material, and developing it into fibrous or cartilaginous tissue; from this period to an indefinite length of time we notice the deposit of ossific matter.
2. Modelling stage—includes the removal of the sharp edges or projecting points at the seat of fracture; the

closing in of the ends of the medullary tissue; the formation of the compact and cancellated tissue, &c.

Time required for the repair of the different kinds of fractures; the Clavicle, how long ; Humerus; Femur, Tibia, &c. Some bones never unite by callus, as those of the cranium, &c.

Treatment—divided into four heads. 1. Movement of the patient. 2. Reduction of the fracture. 3. Mechanical appliances to maintain the fragments in position. 4. After-treatment.

1. Movement and placing the patient in bed in fractures requiring it; means detailed, with rules for.
2. Reduction—by *extension*, *counter-extension*, and *coaptation;* each described.

Difficulties to be encountered in reduction—spasm of the muscles; advantages of anæsthetics.

3. Mechanical means—rest; position; splints; cushions; bandages; each described.
4. After-treatment—counteract inflammation; relieve the pain or spasm; treat the chafing, ulcerations, &c.; and guard against the stiffness of the joints, by passive motion.

SPECIAL FRACTURES.

Fractures of the Bones of the Skull.

Conformation of the Cranium.

Physical structure—advantage of its rotundity; sutures, tables and diploë destroy the effect of blows.

Causes of Fracture of the Skull—direct force and counter-stroke; latter acts how—

Bones of the cranium most likely to be fractured.

Varieties in fractures of the bones of the skull—simple fissure; stellated; camerated, and depressed fracture.

Symptoms of a depressed fracture.

Diagnosis of depressed fracture — from puffy scalp; from nodes and cephalæmatoma; from sutures.

Prognosis—dependent on the extent of the fracture, compression of the brain, &c.

Repaired by—ligamentous matter; no callus.

Indications of the treatment—relieve the compression if existing, and combat the internal and external inflammation.

How accomplished—trephining and antiphlogistics.

Operation of Trephining.

Opinions as to the propriety of; Desault's, Abernethy, Cooper, &c.

Conditions requiring it?—fractures with compression; separation of the sutures; foreign bodies in the cavity of the skull; accumulation of blood or pus with symptoms of compression, &c.

Parts to be avoided in trephining—frontal cavities; over the course of the sinuses; anterior-inferior angle of the parietal bone, &c.

Operation—Baring, perforating, and elevating the bone.

Instruments, &c.

After-treatment.

1. Fracture of the Nasal Bones.

Liability of these bones to fracture.

Causes—direct violence, as blows, &c.

Dangers—concussion or inflammation of the brain; injury to a portion of the lachrymal apparatus; fracture or displacement of the cribriform plate of the ethmoid bone.

Symptoms—depression; deformity.

Prognosis—dependent on the injury of the adjacent organs.

Treatment—replace the bones and combat the inflammation; advantages of the double T bandage in retaining dressings to the part.

2. Fracture of the Superior Maxillary Bones.

Frequency—seldom except when a compound fracture.

Causes—gunshot injuries, kick of horse, &c.

Kinds of fracture—compound and complicated.

Treatment—coaptate fragments; antiphlogistic remedies; bandages not needed usually.

3. Fracture of the Inferior Maxillary Bone.

Frequency.

Causes—direct violence; considerable force necessary.

Why dislocation of the law is so readily induced.

Seats of fracture in this bone—chin; body; angle.

Diagnosis of each.

Causes of the deformity in each case.

Complications.

Prognosis—generally favorable.

Treatment of each variety—Barton's bandage; Gibson's; Bandage for fracture of the angle of the jaw.

General treatment—food, &c.

4. Fracture of the Os Hyoides.

Frequency—rare.

Causes—direct violence.

Symptoms—effects in swallowing, talking, &c.

Complications.

Diagnosis.

Prognosis.

Treatment—antiphlogistics; rest of the part, &c.

5. Fracture of the Vertebræ.

Frequency.

Where it may occur.

Dangers of.

Effects on medulla spinalis.

Signs of fracture above the fourth cervical vertebra.

Signs of fracture at the third dorsal vertebra.

Signs of fracture of the other dorsal vertebræ.
Signs of fractured lumbar vertebra.
Prognosis of fracture of the vertebræ.
Treatment.
Caution as to the state of the bladder, and the use of blisters.

CONCUSSION OF THE SPINAL MARROW.

Results—similarity with concussion of the brain.
Treatment—antiphlogistic, with rest.
Extravasation in the spinal canal—how treated.

MENINGITIS FROM CONCUSSION OF SPINAL MARROW.

Treatment—importance of mercurials.

6. FRACTURES OF THE RIBS.

Frequency.
How produced—direct or indirect force.
Which ribs most frequently fractured—true.
Part generally broken.
Kinds of fracture—simple most frequently.
Signs of fracture—displacement.
How determine crepitation.
Why no shortening in fracture of the ribs.
Complications—Pleuritis, Hæmoptysis, Emphysema, &c.
Symptoms of each.
Diagnosis of fracture of the ribs.
Treatment of fracture of the ribs—bandage of the chest.
Constitutional treatment of the complications.

7. FRACTURE OF THE STERNUM.

Frequency—points most liable to fracture.
Causes—direct force.
Signs of—difficult respiration; crepitus.
Kinds of
Complications and dangers of this fracture—injury to the pectoral organs; suppuration; caries.

Treatment—local and constitutional; local—bandages; constitutional—antiphlogistics.

If matter form beneath the sternum—trephine the bone, or puncture it.

8. Fracture of the Clavicle.

Frequency—common. Why?—exposed position; relation to the shoulder; form and texture.

Causes—either by direct force or counter-stroke.

Portions of the bone liable to be fractured.

Most common seat of the fracture—usually about the middle.

Kinds of fracture—commonly simple and oblique, or transverse; compound rare.

Symptoms—depression of the shoulder; head inclined to the injured side; inability to place the hand on the opposite shoulder; tingling of the fingers; crepitation; arm carried into the side of the chest, &c.

Function of the clavicle.

Muscles, &c. concerned in producing mal-position of the fragments.

Complications—paralysis; injury of the axillary nerves; of the bloodvessels, &c.

Diagnosis—sometimes difficult, but generally easy.

Prognosis—favorable.

Treatment—the indications in the treatment are those of Desault: 1, to keep the shoulder upwards; 2, backwards; 3, outwards.

Object of each.

The dressings designed to accomplish the above indications are—Fox's bandage, Desault's, Velpeau's, Mayor's; each detailed.

9. Fracture of the Scapula.

Frequency.

Causes—direct or indirect violence.

Parts fractured—Acromion, Neck, Coracoid process, Body, and Inferior angle.

Complications—inflammation or injury of the soft parts.

Symptoms—according to the part broken; in fracture of the neck; of the acromion.

Diagnosis of fracture of the neck of the scapula from fracture of the head of the humerus.

Prognosis of fractures of the scapula.

Treatment of each variety.

10. Fracture of the Humerus.

Parts of the bone generally broken—any part, as the Head, Anatomical Neck, Surgical Neck, Shaft, Epiphysis, and Condyles.

Frequency.

Causes.

What age have the neck of the bone most frequently fractured—old men.

Kind of fracture peculiar to the young—separation of the epiphyses.

Complications.

Symptoms—according to the broken part; each detailed.

Diagnosis of each fracture.

Prognosis " "

1. Fracture of the Head of the Humerus.

Frequency—rare.

Causes—gunshot wounds, &c.

Varieties—two, simple and compound.

Diagnosis—difficult, owing to there being no displacement and little crepitus.

Prognosis.

Treatment, in both simple and compound fractures of this bone—rest; antiphlogistics, &c.

2. Fracture of the Surgical Neck of the Humerus.

Define the surgical neck—part between the tuberosities and the insertion of the latissimus dorsi and pectoralis major muscles.

Frequency of this fracture.

Causes—direct force, and muscular action.

Signs of the fracture.

Diagnosis—from dislocation of the head of the humerus.

Prognosis.

Treatment—Boyer's Bandage, applied.

3. Fracture of the Shaft of the Humerus.

Frequency—common.

Causes—direct force.

Where it is generally broken.

Symptoms of this fracture.

Muscles concerned in producing the shortening, &c.

Treatment of this fracture—Boyer's method.

4. Fractures of the Condyles of the Humerus.

Frequency—common.

Causes—direct force.

Symptoms.

Diagnosis—from dislocation of the elbow.

Prognosis—uncertain; dangers of a stiff joint.

Dangers of compound fracture of the condyles.

Treatment—Physick's angular splints; Hospital plan; Carved splint in compound fracture of the condyles.

11. Fracture of the Bones of the Forearm.

Frequency—most frequent of all.

Causes—direct force or counter-stroke.

Bones fractured—may be radius, ulna, or both.

Which most frequently—radius.

Kinds of fracture.

Diagnosis of the fracture of both bones.

Treatment when both bones are fractured—Boyer's dressing; Hospital plan; importance of preserving the interosseous space; how tell when the bones are parallel.

1. Fracture of the Radius alone.

Frequent—very, in consequence of its carpal connections.

Causes.

Place of fracture—lower end and middle; rare at upper end.

Part generally broken—shaft, or lower extremity.

What is meant by Barton's fracture.

What is meant by Colles' fracture.

Symptoms of each.

Diagnosis—from dislocations of the wrist.

Prognosis—favorable, if well treated; caution as to stiffness of the hand and imperfect pronation and supination.

Treatment—Bond's splint; Barton's method.

After-treatment—guard against false anchylosis.

2. Fracture of the Ulna.

Frequency—comparatively rare.

Causes.

Part fractured—shaft, olecranon, and coronoid processes.

Signs of each.

3. Fracture of the Olecranon, how produced—either by direct force or by the action of the triceps muscle.

What kind of union—why; rarity of the fracture of the coronoid process.

Diagnosis of fracture of the olecranon.

Prognosis.

Treatment of fracture of the shaft of the ulna.

Treatment of fracture of the olecranon process.

Desault's plan; Sir Astley Cooper's; Gerdy's, &c.

12. Fracture of the Bones of the Carpus.

Frequency—rare except when compound.

Causes—direct and violent force.

Kind of fracture—compound, generally.

Signs of.

Diagnosis—obscure.

Prognosis — not very favorable; dangers — caries, stiff joint, &c.

Treatment—combat the inflammation, and the injury to the soft parts and the joint.

13. Fracture of the Metacarpus.

Frequency.

Causes—direct force.

Which bone most frequently fractured—fifth; why—is one of the abutments of the arch of the hand.

Symptoms.

Complications—injury of the palmar arch and aneurism of these vessels. Dangers to be apprehended—inflammation of the joints, caries, &c.

Diagnosis.

Treatment—Palm splint.

14. Fracture of the Phalanges of the Fingers.

Frequency.

Causes.

Signs of.

Kinds of fracture.

Treatment—four finger splints; guard against anchylosis; best position of the fingers when anchylosis is feared—the flexed position.

FRACTURES OF THE LOWER EXTREMITY.

General preparation of a patient with a fracture of the lower extremity.

Rules for the removal of the patient.

Best means of moving him.

Preparation of the bed.

How to change the clothing without changing the position of the patient in bed.

15. FRACTURE OF THE FEMUR.

Frequency—often met with.

Causes—violence direct or indirect, or sometimes from muscular action.

Seat of the fracture—head, neck, shaft, condyles, trochanters.

Kinds of fractures—oblique; transverse; compound.

1. FRACTURE OF THE NECK OF THE FEMUR.

Frequency—not uncommon.

Causes—most commonly indirect force.

Who most liable to it—aged persons, especially women, the angle formed by the neck with the shaft of the bone being greater in females.

Position of the fracture—within, or partly within and partly without the capsule of the hip-joint.

Signs of a fracture of the neck of the femur—shortening, crepitus, foot turned out. Why—

How produce crepitus—let an assistant rotate and extend the limb, whilst the surgeon keeps his hand on the trochanter.

Diagnosis—how known from a luxation downwards and forwards? In luxation lengthened; in fracture shortened; foot turned outwards in both.

Points to measure from; caution in measurement.

How known from a luxation on the pubes.

Prognosis—unfavorable if within the capsule.

Kind of union, and why? Result—generally leaves deformity.

Treatment—double inclined plane; objections to extension in old persons; dangers from ulcerated heel, &c.

2. Fracture of the Trochanter Major.

Frequency—rare.

Signs—mobility; no shortening of the limb; fragment slightly drawn upwards; loss of active motion, &c.

Kind of union—

Treatment.

3. Fracture of the Shaft of the Femur.

Frequency—common.

Causes—direct force; rarely muscular action.

Seat of fracture—upper, middle, or lower third.

Class most liable—young, and middle aged.

Signs of fracture at the upper third—

Muscles producing the deformity and shortening.

Signs of fracture elsewhere.

Prognosis—very apt to result in more or less deformity.

Treatment of each variety—Desault's apparatus; modifications by Physick and Hutchinson, Horner, &c.

Boyer's splint; double inclined plane—Liston's, &c.

4. Fracture of the Condyles of the Femur.

Frequency.

Causes—direct and great violence.

Signs of.

Prognosis—unfavorable, owing to its proximity to the joint.

Treatment—rest, and the most active antiphlogistic treatment.

16. Fracture of the Patella.

Frequency.

Causes—generally muscular action.

Persons most liable to it—circus riders, &c.

Direction of the fracture—transverse, oblique, or longitudinal.

Which most common—transverse.

Signs of the transverse fracture.

Signs of the longitudinal.

Kind of union—sometimes bony; specimens shown.

Prognosis—if compound and complicated, unfavorable; may result in anchylosis, or even loss of limb.

Liability to future fracture—very great.

Treatment—Desault's method; Dorsey's; Gerdy's; Astley Cooper's.

17. Fracture of the Leg.

Frequency—common.

Causes—direct force.

Kinds of—simple, compound, and comminuted.

Direction—transverse or oblique.

Most frequent seat of the fracture—middle or lower third of the leg.

Signs.

Prognosis—if transverse, no deformity.

Treatment—fracture box; Boyer's plan; bran dressing in bad compound fractures.

1. Fracture of the Tibia only.

Frequency.

Causes—direct force.

Seat of the fracture—middle or lower third.

Symptoms of each.

Direction of the fracture—generally oblique.

Why no displacement generally—the fibula acts as a splint.

Deformity in fracture of the Internal Malleolus.

Diagnosis from sprain, &c.

Prognosis.

Treatment.

2. Fracture of the Fibula.

Frequency—

Causes—direct violence, or forcible turning in or out of the foot.

Seat of fracture—middle of the shaft, or near its lower fifth.

Signs of the fracture at the lower fifth.

Why a tendency to dislocation of the ankle, in this fracture.

Complications.

Prognosis.

Treatment—Dupuytren's splint; fracture box.

18. Fractures of the Bones of the Foot.

1. Fracture of the Os Calcis.

Frequency—not very common.

Causes—direct force, and from the sudden action of the muscles, as the soleus, gastrocnemius, &c.

Deformity—upper fragment rests where.

Signs of this fracture.

Prognosis.

Treatment—Desault's method.

The fractures of the other bones of the tarsus are generally compound, being produced by crushing forces.

Prognosis of such.

Treatment.

Advantages of the Starch Bandage, or the Immovable apparatus of Suetin in the treatment of certain fractures; its application shown; also Laugier's method.

COMPOUND FRACTURE.

Defined, as one in which there is a wound communicating with the fractured ends of the bone.

Causes—any opening in the integuments communicating with the fractured bone, and made either by direct violence, abscess, sloughing, or protrusion of the ends of the bone.

Dangers to be apprehended in all bad compound fractures—shock to the system; injury to important bloodvessels or nerves; tetanus; inflammation; hectic.

Treatment to be adopted in each.

When the fragments of a broken bone project from the external wound, how it is to be managed.

How dress the external wound—Collodion; Water-dressing; Cooper's scab.

Diet and hygiene—importance of in the treatment of compound fracture.

Barton's Bran dressing—great advantages of it in hot weather.

Question of primary or secondary amputation in cases of compound fracture, discussed.

Mortality in compound fractures of the Upper and Lower extremities.

Mortality in Amputations for compound fractures of the upper and lower extremities.

Difference in the mortality in Civil and Military hospitals

FALSE JOINT, OR PSEUDARTHROSIS.

Definition.

Causes—constitutional and local.

Condition of the parts.

Is there a true joint?

Object of all the plans of treatment.

Treatment—Celsus, White, Wardrop, Mayor, Physick; modifications of Dieffenbach, Malgaigne, Green, Smith, &c. Each plan of treatment detailed and shown.

Prognosis of the treatment—dependent on circumstances.

Question of amputation—seldom or never necessary; defective limb with Smith's treatment better than amputation, as there is always a chance of union.

LUXATIONS.

Definition of—displacement of a bone from its natural articulating cavity.

Varieties of—1, according to the position of the displaced bone, as primitive and consecutive; 2, the character of the injury, as simple, compound, and complicated luxations; 3, according to the duration of the injury, as recent, and old.

1. A primitive luxation is that in which the bone remains in its first unnatural position.
2. A consecutive luxation is that in which it leaves the first and takes a second unnatural position.
3. A complete luxation is one in which the bone is entirely free from its articulating surfaces.
4. An incomplete luxation.
5. A simple luxation is one in which the bone is merely displaced from its articulating surface, without the injury being accompanied by any external wound.
6. A compound luxation is one in which the luxated bone is exposed by a wound of the soft parts.
7. A complicated luxation is

Causes of luxations—predisposing and exciting, or constitutional and local. Each detailed.

Joints most liable to luxation.

Direction of luxations in the Orbicular joints; four—upwards, downwards, forwards, and backwards. In the ginglymoid joints it is most frequent laterally.

Changes which occur in the parts when a luxation is not reduced; specimens shown.

Symptoms of luxation—pain; change of appearance in the joint; defects in the motion; condition of the adjacent muscles.

Diagnosis, what liable to be confounded with—sprains; fractures; ill-formed bones; chronic disease of the articulations.

How distinguished from sprains, &c.

Use of Anæsthetics in aiding the diagnosis of luxations; also in removing the chief obstacle to their reduction.

Post-mortem appearances in a recent luxation—hemorrhage, induration, &c.

Treatment—constitutional and mechanical; each detailed.

Difficulties to be encountered.

Importance of inducing perfect anæsthesia before attempting the reduction of serious luxations.

Complications of luxations. Prognosis of compound luxations.

SPECIAL LUXATIONS.

1. LUXATIONS OF THE VERTEBRA.

Frequency.

Causes.

Pieces of the vertebral column most likely to be luxated—the cervical, and of these the dentata.

Symptoms of luxation of the vertebræ.

Prognosis—dependent on the position of the bone luxated; if in the neck it frequently results in sudden death.

Treatment.

2. Luxation of the Inferior Maxillary Bone.

Description of this articulation.

Frequency of this luxation.

Age at which it is most likely to occur—middle age.

Kinds of luxation at this joint—complete, and incomplete or sub-luxation.

Causes of—effects on the inter-articulating cartilage.

Muscles concerned in this luxation—what muscles are stretched and what relaxed.

Treatment—reduce the luxation and combat the inflammation; reduction shown.

I. Sub-Luxation of the Inferior Maxilla.

Causes.

Symptoms.

Treatment—advantages of repeated blisters.

3. Luxation of the Ribs.

General reference to the articulation at the head of the rib.

Frequency of luxation at this joint—rare; denied by many.

Causes—only by direct violence.

Ribs most likely to suffer from this luxation—eleventh and twelfth.

Signs of this luxation.

Signs of luxation of the sternal end of the ribs.

Effects if unreduced, in either case.

Diagnosis of luxations of the ribs—very doubtful; may be confounded with fracture near the sternal end.

Treatment—how reduce and keep reduced.

Chicken-breasted children—most frequently the deformity is due to displacement or bending of the cartilages of the sixth, seventh, and eighth ribs.

Prominence of the sternum due to.

4. Luxation of the Clavicle.

General description of its articulations.

Where luxated—both sternal and scapular ends.

Causes of.

Direction of the displacement of the sternal end; three—forwards, backwards, and upwards.

Symptoms of each—swelling; pain; loss of motion; posterior luxation very rare.

Muscles involved in this luxation.

Treatment of each—direction in which to apply the force in the reduction.

Displacements of the scapular extremity, two—downwards and upwards.

Symptoms of each.

Shape of the shoulder—how affected in this luxation.

Treatment of each.

Difficulty of retaining the bone in position after reduction; bandages for.

5. Luxation of the Inferior Angle of the Scapula.

Frequency—very rare.

What occurs? The Latissimus Dorsi muscle is displaced from the inferior angle of the bone.

Symptoms.

Treatment.

6. Luxation of the Head of the Humerus.

Description of the articulation of the shoulder.

Frequency of luxation in this joint—very common, owing to the smallness of the glenoid cavity, laxity of the ligaments, great extent of motion, &c.

Causes—direct or indirect force; how applied.

Varieties of the luxation of this bone—three complete and one sub or incomplete luxation.

1. Downwards, or into the axilla.
2. Forwards, or under the pectoral muscle below the clavicle.

3. Backwards, on the dorsum of the scapula below the spine.

4. Partially upwards—a sub-luxation, the head of the bone resting against the coracoid process of the scapula.

Symptoms of each—sometimes crepitus, why; character of; shape of the shoulder; change in the length of the limb; how measured.

Diagnosis—from fracture of the neck of the scapula; fracture of the acromion.

Reduction of each.

Importance of anæsthetics.

Pulleys seldom required when anæsthetics are employed.

Reduction—how effected; adjuvants to.

Rules for the line of extension.

Rule for the counter-extension.

COMPOUND LUXATION OF THE HUMERUS.

Dangers from.

Treatment—reduce, if possible, by

7. LUXATION OF THE ELBOW JOINT.

Description of this articulation.

Frequency of luxation of both bones at this joint.

Varieties—1. Backwards and upwards of both bones. 2. Lateral of both bones. 3. Forward of both bones; impossible without fracture of the olecranon process.

Symptoms of each variety.

Reduction of each variety.

After-treatment.

1. LUXATION OF THE RADIUS—FORWARD LUXATION OF ITS HEAD.

Description of the articulation.

Causes of the luxation.

Signs of position of the hand.

Reduction—how accomplished.

2. Luxation of the Radius Backward.

Causes.

Signs.

Reduction—how effected.

3. Luxation of the Ulna—its Superior Extremity Backwards.

Causes.

Signs.

Diagnosis from fracture of the Condyles.

How reduced.

8. Luxation of the Wrist.

Description of this articulation.

Kinds of. Four: forward, backward, and to either side.

Causes.

1. Forwards of the Wrist.

Causes.

Diagnosis—caution in.

Signs—hand bent backward; tumor front, &c.

Treatment—importance of combating the inflammation.

2. Backwards of the Wrist.

Causes.

Frequency—rare.

Complications—fracture of the radius, or great laceration of the soft parts.

Reduction—how accomplished.

9. Luxation of the Inferior Extremity of the Ulna.

Kinds of. Two: forward and backward.

Causes.

Diagnosis—cautions in.

How reduce and maintain.

10. Luxations of the Carpus.

Description of this articulation.

Bones most liable to be luxated—os magnum, and pisiforme.

Kinds of luxation of the former: two—backwards and forwards.

Causes.

Treatment—if it cannot be reduced.

Signs of luxation of the Pisiforme.

Its connections—capsular lig.; relations of the flexor carpi ulnaris.

Treatment.

11. Luxation of the Metacarpal Bone of the Thumb.

Description of this articulation.

Kinds of luxation.

Causes.

Signs of.

Treatment—Clove-hitch; line of extension; effects of internal lateral ligament.

12. Phalangeal Luxations.

Description of these articulations.

Frequency of the luxation—that of the first phalanx of the thumb more common than the luxation of the digital phalanges.

Kinds of luxation of the fingers.

Causes.

Difficulties.

Treatment—how reduce.

THE LOWER EXTREMITIES.

1. Luxation of the Head of the Femur.

Description of the Hip-joint.

Frequency of luxation of the head of the femur.

Kinds of—six varieties arranged for study, as three upwards and backwards, and three downwards and forwards.

The position of each shown.

In the upward and backward on the Dorsum Ilii, the head of the femur rests just behind the—

When upwards and forwards on the Pubes, it rests—sometimes it rises upwards, just in advance of the anterior-superior spinous process of the ilium; this is a modification of the position on the pubis, and is rare.

Downwards and backwards—it slips into the Ischiatic foramen.

Downwards and forwards—into the Thyroid foramen.

Downwards, between the lesser Ischiatic notch and the Tuber ischii (rare).

Difficulties to be expected in these luxations from the powerful muscles around the joint; means to be employed.

Value of securing the entire relaxation of the muscles, in all attempts at reducing these luxations of the Hip.

SPECIAL LUXATIONS OF THE HEAD OF THE FEMUR.

1. UPWARDS AND BACKWARDS, or on the Dorsum Ilii.

Frequency—most common of all luxations of the femur.

Symptoms of—head of the bone often felt to rotate on the dorsum ilii.

Position of the foot—toes turned inwards; great toe on the instep of the opposite foot; limb shortened from one and a half to two and a half inches.

Causes of this luxation—falls or blows when the limb is turned inwards or *adducted.*

Diagnosis—from fractured cervix; from morbus coxarius.

Treatment—how accomplish reduction; simply by manipulation and anæsthetics; Reid's plan; Pulleys applied, &c.

2. UPWARDS AND FORWARDS, or on the Pubis.

Frequency—occasionally seen.

Position of the limb—foot and knee turned out; limb shortened an inch; head of the bone perceptible.

Causes of this luxation—slip into a hollow whilst walking.

Symptoms—rotation of the head of the femur.

Treatment—line of extension.

3. Downwards and Forwards, or into the Foramen Ovale.

Frequency—rare.

Symptoms—limb two inches longer; toes neither inverted nor everted; head of the bone can be felt in thin persons.

Position of the limb—knee forwards; limb too long.

Causes—violence whilst the limbs are separated.

4. Downwards and Backwards, or into the Ischiatic Notch.

Frequency—occasionally.

Symptoms—limb shortened half an inch to an inch.

Position of the foot—turned in.

Causes—violence whilst the thigh is bent at a right angle to the pelvis.

Treatment—reduce.

5. Congenital Luxation of the Head of the Femur.

Frequency.

Diagnosis—from paralysis.

Position of the head of the bone; class of patients affected by it.

Causes.

Peculiarities—occurs in both hips; is not connected with morbus coxarius.

Symptoms.

Pathology.

Treatment.

2. Luxation of the Patella.

Relation of the patella to the knee-joint, and its functions.

Frequency of this luxation.

Varieties—three—laterally and on its axis; any displace-

ment upwards or downwards involves the rupture or division of the ligamentum patellæ or of the tendon of the quadriceps femoris muscle.

Causes of the lateral luxation of the patella.

Signs of.

Treatment.

3. Luxation of the Knee-Joint.

Description of this articulation.

Frequency of this luxation.

Varieties—Tibia in four directions: backwards, forwards, or to either side.

Treatment in each.

1. Displacement of the Cartilages of the Knee-Joint.

Description and connections of the semilunar cartilages.

Causes of their displacement.

Symptoms—intense pain sometimes felt.

Treatment—flex the leg suddenly.

4. Luxation of the Fibula.

Frequency.

Both extremities of the fibula may be luxated.

Varieties of—forward and backward.

Symptoms.

Treatment.

5. Luxation of the Ankle Joint.

This articulation described.

Frequency of luxation in this articulation—prognosis if compound.

Varieties. Four: inwards, outwards, forwards, and backwards.

1. Luxation Inwards.

Frequency—most common of all.

What complicated with, frequently.

Causes—fracture of lower fifth of the fibula, &c.

Symptoms.
Treatment.
2. Luxation Outwards.
Frequency.
What complicated with generally.
Causes.
Symptoms.
Treatment.
3. Luxation Forwards.
Frequency.
Causes.
Symptoms.
Great obstacle to reduction—Tendo Achillis.
Treatment.
4. Luxation Backwards.
Frequency.
This dislocation may be incomplete.
Causes.
Symptoms.
What occurs always—Fracture of the Fibula.
Treatment.
6. Luxation of the Bones of the Tarsus.
1. Luxation of the Astragalus.
Frequency.
Cause.
Kinds of—four: forward, backward, inward, or outward.
Symptoms.
Treatment—if simple; if compound.
What if it cannot be replaced—force it out of the articulation to one side of the joint after a subcutaneous incision of the ligaments.
2. Luxation of the Cuneiforme Internum.
Frequency.

Connections.

Causes.

Kinds of—inwards and upwards.

Symptoms.

Treatment.

The other bones of the tarsus are very rarely luxated unless by crushing forces, which lacerate and tear the soft parts, and fracture some of the bones at the same time; hence their luxation is seldom seen except in railroad accidents, when they are apt to require amputation.

7. Luxations of the Metatarsal Bones.

The entire row may be luxated either backwards or forwards, by a fall backward or forward when the toes are fixed.

Symptoms of each.

Treatment of each.

8. Phalangeal Luxations.

Not common, why—

Treatment—amputation required, when.

SPRAINS.

Explanation of the varied extent of the injury designated as a sprain; condition of the ligaments, bursa, &c.

Frequency—common.

Causes—moderate violence.

Symptoms.

Diagnosis—from dislocations; caution in diagnosticating sprains of the wrist and ankle.

Prognosis—anchylosis, caries, &c. if neglected.

Treatment—importance of the water-dressing; rest; carved splint. Treatment of Chronic Sprain.

ANCHYLOSIS.

Explanation of the term.
Varieties of anchylosis—true and false.
Conditions of the joint in each.
Joints most liable to anchylosis—the ginglymoid—why?
Causes.
Symptoms.
Prognosis.
Pathological appearances in both true and false anchylosis.
Treatment—passive motion; friction; Stromeyer's screw.

SYNOVIAL INFLAMMATION.

Meaning of the term.
Causes of—Local and General—as sprains and blows among the former; gout, rheumatism, and specific affections of the genito-urinary organs among the latter.
Symptoms—pain, redness, heat, swelling about the joint, rigors, and febrile reaction.
Advantage of the development of synovial inflammation in some cases—protects internal organs, and hence should not be too suddenly removed.
Dangers of synovial inflammation to the function of the joint; caution as to anchylosis.
Treatment—general and local; details of each.

WHITE SWELLING.

Vague meaning of the term.
Where most frequent—in cold, damp climates.
Age most prone to this complaint; character of the patients—scrofulous.

Joints most frequently affected.
Causes—constitutional and local; each detailed.
Stages of the disease, and symptoms of each.
Prognosis.
Results.
Pathology—various conditions of the joint.
Treatment.

MORBUS COXARIUS, OR HIP-JOINT DISEASE.

Synonyme—COXALGIA.
COXALGIA, defined; difference between the condition of the parts in it and in Morbus Coxarius.
Causes of Morbus Coxarius—constitutional and local.
Age most liable to.
Symptoms.
Stages of.
First stage—slight pain about the hip-joint, or knee (why pain is felt at the knee when the hip is affected); weariness in moving the joint; stiffness in the morning, which wears off during the day; paroxysmal pain; and occasionally some febrile excitement.
Second stage—Apparent or actual lengthening of the limb; buttock becomes flat; its fold deepens; thigh wastes; sharp pain when the surfaces of the joint are brought in contact; body rests on the sound limb entirely.
Third stage—the diseased extremity becomes shorter, either from displacement, or change in the head of the femur or acetabulum; examples of. The disease may terminate in this stage by firm anchylosis, but generally a painful swelling occurs about the whole joint; fluctuation is discovered; the swelling breaks, and discharges pus; then there is often hectic fever.

Fourth stage—characters of the changes which occur in convalescence.

Diagnosis—from rheumatism; psoas abscess; congenital luxation of the femur, &c.

Prognosis—unfavorable.

Pathology—condition of the bone; of the joint; of the surrounding tissues; character of the luxation, when present.

Treatment—according to the stage; antiphlogistic; rest, by means of Physick's carved splint, or one of gutta percha; best position of the limb.

DISEASES OF THE CONTINUITY OF THE BONES.

Relations and importance of the Periosteum.

1. PERIOSTITIS, defined—result of.

Constitutional and local symptoms.

Nodes defined.

Importance of a correct diagnosis.

Prognosis.

Treatment—local and general.

Local treatment—antiphlogistic; sometimes incisions are demanded, &c.

General treatment—propriety of employing mercurials and iodide of potassium.

2. OSTITIS defined.

Apt to result from tubercles in the bone.

Class of patients who suffer from it.

Causes.

Symptoms.

Difficulty in the diagnosis.

Prognosis.

Treatment in cases resulting in suppuration—operation of trephining the shaft of a bone.

Treatment when near a joint—as in the head of the tibia.

3. Atrophy of Bone.

Causes.

Results.

Treatment.

4. Hypertrophy of Bone.

Varieties—eccentric and concentric.

Causes of.

Pathology of.

Prognosis.

Changes in the cranial bones—specimens shown.

Treatment of.

5. Caries—defined, as a solution of continuity in bone of a peculiar kind, and somewhat similar to ulceration in the soft tissue.

Symptoms of caries.

Diagnosis from ulceration of the bone; from necrosis, inflammation of the bone, and periostitis.

Treatment—will depend on the cause; requires general and local means.

1. Caries of the Cranium.

Symptoms.

Prognosis.

Treatment.

2. Caries of the Vertebra—treated of hereafter.

6. Necrosis.

Explanation of the term.

Bones most liable to be attacked—long bones.

Varieties of necrosis—external, internal, entire.

Part performed by the Periosteum in the cure.

Symptoms of necrosis.

What meant by a Sequestrum.

Explanation of the mode of separation of the sequestrum and repair of the cavity left by its removal.

What is meant by a Cloaca.

Treatment of necrosis—constitutional; local.

Local treatment—operate.

After-treatment.

7. Exostosis.

Explanation of the term; its relation to hypertrophy.

Bones most liable to suffer from it—compact part of tubular bones; cranium, and other flat bones; lower jaw, vertebra, &c.

Varieties of—Peripheral and Parenchymatous, or Tuberculated, Laminated, and Spinous.

Causes.

Changes in these growths; results; dangers when situated near a joint; effects upon tendons; on the intestines, &c.

Treatment—when operate.

8. Spina Ventosa—defined as.

Origin of this ancient term; objections to its employment; Osteophyte of Gluge, a preferable term.

Bones most liable to this complaint.

Causes.

Symptoms.

Diagnosis—from exostosis.

Pathology—condition of the compact and reticulated structure.

Treatment—amputation proper?

9. Osteo-Sarcoma.

Objection to this term; that of Enchondromata, preferable.

Analogy to carcinomatous degeneration of the soft parts; necessity of attention to the modern nomenclature of osseous tumors.

At what age Enchondromata are seen—generally the young.
Seat of the disease—periosteum and bone.
Bones most liable to it—lower jaw; pelvis.
Causes—local and constitutional.
Symptoms—pains lancinating like cancer; these pains change their character sometimes after inflammation.
Class of patients—young persons.
Prognosis.
Pathology.
Treatment—result of the operations for; constitutional treatment.

10. Mollities Ossium.
Explanation of this term.
Bones most liable to the complaint.
Symptoms.
Causes.
Pathology—fatty degeneration.
Diagnosis from Rickets—in Mollities the firmness is naturally deficient; and it is peculiar also to adults; rickets to infancy.
Treatment—chiefly constitutional; guard against the bending of the bones.
Object of the constitutional means.

11. Fragilitas Ossium—defined as
Causes of—constitutional, old age, cancer, &c.
Symptoms.
Pathology.
Treatment.

12. Rachitis, or Rickets, is
Causes—constitutional.
Symptoms.
Age most liable—from six months to two years.

Pathology.

Treatment—tonics, phosphates, salt air, and good diet.

AFFECTIONS OF THE EYE.

General remarks on the characters of these affections, and the amount of special study necessary for their full comprehension; little more than an outline possible in a general course of lectures on Surgery.

Varieties—those of the Appendages and those of the Ball.

OF THE APPENDAGES.

Importance of the disorder of the Appendages of the Eye.

General outline of their structure.

1. BLOWS ON THE EYE—Ecchymosis.

   Treatment.

2. FOREIGN BODIES—between the lids and the eyeball.

   Treatment—eversion of the lid and their removal.

3. WOUNDS OF THE LID—treatment of.

4. HORDEOLUM, or STYE—treatment.

5. OPHTHALMIA TARSI, or Psorophthalmia.

   Causes.

   Symptoms.

   Character of the patients—scrofulous.

   Results—loss of ciliæ; eversion of the lids, &c.

   Treatment.

6. TRICHIASIS.

   Symptoms.

   Treatment.

7. DISTICHIASIS.

8. ENTROPION—or inversion of the eyelid.

   Causes.

   Symptoms.

Treatment—palliative and radical; each described, and operations shown.

9. ECTROPION, or eversion of the lid.

Causes.

Evils resulting from.

10. LAGOPHTHALMOS, or HARE-EYE—due to.

Treatment.

11. PTOSIS, or drooping of the upper lid.

Causes and treatment.

12. ANCHYLOBLEPHARON—meaning of the term.

Disease due to.

Prognosis.

Treatment.

13. SYMBLEPHARON—details of.

14. ENCYSTED TUMORS OF THE LIDS—seat of.

Treatment.

15. PEDICULI TARSI.

Treatment.

DISEASES OF THE LACHRYMAL APPARATUS.

General description of the sac, ducts, and puncta.

1. XEROPHTHALMIA, or dryness of the eye.

Causes.

Treatment.

2. EPIPHORA, or constant and excessive lachrymation.

3. STILLICIDIUM.

Obstruction of the puncta—act how.

Treatment—Anel's probe; objections to; best instrument for dilatation is.

Catheterism of the ducts.

16. DACRYOCYSTITIS, or INFLAMMATION OF THE LACHRYMAL SAC.

Causes; progress; often results in an abscess, and this being evacuated by ulceration results in fistula.

4. Fistula Lachrymalis—defined.
Pathology.
Treatment—by dilatation; by incision, caustic, style, &c.
5. Strabismus, or Squinting.
Causes.
Varieties—convergent and divergent.
Mechanism of each form—muscles involved.
General treatment—importance of attention to the condition of the alimentary canal.
Local treatment.
Operations—Hays, &c.
Tavignot's plan.
After-treatment.

DISORDERS OF THE EYEBALL.

General relations of the coats of the Eyeball.
1. Conjunctivitis.
Symptoms.
Causes.
Diagnosis—character of the vascularity.
Purulent ophthalmia.
Scrofulous.
Chemosis.
Prognosis of conjunctivitis.
Treatment of each form.
2. Sclerotitis.
Symptoms.
Causes.
Diagnosis—character of the vascularity.
Rheumatic ophthalmia.
Treatment.
3. Corneitis.
Symptoms.

Results.

Treatment.

Ulcer of the cornea.

Nebula.

4. STAPHYLOMA—defined; due to.

Treatment.

5. IRITIS.

Causes—syphilis, wounds, cold, &c.

Symptoms—change of color, of the shape of the pupil; deep-seated pain in the temple, &c.

Diagnosis.

Prognosis.

Treatment.

Importance of the constitutional treatment.

Local treatment—antiphlogistic, belladonna, &c.

Artificial pupil—operations for.

6. CATARACT.

General account of the structure concerned.

Causes.

Symptoms.

Diagnosis.

Catoptric test—advantages of.

Varieties of cataract—according to consistence; soft and hard.

" " according to ripeness; mature and immature.

" " according to its seat; lenticular, capsular, and capsulo-lenticular.

" " according to color; white, gray, amber, brown, radiated, &c.

" " according to contents of capsule; milky, osseous, gelatinous, &c.

Each variety explained in detail.

Characters of soft or fluid cataract.

" " hard cataract.

" " capsular cataract.

Complications of cataract.

Prognosis of cataract.

Treatment—constitutional and local.

Constitutional—chiefly in reference to the operation.

Preparation of the patient.

Local, three varieties in the operation—extraction, absorption, and reclination.

Details of each operation.

After-treatment.

Cataract glasses—when to be worn; caution in use.

7. AMAUROSIS—defined.

Amblyopia.

Gutta Serena.

Causes of amaurosis—local and constitutional; each detailed.

Local are

Constitutional are.

Varieties—idiopathic, sympathetic, and symptomatic; incipient, inveterate, partial, complete, functional, and organic.

Symptoms of amaurosis detailed.

Diagnosis—cautions in.

Prognosis.

Treatment—importance of the constitutional treatment.

Applications to the ball and its vicinity.

8. EXTIRPATION OF THE EYEBALL—causes demanding it; operation shown.

AFFECTIONS OF THE EAR.

1. Otitis—abscess, &c.
2. Otalgia, or Earache—result of.
   Diagnosis.
   Treatment.
3. Otorrhœa.
   Symptoms of.
   Causes.
   Treatment.
4. Foreign Bodies in the External Ear.
   Treatment.
5. Polypus from the Membrana Tympani.
   Symptoms.
   Diagnosis. Speculum auris.
   Treatment—ligature, forceps, caustics.
6. Deafness.
   Causes.
   Varieties.
   Symptoms.
   Pathology of—condition of mucous lining, &c.
   Treatment—catheterism; perforation of the membrana tympani, &c.

DISEASES OF THE NOSE AND ANTRUM.

Affections of the External Nose.

1. Lipoma.
   Characters of.
   Causes.
   Treatment.
2. Lupus.
   Varieties—exedens and non-exedens.

Characters of each.

Diagnosis—from epithelial and other cancers.

Prognosis.

Treatment.

Various constitutional remedies.

Local treatment.

3. Rhinoplasty—detailed history and various operations shown for the formation of a new nose; results; prognosis of the operation.

Affections of the Internal Nose.

Disease connected with the Schneiderian Membrane.

1. Coryza.
2. Epistaxis—plugging, &c.
3. Ozæna.

Symptoms.

Diagnosis.

Prognosis.

Treatment—advantages from the use of chlorides.

4. Rhinolitres—Nasal Calculi.
5. Foreign Bodies in the Nostril—how removed.
6. Abscess of the Septum Narium.

Effects on the cartilage.

Treatment.

7. Polypi Narium.

Varieties—soft and hard, malignant and benignant.

Characters of soft polypi—homogeneous soft tissue, containing cells, and a mucous fluid which escapes when squeezed.

Vessels—chiefly on the surface.

Color.

Attached by—narrow pedicle or stem.

Effect of the atmosphere on.

Characters of the hard and malignant polypi.

Color—bluish or red, according to vascularity.
Covered by—shining firm membrane.
Vessels—veins superficial, and arteries within; often very vascular.
Structure internally—fleshy and thick cellular structure, with bands of fibres.
This variety designated as Fibrous Polypi.
Attached by—a firm narrow base.
Bean-shaped—growth slow.
Effects of enlargement—distend cavities and destroy the adjacent bones.
Usual seat of polypi in the nose.
Diagnosis.
Caution as to the inferior turbinated bones.
Prognosis.
Treatment of Soft polypi—puncture, astringents, sternutatories, ligature, &c.
Treatment of Hard polypi—excision, caustic, &c.
Caution in use of instruments.

8. Ulcers of the Nasal Surface of the Soft Palate.
Symptoms—effect on the voice.
Treatment.

AFFECTIONS OF THE ANTRUM HIGHMORIANUM.

1. Effusions into the Cavity of the Antrum.
Symptoms.
Diagnosis.
Prognosis.
How treated.

2. Abscess of the Antrum.
Treatment.

3. Polypi of the Antrum.
Symptoms.

Prognosis—effects sometimes produced on the face.
Treatment.

4. Fungoid Disease of the Antrum.
Symptoms—local and constitutional.
Details of each.

5. Bony Tumors involving the Antrum.
Treatment—resection of the upper jaw.
Operation shown.
Various external incisions—importance of avoiding the Duct of Steno, &c.
Results of the operation.

AFFECTIONS OF THE CHEEK.

1. Tumors. Varieties: warts, enlarged buccal glands, &c.—how removed.
2. Salivary Fistula—what; relation of the Duct of Steno.
Result of wounds of this duct—difficult to heal, owing to the induration of the edges, &c.
Treatment—operations shown.

AFFECTIONS OF THE LIPS.

1. Cancer of—which lip most frequently affected.
Operation.
2. Hare-Lip—congenital fissure of the upper lip.
Varieties—single and double; each described.
Theory of its formation; effect on suction, speech, &c.
Operation.
Importance of its early performance; influence in contracting a fissure of the palate.
After-treatment.
3. Atresia Oris.
Result of—variety in the condition of the parts.

Treatment.

Dieffenbach's operation.

4. CHEILOPLASTY—history of.

Various operations shown.

5. FISSURE OF THE PALATE—hard and soft; its connection with Hare-lip.

Treatment detailed, and operations shown.

AFFECTIONS OF THE TONGUE.

1. RANULA—defined.

Symptoms.

Cause.

Diagnosis.

Treatment—various plans shown.

2. LINGUA VITULA, or Calf's Tongue.

Causes.

Symptoms.

Dangers from.

Treatment—operations shown.

Malformation of the Frænum Linguæ—varieties seen; evils of.

AFFECTIONS OF THE THROAT.

1. ENLARGED OR SCIRRHOUS TONSILS.

Symptoms.

Causes.

Pathology—not true scirrhus; effects of induration on the vessels of the tonsil; why they may bleed freely when excised.

Treatment.

Various operations shown.

2. TUMORS OF THE LOWER JAW—of the SUBLINGUAL GLAND; effects on deglutition, &c.

Resection of the lower jaw alluded to.

3. Foreign Bodies in the Pharynx.
   Where found most frequently, and why.
   Treatment.
4. Foreign Bodies in the Œsophagus.
   Rest where usually.
   Cause of the spasm in the larynx, and sense of suffocation.
   How relieved temporarily by position—by flexing the head so as to relax the muscles on the front of the neck.
   How removed—Bond's forceps, &c.
5. Foreign Bodies in the Larynx and Trachea.
   Usually what articles.
   Effects upon the Trachea—apt to result in.
   Treatment.
6. Laryngotomy—operation shown.
7. Tracheotomy—operation detailed.
   Question of the advantages of Tracheotomy in Croup.
   Torticollis, or Wry Neck.
   Operation of Myotomy.
   After-treatment.
8. Bronchocele, or Goitre—history of.
   Symptoms.
   Treatment.
9. Hydrocele of the Neck—pathology of.
   Treatment.

POISONS IN THE STOMACH.

Varieties—mineral, vegetable, and animal.

Mineral chiefly employed are—arsenic, corrosive sublimate, salts of copper and lead, and the mineral acids.

Vegetable poisons are chiefly the narcotics, as opium; cicuta, stramonium or Jamestown weed; also laurel, mushrooms, truffles, and similar articles often eaten.

Animal are—certain shell and other fish; fresh pork in hot weather; cantharides, &c.

Symptoms of Mineral Poisons—inflammatory.

Appearance of the tongue and throat; vomiting, thirst, cold sweats, death.

Post-mortem appearances—redness, inflammation, and perforation of stomach; change in the mucous membrane.

Symptoms of Vegetable Poisons—chiefly connected with the brain, eye, and senses generally; vertigo, vomiting, loss of consciousness, &c.

Symptoms of Animal Poisons—sickness of stomach, purging, eruptions, fever, &c.

Indications in the treatment of all poisons are—

First—to evacuate the stomach.

Second—employ antidotes.

Third—purge.

Fourth—combat the effects of the poison.

Antidotes, &c.—

Arsenic—albumen, and hydrat. sesquioxide of iron.

Corrosive Sublimate—albumen, emetics, &c.

Lunar Caustic—common table salt.

Lead—sulphuric acid diluted.

Copper—give albumen, and empty the stomach.

Opiates—evacuate the stomach, then keep up the action of the brain by the galvanic battery, exercise, &c.

Mineral Acids—give freely of alkalies, mucilage, &c.

Stomach-pump and tube—how used.

AFFECTIONS OF THE CHEST.

Empyema—cause and symptoms detailed.

Paracentesis Thoracis.

Causes demanding the operation.
Methods of operating.
CARIES OF THE RIBS—alluded to.

AFFECTIONS OF THE ABDOMEN.

ABSCESS OF THE LIVER.
Symptoms.
Treatment.
PARACENTESIS ABDOMINIS.
Operation.
Results.
GASTROTOMY, or opening of the Stomach.
Causes demanding it—prognosis of the operation.
ENTEROTOMY, or opening of the intestines.
Operations shown.

WOUNDS OF THE INTESTINE.

Varieties—longitudinal and transverse wounds.
Treatment—various sutures shown; suture of Reybard, Jobert, &c.
After-treatment.

HERNIA.

HERNIA—defined as "a protrusion of any of the abdominal viscera, covered by peritoneum, through natural or preternatural openings in the abdominal parietes;"—is a common complaint, about one in eight suffering from it.
Hernia are classified—1, from the position of the protruded portion; 2, from the contents of the tumor or portion of the viscera that protrudes.

Named from position—Inguinal, Scrotal, Femoral, Umbilical, Ventro-inguinal, Ventral, Ischiatic, Thyroidal, Phrenic, and Pudendal.

Named as a tumor of these regions—Bubonocele, or groin or inguinal tumor; Oscheocele, or scrotal tumor; Merocele, or femoral tumor; and Exomphalos, or umbilical tumor.

Named from the condition of the contents—Reducible, Irreducible, and Strangulated hernia.

Named from the contents of the tumor—Enterocele, or intestinal tumor; Epiplocele, or omental tumor; Entero-epiplocele, or intestinal and omental tumor.

Description of each variety of hernia.

Sac—what, and how made.

Regions of the sac—neck, mouth, and fundus.

Different conditions of the sac—thinned, thickened, &c.

Causes of hernia—exciting and predisposing.

Exciting causes are—

Predisposing causes.

Symptoms of Reducible hernia.

How tell when the tumor contains intestine and when omentum—effects of a full meal upon it.

Causes of Irreducible hernia.

Difficulty of reducing omentum due to

Symptoms of Strangulated hernia—soreness of the abdomen; pain around the navel; feeling of constriction; vomiting of bile; colic; stercoraceous vomiting; hiccough; quickened pulse; tension of the abdomen; cold sweats, &c. &c.

Diagnosis from Ileus.

Post-mortem appearances.

Prognosis of strangulated hernia—may result in artificial anus.

Prognosis of reducible and irreducible hernia.

Treatment of Reducible.

Taxis.

Application of a truss.

Varieties of trusses shown.

Radical cure—how accomplished.

Gerdy's plan—injections, &c.

Treatment of the Irreducible.

Characters of the truss for irreducible hernia.

Treatment of Strangulated—local and general.

Rules for taxis in strangulated—adjuvants to taxis, anæsthesia, &c. &c.

Bubonocele and Oscheocele, or Inguinal and Scrotal Hernia—size of.

How tell contents.

Surgical anatomy of the region through which this hernia passes.

External and internal ring described; their relations and condition in hernia; difference between this and their normal condition.

Poupart's ligament.

Tissues covering an inguinal hernia.

Bloodvessels near.

Relations of the hernia to the spermatic cord or round ligament; to the epigastric artery.

Direct and indirect inguinal hernia—what?

Ventro-inguinal hernia—what?

Diagnosis of Scrotal hernia—from hydrocele; circocele.

Rules for taxis in Inguinal hernia.

Application of an Inguinal truss.

Inconvenience resulting from irreducible hernia of this region.

Stricture where in Strangulated Inguinal Hernia.

Operation of Herniotomy in Inguinal Hernia—position of the patient; of the surgeon; preparation for the operation, &c.

Layers usually incised in Inguinal Hernia.

Stricture to be nicked *upwards*.

Position of the Epigastric artery to the internal ring.

How arrest the hemorrhage from this artery if it should be cut.

Treatment of the intestine if mortified.

Treatment of the omentum if mortified.

Treatment of the wound after the operation.

Constitutional treatment after the operation.

CONGENITAL INGUINAL HERNIA.

Differs from the former variety of inguinal hernia how—no proper sac.

Relation of the tunica vaginalis testis.

Course of the hernia in its descent.

Relative position of the epigastric artery and spermatic cord.

Testis—where.

Diagnosis from hydrocele.

Treatment when reducible.

Caution in the use of the truss in these cases.

How treat it when the testicle has not descended.

Dangers of the operation for strangulated inguinal hernia in the infant.

Advantages of dividing the stricture outside of the tunica vaginalis.

MEROCELE, OR FEMORAL HERNIA.

Size of the tumor.

Most frequent in females. Why—

Contents of the tumor generally.

Surgical anatomy of this region—relation of the femoral Bloodvessels to the hernia.

Obturator artery—occasionally where.
Femoral ring—defined.
Hey's ligament.
Saphenous opening—described.
Coverings of the Femoral hernia.
Cribriform fascia described.
Diagnosis of Femoral from inguinal hernia; aneurism, abscess, &c.
Prognosis—why more rapidly fatal than inguinal hernia.
Rules for taxis in Femoral hernia.
Position of the patient; position of the toes of the limb on the affected side; importance of attention to this.
Adjuvants to the taxis.
Seat of the stricture in strangulated femoral hernia.
Femoral trusses—described and shown.
Operation of Herniotomy in Femoral Hernia.
Line of incision.
Direction in which to nick the stricture—upwards and slightly inwards.
After-treatment and dressing.

EXOMPHALOS, OR UMBILICAL HERNIA.

Most common in females.
Surgical anatomy of the part.
Umbilical Ring—where.
Coverings of this hernia in the adult.
Coverings of umbilical hernia in the infant.
Appearance of the infantile tumor—clear, and sometimes transparent.
Size of adult umbilical hernia.
Shape.
Contents.
Inconveniences of.
Constitutional effects.

Causes in the adult.

Treatment of Congenital Umbilical Hernia—ligature, &c.

Object of the treatment by the ligature.

Treatment of the sore.

Truss for the infant.

Truss for the adult.

Treatment of umbilical hernia in the adult.

Taxis—how made.

Treatment of Irreducible Umbilical hernia.

Treatment of Strangulated " "

Adjuvants.

Operation.

After-treatment.

ARTIFICIAL OR UNNATURAL ANUS.

Result of.

Relations of the intestine to the abdominal parietes.

Why feces cannot pass directly through the intestine under these circumstances.

Appearance of the ulcer made in the integuments by an artificial anus.

Character of the discharge from the ulcerated opening—thin, watery, and windy.

Effect of the discharge on the surrounding skin.

Character and amount of the discharge per anum.

Treatment—palliative; curative—each detailed.

Physick's operation.

Trant's plan, &c. &c.

Lotz's instrument; Dupuytren's forceps.

After-treatment.

Artificial anus as made for the relief of obstruction in the bowels.

Seat of.

Causes demanding the operation—Amussat's operation, &c.

AFFECTIONS OF THE BACK.

1. TUMORS OF THIS REGION.

   Prognosis.

   Treatment.

2. SPINAL CURVATURE.

   Class who suffer.

   Varieties of spinal curvature—two: that due to disease of the vertebræ, and that due to disorder of the muscles.

(1.) TUBERCLES IN THE VERTEBRÆ—described; Nelaton's opinions as to their development and progress.

(2.) CARIES OF THE VERTEBRÆ.

   Symptoms of spinal curvature from disease of the bones.

   Two stages—before and after the curvature.

   Symptoms of the first stage—weariness, weak back, indisposition to exercise; dull, heavy pain; relief in the horizontal position, &c.

   Symptoms of the second stage—inability to control the motion of the lower limbs; disposition to sit with the knees drawn up towards the chest; loss of power due to the pressure or change in the spinal canal and cord as caused by the curvature of the vertebral column—Paraplegia.

   Most common seat of the curvature from caries of the vertebræ.

   Diagnosis from lateral curvature.

   Prognosis—cure tedious.

   Treatment—indications are to prevent the increase of the curvature, and preserve the general health.

   First—fulfilled by counter-irritants, and rest.

   Second—by fresh air, tonics, &c.; each detailed; advantages of spinal carts, &c.

(3.) LATERAL CURVATURE, or MUSCULAR DISTORTION OF THE SPINE.

Class affected.

Causes—bad constitution; want of exercise; bad position of the body in school; habit, &c.

Treatment—develop and equalize the powers of the muscles on both sides of the spine; how done.

Evil effects of lateral curvature if not cured—seen in disorders of the respiratory and abdominal organs.

3. SPINA BIFIDA—described.

Class affected.

Causes—its connection with Hydrocephalus.

Symptoms.

Prognosis.

Treatment—operation of the ligature, injections of iodine, puncture, &c.

Dangers of the operation.

Results of Trowbridge's operations.

SPECIFIC DISEASES OF THE GENITO-URINARY APPARATUS.

SYPHILIS.

General history of the Venereal disease, its origin, &c.

Two affections—Gonorrhœa, and Syphilis.

GONORRHŒA—defined.

Synonymes—Blennorrhagia, Clap, Chaude-pisse.

Reference to the anatomy of the urethra.

Symptoms of Gonorrhœa—tickling; swelling of urethra; Ardor Urinæ, serous discharge; muco-purulent; purulent; color of each discharge, &c.

Chordee.

Sympathetic Bubo.

Balanitis—Phymosis.

Spurious and true Gonorrhœa.

Diagnosis.

Prognosis.

Treatment of Gonorrhœa—abortive; curative—each detailed.

Importance of the use of a suspensory bandage, &c.

Sequelæ—epididymitis, irritable bladder, stricture, &c.

EPIDIDYMITIS.

Period of its development.

Symptoms.

Diagnosis.

Treatment.

ENLARGED PROSTATE.

Diagnosis.

Treatment—how introduce the catheter in a case of enlarged prostate; various instruments shown.

IRRITABLE BLADDER.

Symptoms.

Treatment.

STRICTURE OF THE URETHRA—defined.

Varieties—three: 1, Spasmodic; 2, Inflammatory; 3, Permanent. Each described.

Another division is, according to the extent and consistence of the stricture—as thread-like, ribbon-like, cartilaginous, indurated, &c.

Symptoms of Spasmodic stricture—what due to.

Symptoms of Inflammatory stricture.

Symptoms of Permanent stricture.

Changes in the caliber of the urethra, &c. induced by the latter.

Causes of Permanent stricture.

Seat of.

Diagnosis—caution in.

Prognosis.

Treatment of Spasmodic stricture detailed.

Treatment of Inflammatory stricture.

Treatment of Permanent stricture—three methods: 1. Dilatation. 2. Incision and division. 3. Caustic.

Each detailed, and shown with the necessary instruments.

Advantages of each.

Special application of each.

SYPHILIS—defined.

Chancre or primary sore—characters of.

Effects of inoculation.

Stages of syphilis—primary, secondary, tertiary.

Secondary sores due to—general infection.

Test of chancre.

Ricord's experiments.

Primary syphilis defined—original sore.

Secondary syphilis defined—affection of the skin, mucous membrane, &c.

Tertiary—affections of the bones and fibrous tissues.

PRIMARY SYPHILIS.

Symptoms of—vesicle; pustule; ulcer.

Hunterian chancre—character of the edges, &c.

Character and properties of its pus.

Sympathetic bubo.

Consecutive bubo.

Treatment of primary syphilis—indications are to destroy the secretory surface of the chancre, prevent absorption of the pus, and heal the ulcer.

How accomplished—avoid crusts; objection to ointments. Aromatic wine—consists of.

Complicated chancre—Phagedæna.

Treatment of syphilitic bubo—importance of its destruction.

Primary syphilis in the female—chancre, where found.

SECONDARY SYPHILIS—the result of.

Period of its appearance.

Symptoms, as seen in the skin—papules, tubercles, &c.; in the mucous membranes of the throat, nose, anus, &c.: ozæna; condylomata; warts; iritis; alopecia.

Treatment of each.

TERTIARY SYPHILIS, as seen in the ligaments, in the periosteum, and in the bones—rheumatism, nodes, caries.

Treatment—question of the employment of mercury.

SPERMATORRHŒA defined.

Symptoms—local and general.

General symptoms—as shown in the digestive organs, those of the circulation, and in the brain or spinal marrow.

Causes.

Pathology of—condition of the vesiculæ seminales; of the spinal marrow, &c.

Prognosis.

Treatment—evils of cauterization of the urethra in some cases.

AFFECTIONS OF THE BLADDER.

RETENTION OF URINE—due to; how treated.

Catheterism. Tapping of the bladder; each described.

STONE AND GRAVEL.

Causes of.

Effects of certain kinds of food; of drink; of climate and country on the formation of gravel.

Disease originates where.

Condition of the kidney.

Oxalic, uric, lithic, and phosphoric acids described.

Lithogenesis.

Constituents of calculi—union of above acids with lime, ammonia, magnesia, soda, silica, iron, cystine.

External Characters of Gravel.

Lithic Acid and Ammonia—yellow, red or lateritious and pink sediment.

Due to—lithic acid diathesis.

Appearance of the crystals under the microscope.

Causes of this diathesis.

Treatment—attention to diet, state of the skin, exercise, &c.

Phosphatic Gravel—white deposit, composed chiefly of phosphates of magnesia, ammonia and lime.

Appearance under the microscope.

Causes of the phosphatic diathesis.

Character of the urine—pale, and of a low specific gravity.

Treatment—generally tonic and slightly stimulant, with attention to the condition of the nervous system.

Oxalic Gravel—seldom seen as fine sediment, generally in the form of pebbles.

Appearance under the microscope—octohedral and dumb-bell shaped crystals.

Character of the urine—often bright and clear; of low or moderate specific gravity.

Causes—depressing, sometimes attendant on gout and rheumatism.

Treatment—advantage of the prudent use of mineral acids.

External Characters of Calculi.

Those of Uric Acid—brown, yellowish, smooth or tuberculated, oval and flattened, formed of concentric layers.

Calculi of Urate of Ammonia—nearly the same, but milk or coffee color, and fracture like hard chalk-stone.

Mulberry Calculi have often a nucleus of uric or oxalic acid; color—dark brown; consistence—hard; very rough surface; moderate size; imperfect lamellated surface when cut through.

Calculi of the Phosphates have a grayish-white color; crystalline, friable, brittle, often smooth, and polished by friction.

Calculi vary much in size, weight, and number.

Specimens shown.

GENERAL CONSIDERATION OF STONE IN THE BLADDER.

Character of the patient—age, habits, &c.

Symptoms of stone.

"Fit of the stone."

Diagnosis of Calculi in the Bladder.

Sounding—cautions in.

Advantages of anæsthetics in sounding.

Treatment of stone in the bladder—palliative; constitutional means; importance of changing the diathesis.

Local treatment during a fit of the stone.

Radical treatment—Lithotomy; Lithotripsy.

LITHOTOMY, three operations—lateral, bi-lateral, and supra-pubic.

Surgical anatomy of the perineum and hypogastric regions.

Operations shown.

Accidents.

After-treatment.

LITHOTRIPSY—history of.

Various instruments shown.

Preliminary treatment.

Operations shown.

After-treatment.

Danger of fragments being left in the bladder.

Stone in the urethra; fragments; how extracted.

STONE IN THE FEMALE.

Varieties of treatment required in the female from that just detailed.

Objections to lithotomy in the female.

AFFECTIONS OF THE TESTICLE AND CORD.

EPIDIDYMITIS—symptoms, &c. detailed under the head of Syphilis.

TUBERCLES OF THE TESTIS.

Synonyme—scrofulous testis.

Class of patients.

Symptoms.

Pathology.

Diagnosis.

Treatment.

FUNGUS OF THE TESTIS described; due to.

IRRITABLE TESTIS—result of.

CASTRATION.

Operation of.

HYDROCELE defined.

Causes.

Symptoms—shape of the tumor; where it commences; translucency, &c.

Diagnosis—from Hernia; Epididymitis; Orchitis; Sarcocele; importance of an examination of the tumor by transmitted light.

Treatment—Palliative and Radical.

Palliative—evacuation of the liquid.

Radical—evacuation of the liquid, and creation of the adhesive inflammation of the sides of the tunica vaginalis; accomplished by—seton, caustic, injections, &c.—each operation shown.

HÆMATOCELE defined.

Diagnosis.

Causes.

Treatment.

CIRCOCELE—enlarged spermatic veins; also those of the scrotum; why most frequent on the left side.

Symptoms.

Diagnosis from Hernia, Hydrocele, &c.

Treatment—advantages of the use of a Suspensory; various operations shown.

SURGICAL AFFECTIONS OF THE FEMALE GENITO-URINARY ORGANS.

Surgical anatomy of these organs.

OCCLUSION OF THE VULVA.

Causes.

Treatment.

ABSCESSES OF THE VULVA.

Importance of their early evacuation.

TUMORS OF THE LABIA—how treated.

ENLARGED CLITORIS—evils from; operation for its removal.

LACERATION OF THE PERINEUM—sutures shown.

VESICO-VAGINAL FISTULA defined.

Causes—due generally to tedious labor, or improper use of obstetrical forceps.

Varieties.

Consequences.

Diagnosis.

Prognosis.

Treatment—Vulva shield of Meigs; by caustic; Sims's operation, Jobert's, &c.

ATRESIA VAGINA described.

Causes—importance of attention to the prevention of cicatrices in the circumference of the canal.

Treatment—importance of the after-treatment.

RECTO-VAGINAL FISTULA—Barton's operations for; other operations for.

AFFECTIONS OF THE ANUS AND RECTUM.

ANAL AND RECTAL ABSCESS.

Causes.

Symptoms.

Diagnosis.

Treatment—operation; importance of early evacuation.

FISTULA IN ANO defined—causes of.

Varieties of—complete, incomplete, and blind; each described.

Treatment—by seton; by incision; by caustics; each shown.

FISSURE OF THE ANUS.

Symptoms.

Diagnosis—importance of the use of anæsthetics and the speculum ani.

Treatment—caustic; laceration and subcutaneous section of the sphincter ani muscle, &c.

HEMORRHOIDS, OR PILES.

Pathology—condition of the rectal veins.

Varieties of—external, internal, blind, open, and bleeding.

Symptoms of each.

Diagnosis from Prolapsus Ani.

Prognosis.

Treatment—palliative and radical.

Palliative—antiphlogistic, astringents, anodynes, and removal of constipation.

Radical—extirpation by the knife, scissors, or ligature.

Various operations shown.

After-treatment.

Dangers of hemorrhage after the operation of excision.

PROLAPSUS ANI defined.

Class of patients who suffer from it.

Causes.

Pathology.

Treatment—restoration and retention.

Operation of excision, sometimes though rarely demanded; other operations shown.

STRICTURES OF THE RECTUM—spasmodic, organic, and malignant.

Symptoms of each; treatment of each.

REMOVAL OF FOREIGN BODIES FROM THE RECTUM—how accomplished.

IMPERFORATE ANUS.

Varieties in the condition of the parts in male and female children, &c.

Treatment.

Results.

AFFECTIONS OF THE ARTERIES.

ANEURISM (from ανευρυνω, to dilate) defined as tumors formed, 1, by preternatural dilatation of a part of an artery (true aneurism), or, 2, by effusion of blood into the surrounding cellular tissue in consequence of a division of the arterial coats (false aneurism).

Varieties—true and false.

TRUE ANEURISM—two varieties, circumscribed and diffused.

Circumscribed—that in which but a short portion of the course of the artery is enlarged.

Diffused—when an artery is dilated for a considerable length.

Difference of opinion concerning this class.

Diagnosis of true from false aneurisms.

FALSE ANEURISM—two varieties, circumscribed and diffused; difference between them.

General symptoms of Aneurism.

Characters of the tumor—pulsation often diminishes as the tumor enlarges.

Reasons.

Effects of the pressure of the tumor upon the surrounding parts, particularly the bones—produces absorption, caries, &c.

Effects upon the limb below its seat—creates œdema, &c.

Terminations of aneurism—occasionally spontaneous cure.

Modes in which it is effected.

Rupture of the aneurism.

Its immediate cause usually the formation of a slough; the tumor is, however, sometimes torn by gradual distension, particularly when the sac projects into a cavity lined with a serous membrane.

Results of such a rupture.

Diagnosis of Aneurisms generally.

Value of auscultation.

Causes of Aneurisms—predisposing and immediate.

Predisposing causes—often obscure; size of vessels; their curvatures; effects of age; reasons for this—calcareous deposition, and disease in coats of vessels; scrofula; rheumatism; gout; syphilis; abuse of alcohol; more frequent in the male than in the female sex.

Immediate causes—wounds and injuries of the arteries; strains; violent exertions, &c.

Prognosis—always serious; left to itself, generally fatal; duration previous to rupture, various; causes influencing it; generally incurable if, from its situation, the artery can neither be compressed nor tied above the tumor; probability of success after an operation; age, constitution, and state of patient's health as influencing success.

General Treatment of Aneurism—rest; antiphlogistics.

Cold and astringents.

Opinions as to their value.

Valsalva's plan—repeated and copious bloodletting; its value.

Objects of compression or the ligature—so as to produce the obliteration of the artery connected with the sac.

Mode in which this plan proves efficacious.

How the circulation is carried on, after such an operation, by the collateral branches.

Compression, as used upon the swelling alone.

Objections.

When applied on the whole limb.

How done—by means of bandages and graduated compresses.

Guattani's method.

Compression of the artery above the swelling.

Reasons why the latter plan is preferable.

Different plans for effecting pressure—Bellingham's, &c.

Comparative value of this mode of treatment.

Ligature—different operations.

The old Greek operation of opening the aneurismal sac, removing the coagulated blood, and tying the artery above and below the sac—why objectionable.

Hunterian operation—tying the artery between the tumor and the heart at a sufficient distance to afford a probability of the vessel being sound at the point where it is tied.

Mode in which this plan acts.

When indicated.

How performed.

Scarpa's mode of ligating an artery—a small cylinder of anointed linen being interposed, the artery is tied so as not to cut the internal and middle coats.

Advantages claimed for this plan.

Disadvantages.

Plan of two ligatures, and dividing the artery between them.

Objections to torsion of the artery by means of forceps.

Ligature—how applied by means of Deschamp's needle.

Amussat's plan—dividing and thrusting back the internal coats.

Mode in which it is effected.

Rationale.

After-treatment in the above operations.

Recurring pulsation—how this happens.

When it will interfere with the cure.

Dangers incidental to the operation.

1. Secondary hemorrhage.
2. Mortification of the limb.
3. Causes and treatment.

Tying the artery below the sac.

Theory of the cure by this method.

Value of the operation.

PARTICULAR ANEURISMS.

Arteries in which aneurism most frequently occurs—the larger arteries most liable.

1. ANEURISMS OF THE AORTA.

Supposed to be as numerous as aneurisms of all the other arteries taken collectively. Arch of the aorta its most common seat.

Difference of opinion whether this aneurism consists of the dilated coats of the artery, or is the result of a rupture of its proper coats.

Scarpa's views.

Symptoms of aneurism of the Thoracic Aorta, as observed

in its early stages. As the disease advances, we have obstructed respiration, altered voice, dissimilarity of pulse in the two wrists, and other symptoms arising from compression of the thoracic viscera. After a time a tumor may appear; where—generally anteriorly, the bones being removed by interstitial absorption; sometimes, however, the tumor appears posteriorly.

Diagnosis—from aneurism of the Innominata or Subclavian arteries; from phthisis, angina pectoris, and disease of the heart.

Value of Auscultation.

Cause of death in Thoracic Aneurism—may prove fatal, 1, by pressure upon the thoracic viscera, or, 2, by a rupture into the cavity of the chest, into the pericardium, trachea, bronchia, air-cells of the lungs, pulmonary artery, œsophagus, or externally.

Symptoms of Aneurism of the Abdominal Aorta—those of pressure upon the abdominal viscera; interference with the action of the diaphragm, pain, pulsation, and finally a tumor which may rupture externally or internally.

Treatment—rest; antiphlogistic remedies; Valsalva's method; digitalis.

Chances of success; probable termination.

2. Popliteal Aneurism—the most frequent of any external aneurisms. Anatomical relations of the Popliteal artery.

Symptoms of this aneurism.

Treatment—local means of.

Hunterian operation of tying the Femoral artery.

Time for the performance of the operation.

Mode of proceeding shown.

3. Femoral Aneurism—seen at various points. Each detailed.

Aneurisms high up in the femoral artery.

Symptoms.

Mode of tying the External Iliac shown, with its anatomical relations.

When indicated.

Other Femoral Aneurisms described.

Plan of operating detailed.

4. Aneurism of the Carotid Artery and its Ramifications.

Generally seated near the bifurcation of the Primitive Carotid.

Symptoms—those of aneurism generally, with violent tearing pains on the side of the head affected, sudden loss of recollection, difficulty of breathing; the tumor does not move in swallowing. Why.

Diagnosis.

Operation of ligating the Common Carotid Artery shown with its anatomical relations.

Aneurismal Varix—produced when the artery, having been punctured through a vein, the two adhere together, the communication remaining open.

Causes—where most frequent.

Symptoms.

Diagnosis.

Treatment—compression; results.

Ligature of the Brachial Artery above and below the tumor shown.

Varicose Aneurism—a false aneurism between an artery and a vein, opening into both.

Causes.

Symptoms.

Diagnosis.

Treatment.

DISSECTING ANEURISM.

Nature.

Characters.

BRANCHING ANEURISM; ARTERIAL VARIX.

Nature.

Causes.

Symptoms.

Treatment—extirpation.

Ligation.

After-treatment.

Prognosis.

ANEURISMS OF THE ARTERIES OF BONES—where most frequent.

Symptoms.

Anatomical character.

Causes.

Diagnosis.

Prognosis.

Treatment.

Ligating principal arterial trunk; amputation.

ANEURISM BY ANASTOMOSIS; NÆVUS; TELEANGIECTASIS—result of unnatural development of the capillary vascular system; difference in the pathology of each.

Symptoms.

Progress.

Age at which most frequent.

Difference of character when the arterial or the venous side of the capillary system is most affected.

Course of this aneurism—often rapid.

Causes.

Prognosis.

Treatment—compression; removal by extirpation or ligature; caustic; actual cautery; tying the principal arterial trunk: producing inflammation and suppuration.

AFFECTIONS OF THE EXTREMITIES.

PARONYCHIA, OR WHITLOW—defined.

Four varieties of—1, pus beneath the cuticle at the root of the nail after trivial inflammation; 2, pus in the cellular tissue at the end of the finger; 3, pus in the sheath of the flexor tendons; 4, pus beneath the periosteum.

Symptoms of each.

Prognosis—dependent on its early evacuation.

Treatment—Perkins's plan by caustic; incisions; necessity of anæsthetics in both.

Operation—importance of a deep incision.

ENLARGED BURSÆ.

Symptoms of.

Pathology—due to an increase of the natural secretion, and resulting from acute or subacute inflammation.

GANGLION defined.

Contents of.

HOUSEMAID'S KNEE defined—its seat generally.

Disease as seen near the hip-joint.

Diagnosis—from fibrous, fatty and encysted tumors of these parts.

Treatment—rupture by force; subcutaneous puncture and absorption; puncture, evacuation, and injection of iodine; incision.

NEURALGIA OF THE MAIN TRUNKS OF THE NERVES—due to.

Treatment.

VARICOSE VEINS.

Causes.

Signs of.

Diagnosis.

Prognosis.

Treatment—laced stocking; bandages; operation of Watson, of Velpeau, &c.

TALIPES, OR CLUB-FOOT, defined.

Varieties of—1. Pes Equinus. 2. Varus. 3. Valgus. 4. Calcaneus. These often combined. Each described in detail.

Pathology—changes in the bones, ligaments, muscles, &c. of the foot and leg; the deformity is generally due to an arrest of development.

Causes.

Prognosis.

Treatment—mechanical, and tenotomy. Each detailed.

Importance of a long continuance of the mechanical treatment; dangers of too much pressure.

RESECTIONS.

Term defined; advantages of this operation in certain cases; comparison with amputation.

Conditions essential to the proper performance of this operation; of the patient; of the surgeon; instruments.

RESECTION OF THE SHOULDER-JOINT—conditions demanding it.

White's operation.

Syme's "

Lisfranc's "

Bourgery's "

Results.

RESECTION OF THE ELBOW-JOINT—conditions requiring the operation.

Moreau's operation.

Harris's, &c.

RESECTION OF THE RADIUS AND ULNA—when required; each described.

Results of the operation.

RESECTION OF THE METACARPAL BONES AND PHALANGES—when proper; operation shown.

RESECTION OF THE HIP-JOINT—diseases demanding it.

1. HEAD OF THE FEMUR.

   Operation shown.

2. RESECTION THROUGH THE TROCHANTER MAJOR FOR ANCHYLOSIS OF THE HIP-JOINT.

   Barton's operation; Rogers's; each shown.

3. RESECTION NEAR THE CONDYLES OF THE FEMUR FOR ANCHYLOSED KNEE.

   Barton's operation.

   Buck's operation.

4. RESECTION OF THE BONES OF THE LEG—cases demanding it; false joint and badly united fractures; operations shown.

5. RESECTION OF THE ANKLE—details of.

6. RESECTION OF THE ASTRAGALUS. "

7. RESECTION OF THE OS CALCIS. "

8. RESECTION OF THE METATARSAL BONES AND PHALANGES.

   Results of these operations.

AMPUTATIONS.

General remarks on amputations.

History of.

Cases requiring these operations—always essential that the disease should be worse than the loss of the limb.

Considerations promising success; caution as to primary amputation in many cases arising from railroad accidents.

Varieties in operating, four—circular; one flap; double flap; oval.

Great object of all—1. To preserve sufficient of the soft parts to cover the bone. 2. To obtain a solid cicatrix. 3. A round stump.

Varieties in amputation.

Two periods when it may be performed—these are designated as primary or immediate, and secondary or consecutive amputation.

Selection of the place—continuity; contiguity.

Special point—election and necessity.

Difficulties attendant on the operation—retraction of the integuments and muscles; inflammation of the stump; exposure of the bone; ulceration; sloughing; conical stump; re-amputation.

General arrangements applicable to all amputations:—

1. Arrangement of instruments.
2. Position of patient.
3. Aids—duties of each.
4. Compression for the arrest of bleeding, or the use of the tourniquet.
5. Calculations for the length of the flap.
6. Care of the portion amputated.
7. Retraction of the stump whilst sawing the bone—application of the ligatures.
8. Dressing. Artificial limb, &c.
9. Importance of anæsthetics in amputations.

Accidents at the time of the operation—hemorrhage; syncope; spasms. Subsequent to the operation—secondary hemorrhage; badly formed stump; disease of the bone; venous inflammation; abscess; neuralgia; tender stump; hectic.

Organic changes in the body resulting from amputation.

SPECIAL AMPUTATIONS.

Larrey's.

E. R. Peaslee's.

Each operation shown, and its applicability to certain cases detailed.

Statistics.

AMPUTATION OF THE ARM.

Methods.

Different operations—circular and flap. Each detailed.

Prognosis generally.

AMPUTATION AT THE ELBOW-JOINT.

Propriety of.

Methods employed in this amputation—the circular and the flap.

Operations shown.

Character of the stump from each.

AMPUTATION OF THE FOREARM.

General observations.

Methods.

Operation.

AMPUTATIONS OF THE FINGERS.

Methods.

Operation.

AMPUTATIONS OF THE LOWER EXTREMITY.

General remarks on the serious character of these amputations in the thigh.

Statistics of the mortality.

AMPUTATION AT THE HIP-JOINT.

In the contiguity, or by disarticulating.

History.

Success.

Various methods detailed.

SURGICAL ANATOMY OF THE JOINT.

Measurements to show how to find the joint.