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1881

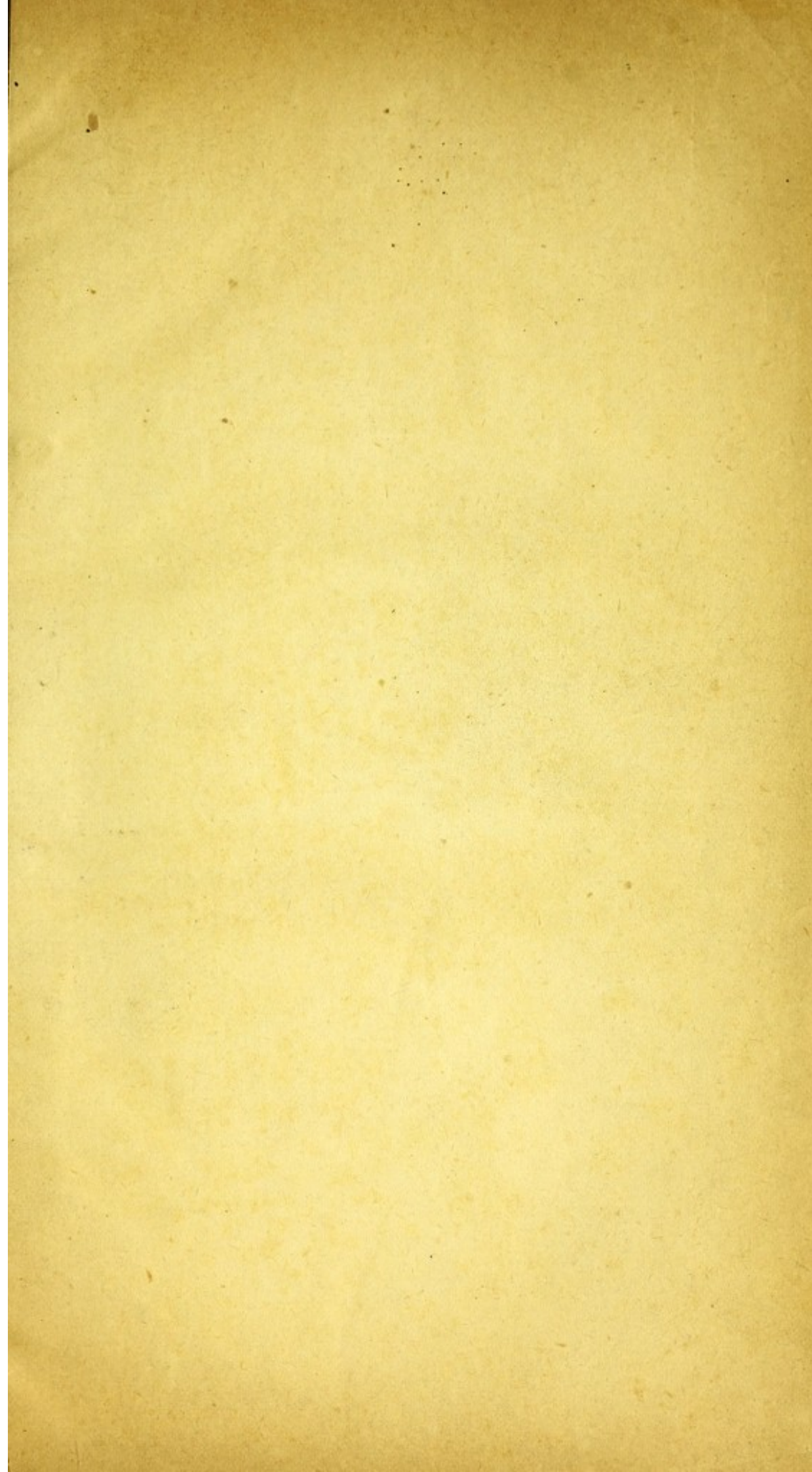


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Antiseptic fume -

Resin -	5 ounces
Paraffine -	3 —
Carbolic acid -	3 —
Castor oil -	5 dr -
Spirits of wine -	10 —

for 15 yards

Boric acid antiseptic

Boric acid (finely levigated) -	1 lb
White wax -	1 —
Paraffine -	2 —
Almond or Coconut oil -	1 —

SYLLABUS
OF A
COURSE OF LECTURES
ON THE
PRINCIPLES OF SURGERY.

BY
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COLLEGE, AND FIRST SURGEON, COLLEGE HOSPITAL.

CALCUTTA :
PRINTED BY P. S. D'ROZARIO AND CO., 12, WATERLOO STREET.
1881.

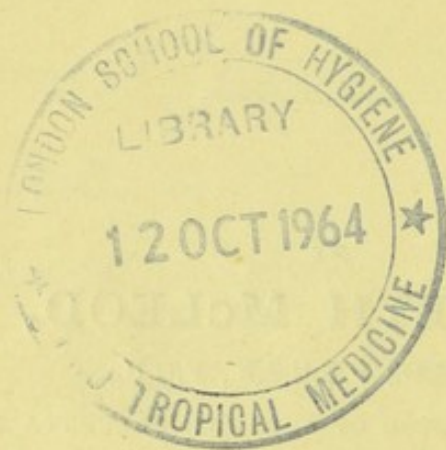
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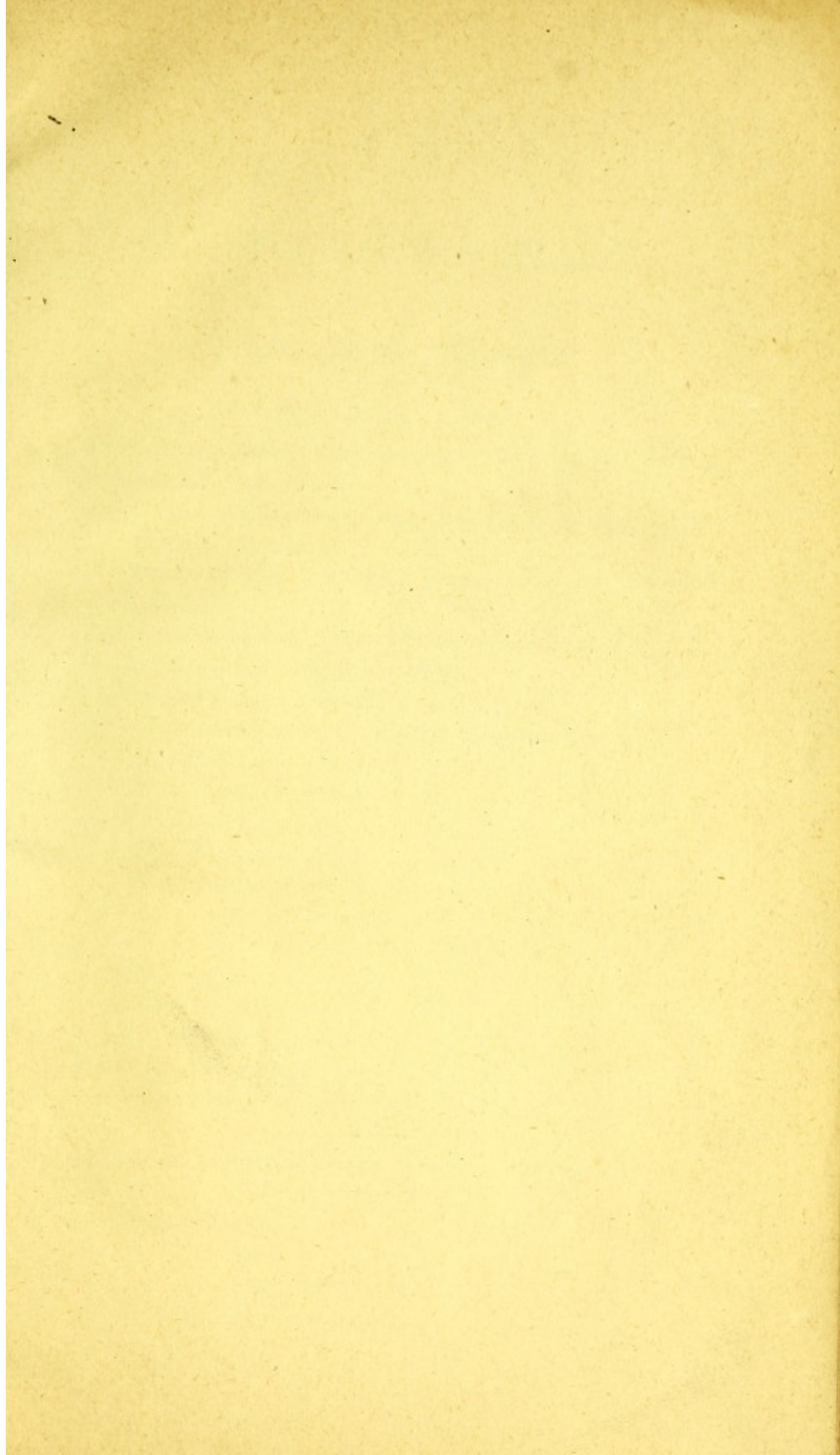
SYLLABUS

COURSE OF LECTURES

ON THE

PRINCIPLES OF SURGERY







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CALCUTTA MEDICAL COLLEGE.

LECTURES ON SURGERY.

PLAN OF THE COURSE.

Introductory remarks on the relations of Medicine and Surgery and on surgical classification.

A.—General conditions and diseases met with in surgical practice (Surgical diseases.)

B.—Tissue changes underlying surgical disorders (surgical pathology.)

C.—Disorders of development (Malformations.)

D.—Injuries—their varieties and effects.

E.—Surgery of special tissues, organs, and regions.

I.—Nervous system (including the special senses.) ✓

II.—Circulatory system. ✓

III.—Absorbent system. ✓

IV.—Ductless glands.

V.—Respiratory system.

VI.—Digestive system.

VII.—Urinary System.

VIII.—Generative system—male and female.

IX.—Organs of locomotion.

X.—Cellular tissue.

XI.—Cutaneous system.

F.—Surgical Operations.

With illustrations on the dead subject.

A. GENERAL CONDITIONS AND DISEASES MET WITH IN SURGICAL PRACTICE.

I.—Nervous Group.

1. Shock.
2. Traumatic delirium.
3. Delirium tremens.

I.—Nervous Group.—(continued.)

4. Hysteria.

5. Tetanns.

II.—Fevers.

1. Traumatic fever.

2. Inflammatory fever.

3. Irritative fever.

4. Typhoid fever.

5. Hectic.

III.—Septic Group.

1. Erysipelas.

2. Septicæmia.

3. Pyæmia.

4. Hospital gangrene.

IV.—Cachexiæ.

1. Scrofula.

2. Rickets.

3. Malakosteon.

4. Lupus.

5. Rodent ulcer.

6. Cancrum oris.

7. Cancer.

8. Elephantiasis (Arabum)

9. Leprosy.

10. Scurvy.

11. Diabetes.

12. Rheumatism.

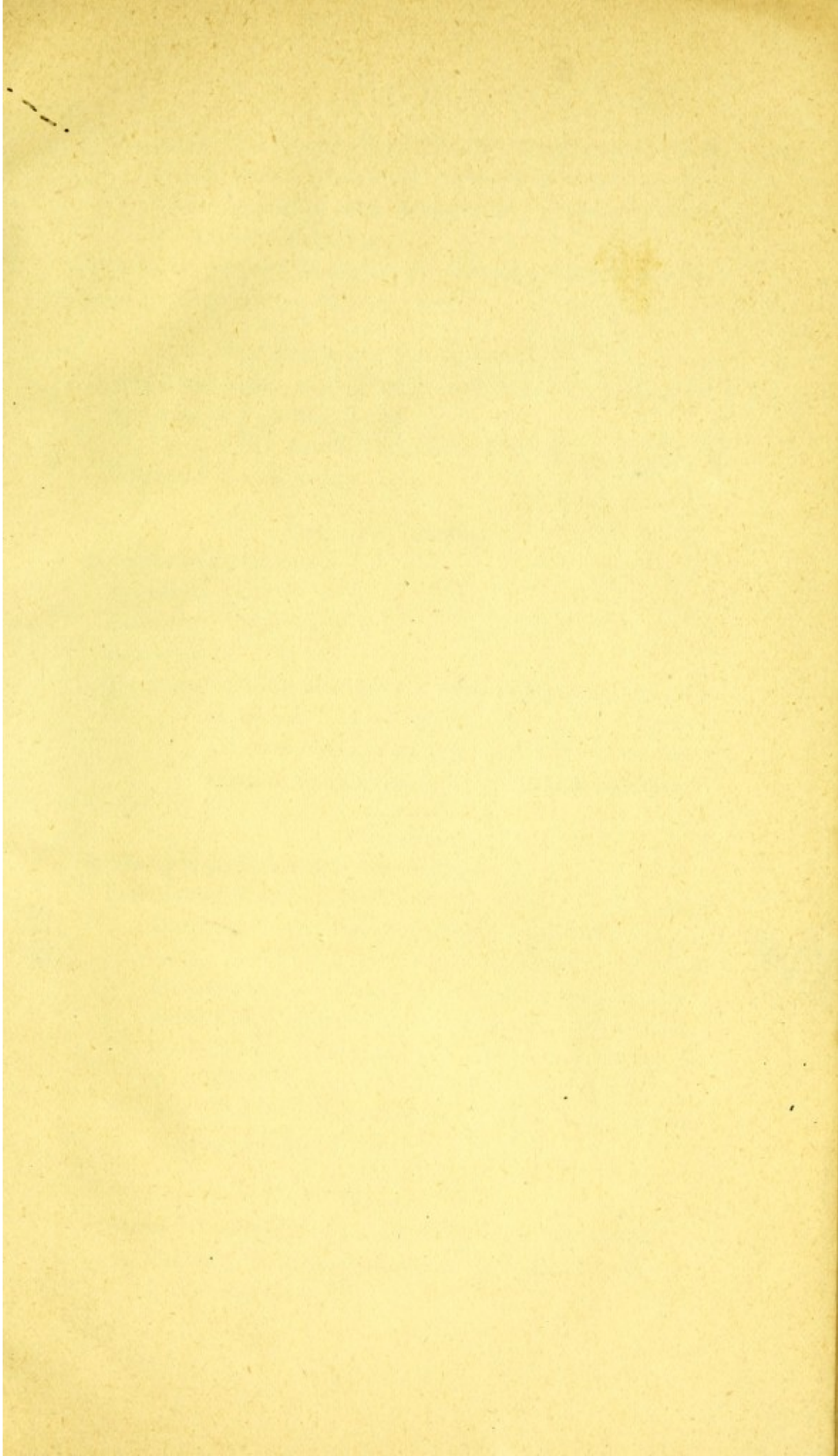
13. Gout.

14. Malaria.

15. Anæmia.

V.—Syphilis.

SHOCK.*Definition and phenomena.**Symptoms* of shock, reaction, and prostration with excitement.*Pathological appearances.**Causes*—*I. Predisposing.* 1—Age. 2—Sex. 3—Idiosyncrasy. 4—State of general health. 5—Attention and expectancy.*II.—Exciting.* 1—Fright and mental impressions. 2—Pain. 3—Direct injury to nervous system. 4—General concussion. 5—Severe injury involving a large part of the body or capital operation. 6—Burn. 7—Multiple injury. 8—Injury of important organs. 9—Loss of blood.*Diagnosis and prognosis.*



Anaesthesia might
come in here

>

Treatment. 1—Prevent death. 2—Restore animation. 3—Supply power. 4—Avoid excessive stimulation. 5—Calm irritability and excitement. 6—Stop bleeding. 7—Attend to injuries.

Question of operation during shock. Should chloroform be administered? Preventive treatment of shock.

TRAUMATIC DELIRIUM.

Definition and causes of delirium generally.

Symptoms of (a) Sthenic and
(b) Asthenic traumatic delirium.

Treatment of each variety.

DELIRIUM TREMENS.

Definition and phenomena.

Symptoms.

Diagnosis.

Prognosis.

Treatment. 1.—Clear primæ viæ. 2.—Induce sleep and calm excitement. 3.—Support system. 4.—Prevent patient injuring or exciting himself. 5.—Administer tonics in convalescence. 6—Attend to the injury.

HYSTERIA.

Surgically important because simulating.—

1.—Disease of spine. 2—Disease of joints. 3—Disease of Mamma. 4—Retention of urine. 5—Local pain.

Diagnosis. 1—Sex and age. 2—Sudden onset. 3—Pain excessive and superficial. 4—Subjective symptoms more marked than objective. 5—Absence of organic change. 6—Pain worse during day. 7—Absence of pyrexia, &c. 8.—Sudden recovery. 9.—Effect of chloroform.

Treatment. 1—Withdraw attention. 2—Tonics and antispasmodics. 3—Local anodynes.

TETANUS.

Definition. Varieties. (a.) Idiopathic. (b.) Traumatic. (c.) Trismus. (d.) Emprosthotonos. (e.) Episthotonos. (f.) Pleurosthotonos.

Symptoms.—Premonitory and actual.

Causes.—*I. Predisposing.* 1—Season. 2—Race. 3—Hygiene.
4—Age, 5—Sex. 6—Constitution.

II.—Exciting. 1—Injuries. 2—Cold and damp. 3—
Worms. 4—Foreign bodies. 5—Terror. 6—Anxiety.
7—Suppression of secretions, excretions and eruptions.

Post-mortem appearances.

Pathology.

Diagnosis from 1—Local spasm. 2—Hysteria. 3—Strychnine.
4—Hydrophobia, and 5—Rheumatism.

Prognosis.

Treatment. 1—Remove local irritation. 2—Cut off afferent im-
pulses. 3—Nerve stretching. 4—Calm centric exci-
tability, (a) Ice to spine; (b) Chloroform. (c) Seda-
tives. 5—Remove sources of excitement; equable tem-
perature, perfect rest, gentle purgation. 6—Keep patient
alive—? Tracheotomy.

SURGICAL FEVERS.

General characters of fever (pyrexia).

Phenomena of fever as regards—1. Temperature. 2. Circulation.
3. Respiration. 4. Skin. 5. Secretions. 6. Digestion.
7. Nervous system. 8. Tissue change.

Treatment. 1.—Reduce temperature. 2—Support strength. 3—
Promote secretion and excretion. 4—Meet urgent
symptoms. 5—Remove local sources of irritation.

TRAUMATIC FEVER.

Diagnosis.

Pathology.

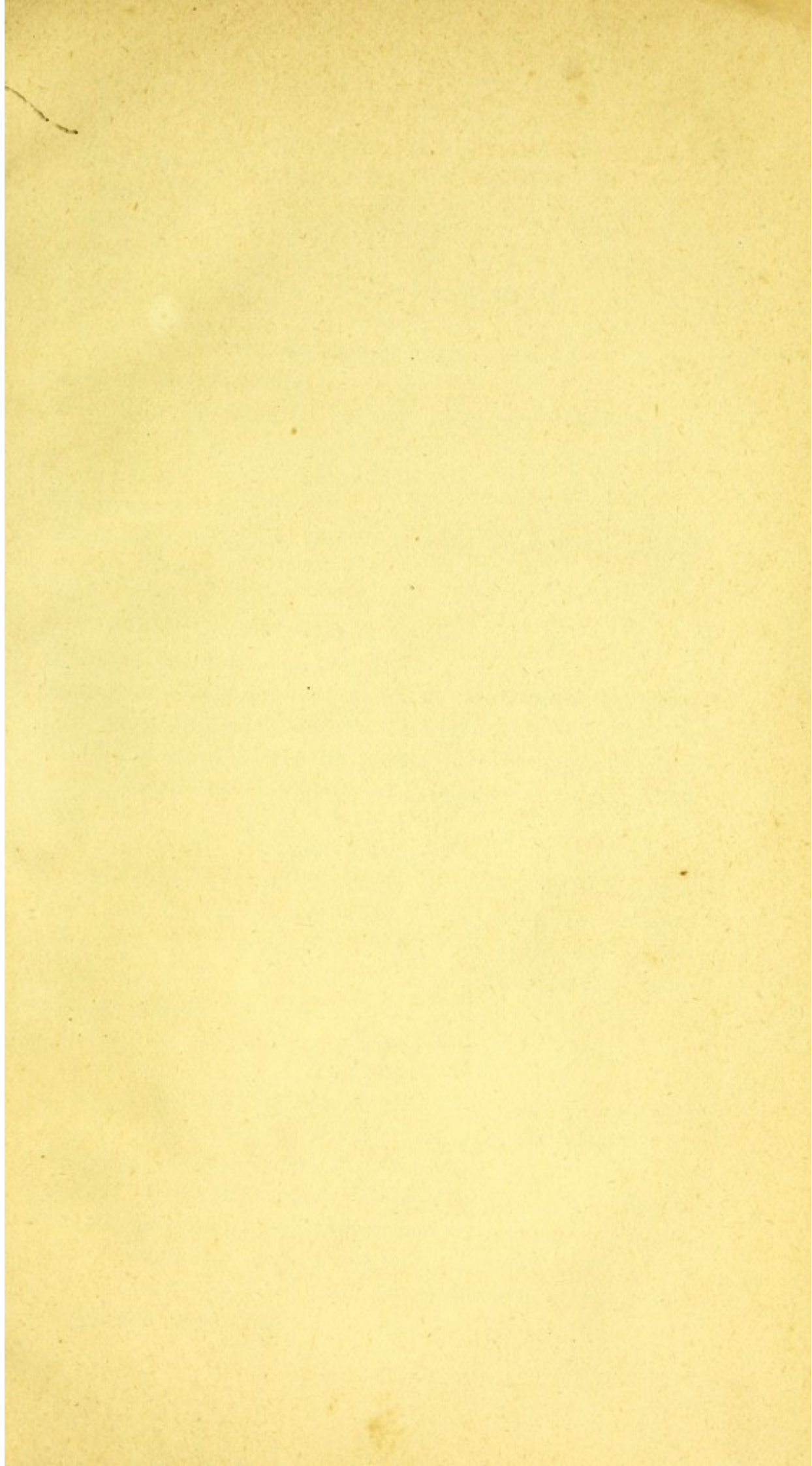
Symptoms.

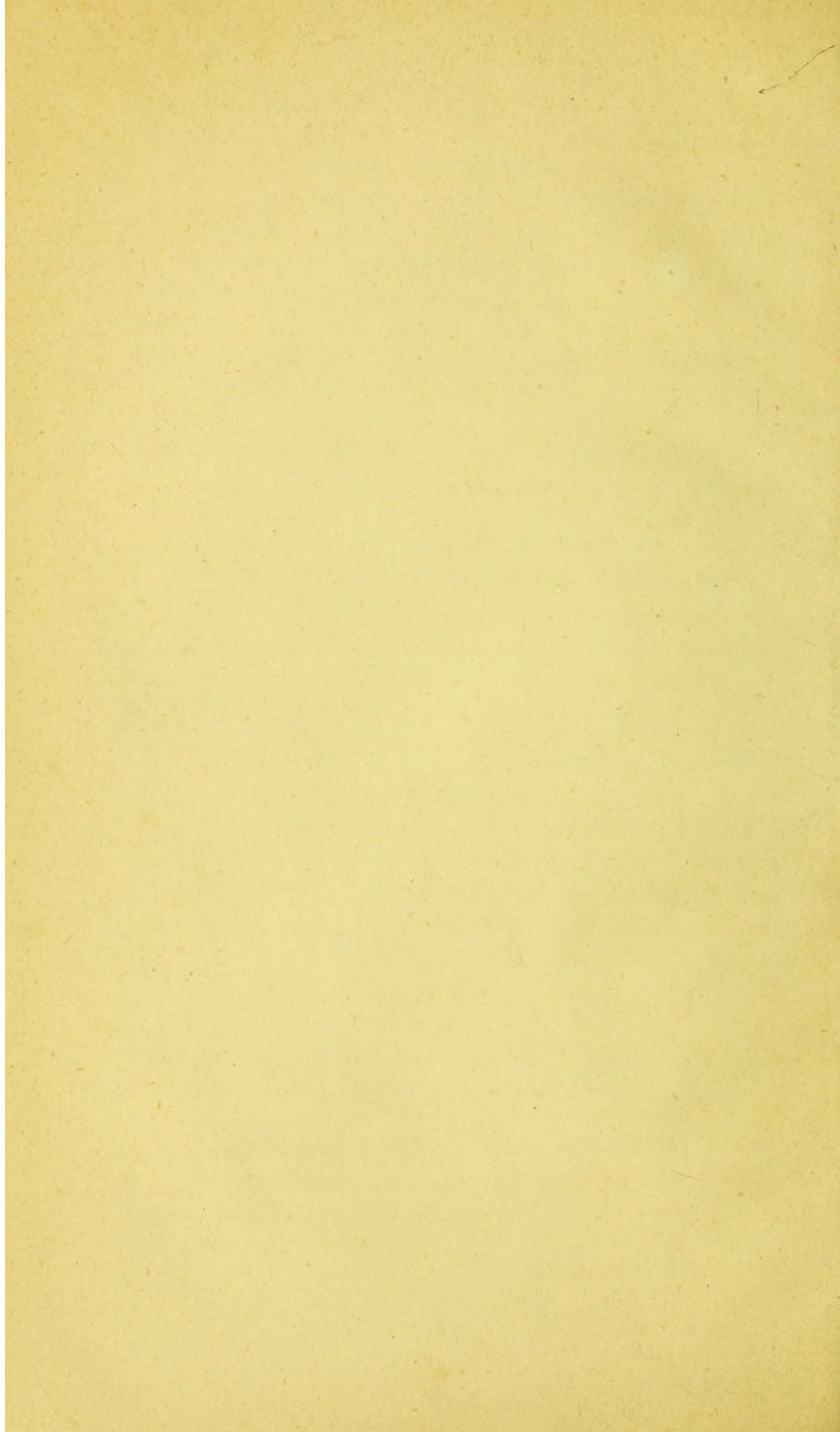
Treatment. Special—measures. 1.—Rest. 2.—Avoidance of
tension. 3.—Prevention of putrefaction. 4.—Exclusion
of irritation.

INFLAMMATORY FEVER.

Causation, varieties and type.

Symptoms.





Pathology.

Terminations.

Treatment. 1—Reduce local inflammation. 2—Relieve tension. 3—Promote secretion and excretion. 4—Administer nutritious but non-stimulating diet. 5—Reduce temperature.

IRRITATIVE FEVER.

Causation and phenomena.

Treatment. 1—Support. 2—Stimulants. 3—Sedatives.

TYPHOID FEVER.

Causation and phenomena.

Treatment. 1—Support. 2—Stimulants. 3—Removal of local cause.

HECTIC FEVER.

Causation and phenomena.

Treatment. 1—Remove local conditions. 2—Support the system. 3—Attend to secretions and excretions. 4 Tonics. 5—Control diarrhœa if present. 6—Prevent formation of bedsores. 7—Amputate if necessary.

SEPTIC DISEASES.

General observations.—Tendency to constitutional depression and local disorganization. Caused by putrefactive fermentation. Materials most liable to putrefy. Septic and infective processes. Microzymes. Vital resistance. Constitutional power. Hygienic defects.

ERYSIPELAS.

Phenomena.—Constitutional and local. *Varieties.* (a)—Cutaneous ; (b)—Cellulo-cutaneous ; (c)—Cellular.

Symptoms. 1—Constitutional. 2—Local.

Causes. 1—Constitutional. 2—Predisposing, (a)—Hygienic defects ; (b)—Epidemic influence ; (c)—Season. 3—Exciting, (a)—Contagion ; (b)—Putrescent animal matter ; (c)—Wounds and injuries ; (d)—Putrefaction.

Post-mortem appearances.

*Pathology.**Diagnosis* from erythema and angeioleucitis.*Prognosis.*

Treatment. 1—*Constitutional*, (a)—Clear primæ viæ ; (b)—Promote secretion and excretion. (c)—Support system ; (d)—Iron ; (e)—If asthenic, bark and ammonia ; (f)—Reduce pyrexia. 2—*Local*, (a)—Sulphate of iron ; (b)—Nitrate of silver ; (c)—Fomentation ; (d)—Carbolic acid subcutaneously. (e)—Incisions ; (f)—Amputation. 3—*Preventive Treatment.*

SEPTICÆMIA.

Definition.—Septic intoxication and septic infection.*Symptoms.*

Causes.—1. *Predisposing*, (a)—Previous illness ; (b)—Organic disease ; (c)—Exhaustion and shock ; (d)—Parturition ; (e)—Unhealthy occupation ; (f)—Excess ; (g)—Hereditary influences ; (h)—Impure air ; (i)—Season ; (j)—Age. 2—*Exciting*, (a)—Decomposing discharges ; (b)—infiltrative inflammations ; (c)—Idiopathic conditions.

*Post-mortem appearances.**Pathology.**Diagnosis.* 1, from ague ; 2, from other traumatic fevers.*Prognosis.*

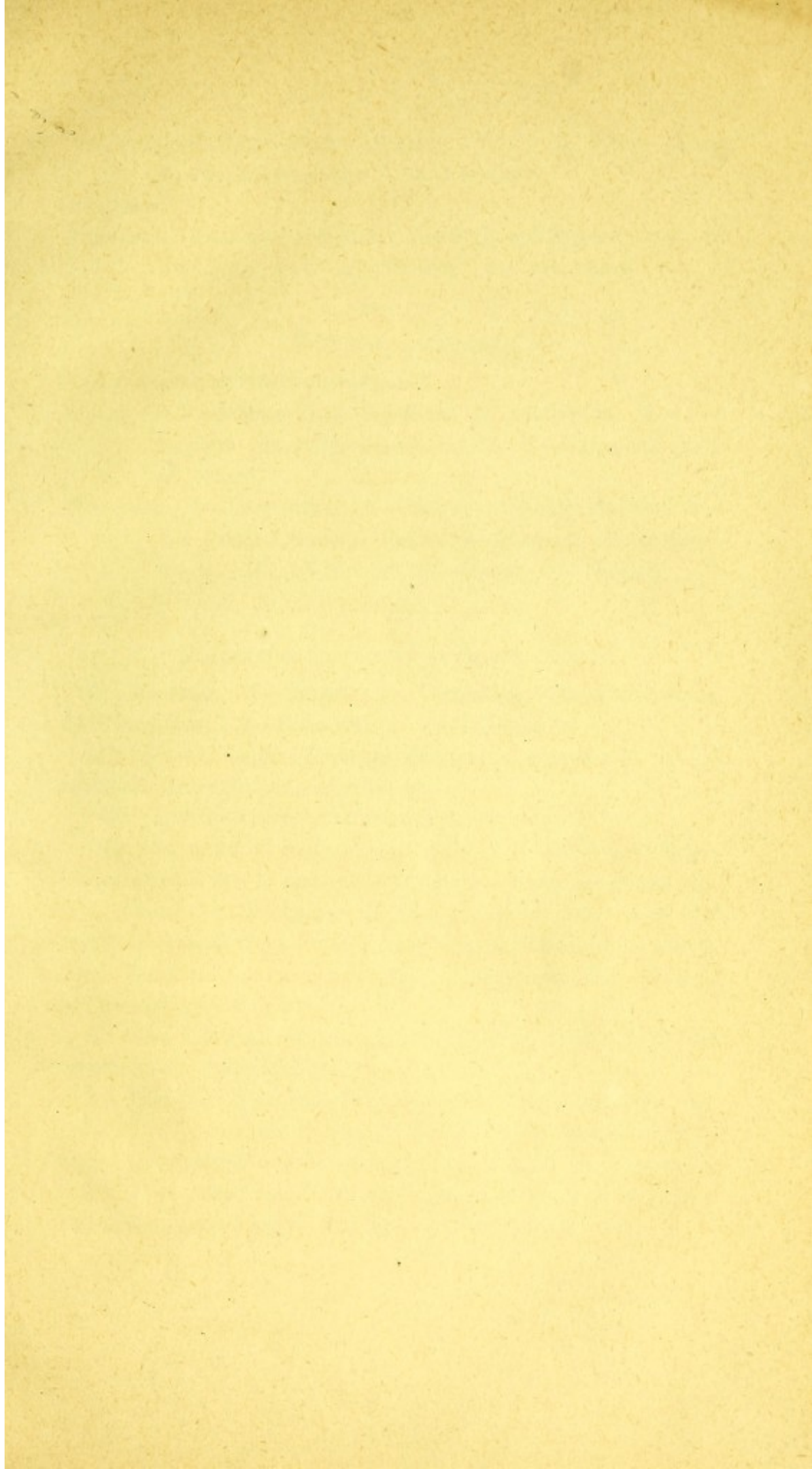
Treatment. 1—Preventive. 2—Promote free drainage and disinfect discharges. 3—Promote elimination. 4—Correct the morbid condition of the blood. 5—Relieve nervous depression. 6—Reduce pyrexia. 7—Support the system. 8—Remove local cause if possible—Amputation ?

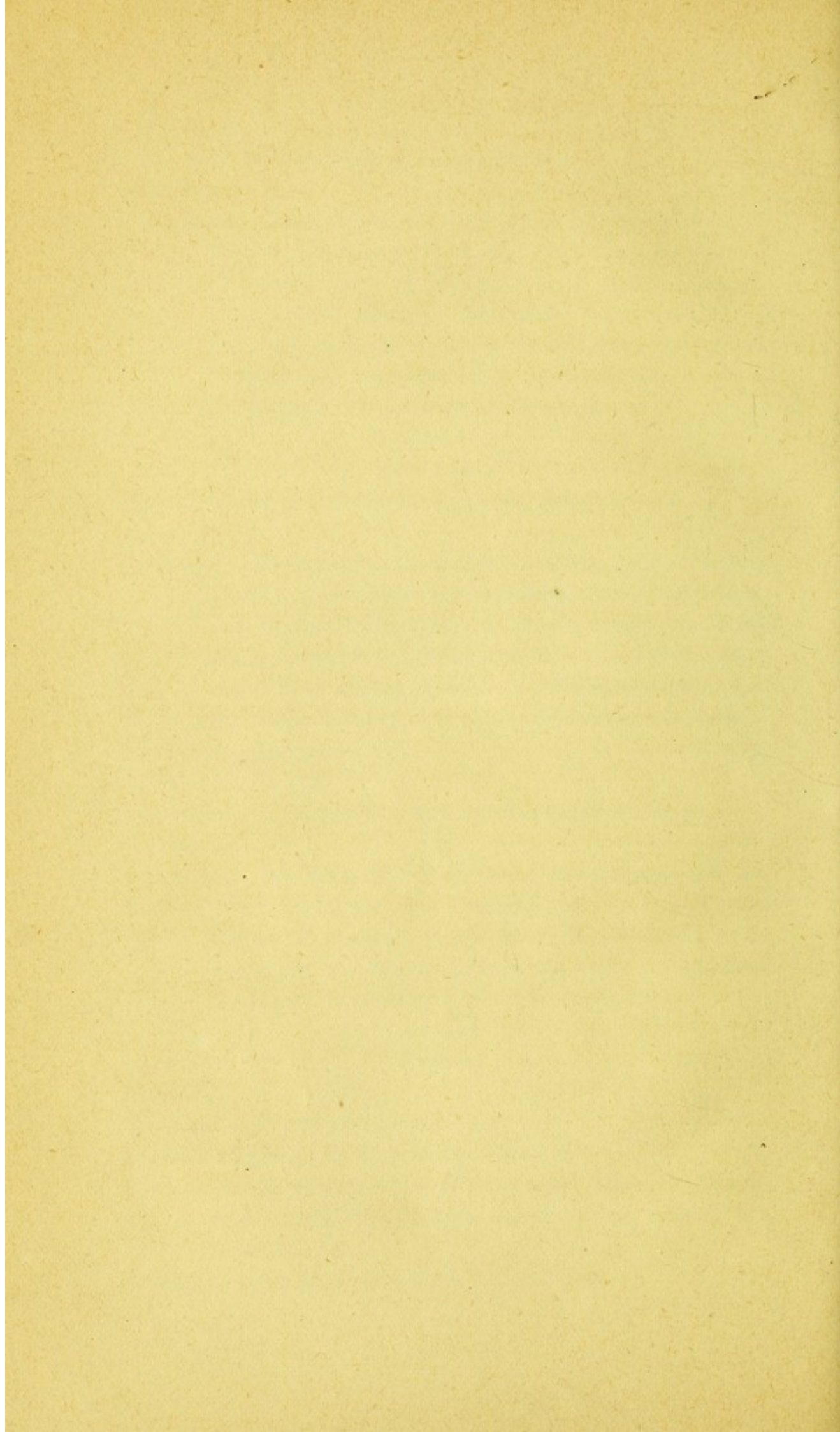
PYÆMIA.

*Definition.**Symptoms.*—General and special.*Causes.*—Hygienic, constitutional and local.

Post-mortem appearances.—Metastatic abscess. Changes observed in the lungs, liver, kidneys, joints, serous cavities and cellular tissue.

Pathology.—Doctrine of thrombosis and embolism.





Diagnosis.—1, from other surgical fevers ; 2, from ague ;
3, from rheumatism ; 4, from hectic.

Prognosis.

Treatment. 1—Local anodynes. 2—Early opening and thorough drainage. 3—? Amputation. 4—Stimulants.

HOSPITAL GANGRENE.

Symptoms.—Local and constitutional.

Causes. 1—Overcrowding. 2—Want of ventilation. 3.—Bad hygiene generally. 4—Contagion. 5—Unhealthy state of wound.

Treatment. 1—Preventive. 2—Destroy sloughing surface. 3—Iodoform, Bromine, Iodine. 4—Restrain hæmorrhage. 5—Nourish and support. 6—Opium. 7—Tonics.

PREVENTIVE TREATMENT OF SEPTIC DISEASE.

I. Hygienic. 1—Space. 2—Ventilation. 3—Conservancy. 4—Cleanliness. 5—Disinfection. 6—Isolation.

II. Constitutional.—Examine condition of organs and correct remediable constitutional disturbances.

III. Local.—Prevent putrefactive fermentation in wound.

Doctrines on which Listerism is founded. 1.—That putrefactive fermentation is due to particulate organisms (bacteria—germs.)

2. That the atmosphere is always loaded with these and every object with which the air comes in contact covered with them.

3. That unless inoculated with germs, putrescible fluids do not undergo putrefaction.

4. That these germs are capable of being rendered inert by certain agents (germicides).

5. That impure air and other objects can thus be rendered pure.

6. That by the use of certain appliances the process of putrefactive fermentation can be excluded from wounds and abscesses.

7. That, when this is accomplished, repair takes place physiologically, and pathological and septic processes are averted.

CACHEXIÆ.

- | | |
|-------------------------------|-----------------|
| 1. Scrofula. | 9. Leprosy. |
| 2. Rickets. | 10. Scurvy. |
| 3. Malakosteon. | 11. Diabetes. |
| 4. Lupus. | 12. Rheumatism. |
| 5. Rodent ulcer. | 13. Gout. |
| 6. Cancrum oris. | 14. Malaria. |
| 7. Cancer. | 15. Anæmia. |
| 8. Elephantiasis
(Arabum.) | |

SCROFULA OR STRUMA.

Definition.—Scrofulosis and tuberculosis.

Symptoms. 1—Diathetic. (*a*)—fair variety ; (*b*)—dark. 2—Functional derangements. 3—Pathological changes of (*a*)—Skin ; (*b*)—Mucous membranes ; (*c*)—Bones and joints ; (*d*)—Glands ; (*e*)—Cellular tissue.

Causes. 1—Hereditary. 2—Predisposing. (*a*)—Insufficient and improper food ; (*b*)—Intemperance and excess ; (*c*)—Impure air ; (*d*)—Climate ; (*e*)—Mental depression ; (*f*)—Unhealthy occupation ; (*g*)—Sex. 3—Exciting, (*a*)—Age and development ; (*b*)—Infantile diseases ; (*c*)—Any cause of debility.

Treatment. 1—Hygienic. 2—Constitutional, (*a*)—Improve digestion ; (*b*)—Codliver oil ; (*c*)—Iodine ; (*d*)—Chloride of calcium ; (*e*)—Tonics, Iron, &c. 3.—Local Measures, (*a*)—Iodine ; (*b*)—Scrofulous eye diseases ; (*c*)—Affections of bones and joints ; (*d*)—Glandular enlargements, *i.*—Endeavour to remove irritation and promote absorption ; *ii.*—When they inflame apply fomentations, &c. ; *iii.*—When opening inevitable do so antiseptically ; *iv.*—Lay open sinuses.

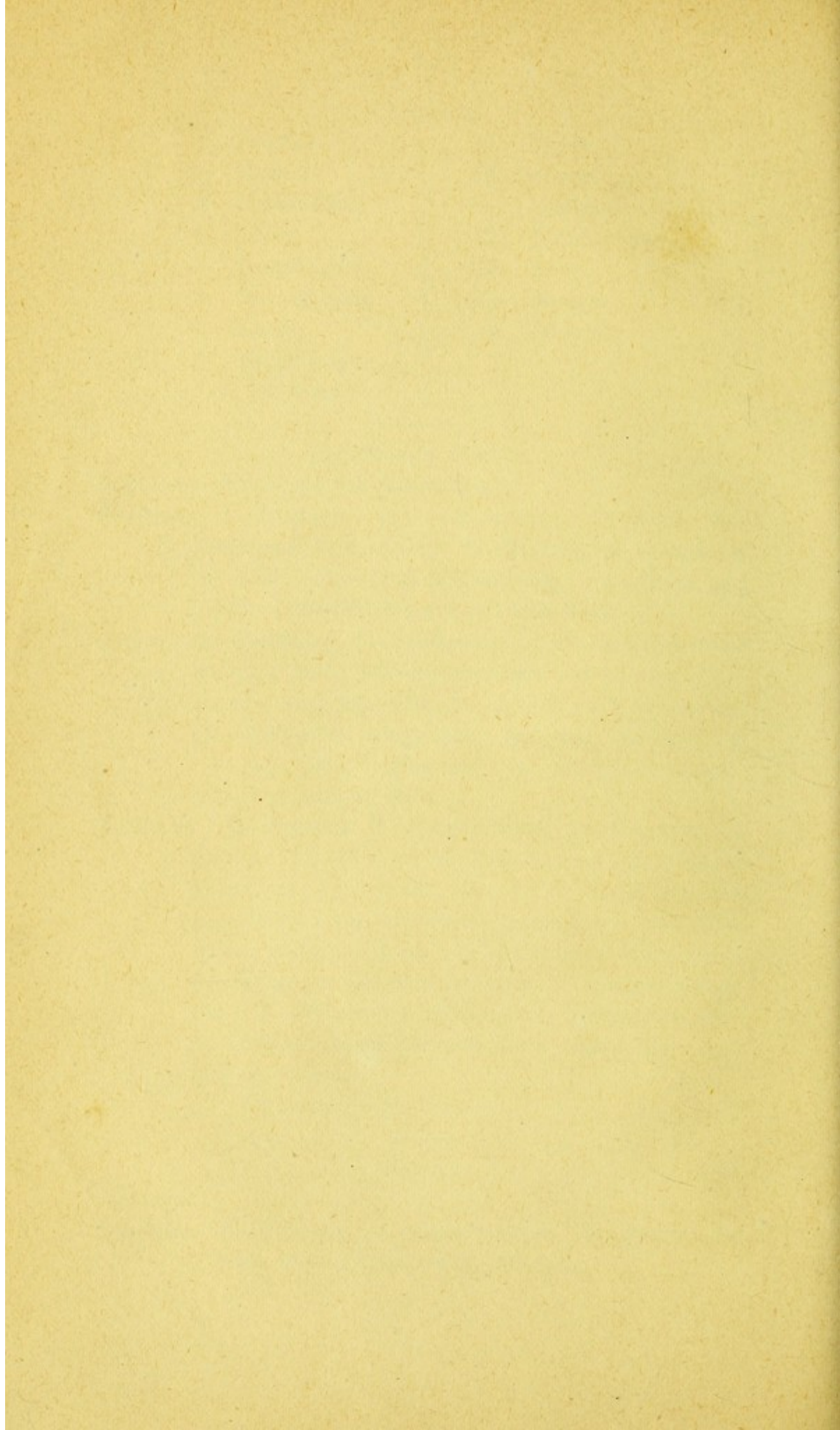
Operations in Scrofula.

RICKETS.

Definition.

Symptoms. 1—Diathetic. 2—Constitutional. 3—Special—cranium, thorax, spine, pelvis, extremities.

Bacillus



Causes. 1.—Diathetic, hygienic and constitutional. 2—Special.
(a)—age; (b)—Improper feeding; (c)—Dentition and
infantile diseases.

Pathology.

Treatment. 1—Improve general health. 2—Prevent deformity. 3—
Remedy deformity, (a)—Mechanical appliances; (b)—
Forcible straightening under chloroform; (c)—Osteotomy.

MALAKOSTEON.

Definition.

Symptoms.

Causes.

Pathology.

Diagnosis and prognosis.

Treatment.

LUPUS.

Definition and varieties.

Symptoms. 1—Lupus non-exedens. 2—Lupus exedens.

Causes. (a)—Scrofula; (b)—Syphilis.

Pathology.

Treatment. 1—Correct constitutional taint. 2—In milder cases
apply soothing medicines. 3—In severer cases destroy
the sore, (a)—By excision; (b)—By scraping; (c)—By
cautery; (d)—By caustics; (e)—By combination of
knife and cautery.

RODENT ULCER.

Distinguished from lupus as to 1, symptoms; 2, cause; 3, pathology.

Diagnosis.

Treatment.

Removal by knife, cautery, caustic or by a combination of
knife and cautery or caustic.

CANCERUM ORIS.

Definition.

Symptoms of mild and severe form—local and constitutional.

Causes. 1—Age. 2—Bad hygiene. 3—Dentition and infantile
diseases. 4—Malaria.

Diagnosis and prognosis.

Treatment. 1—Constitutional. 2—Local measures—Nitric acid, Iodoform. 3—Plastic operations.

CANCER.

Is the disease constitutional or local ?

Is the cancerous cachexy primary or secondary ?

Is there any constitutional remedy competent to prevent or modify the disease ?

ELEPHANTIASIS ARABUM.

Definition and synonyms.

Symptoms. 1—Constitutional—Elephantoid fever. 2—Local, (a) of ordinary elephantiasis ; (b) of lymph scrotum. 3—Parts of the body affected. 4—Anatomy of hypertrophied parts. 5—Microscopic anatomy.

Causes. 1—Geographical distribution. 2—Climatic conditions. 3—Malaria. 4—Heredity. 5—Race. 6—Age. 7—Sex. 8—Occupation and social status. 9—Syphilis. 10—Filaria.

Pathology.—Constitutional or local disease ? Nature of local changes ?

Diagnosis and prognosis.

Treatment. 1—Constitutional. 2—Change of air. 3—Treatment of the pyrexia. 4—Local, (a) Pressure ; (b) Position ; (c) Medicinal applications—iodine, blisters, &c. ; (d) Ligature of arteries ; (e) Excision ; (f) Amputation.

LEPROSY.—(Elephantiasis Græcorum).

Definition.

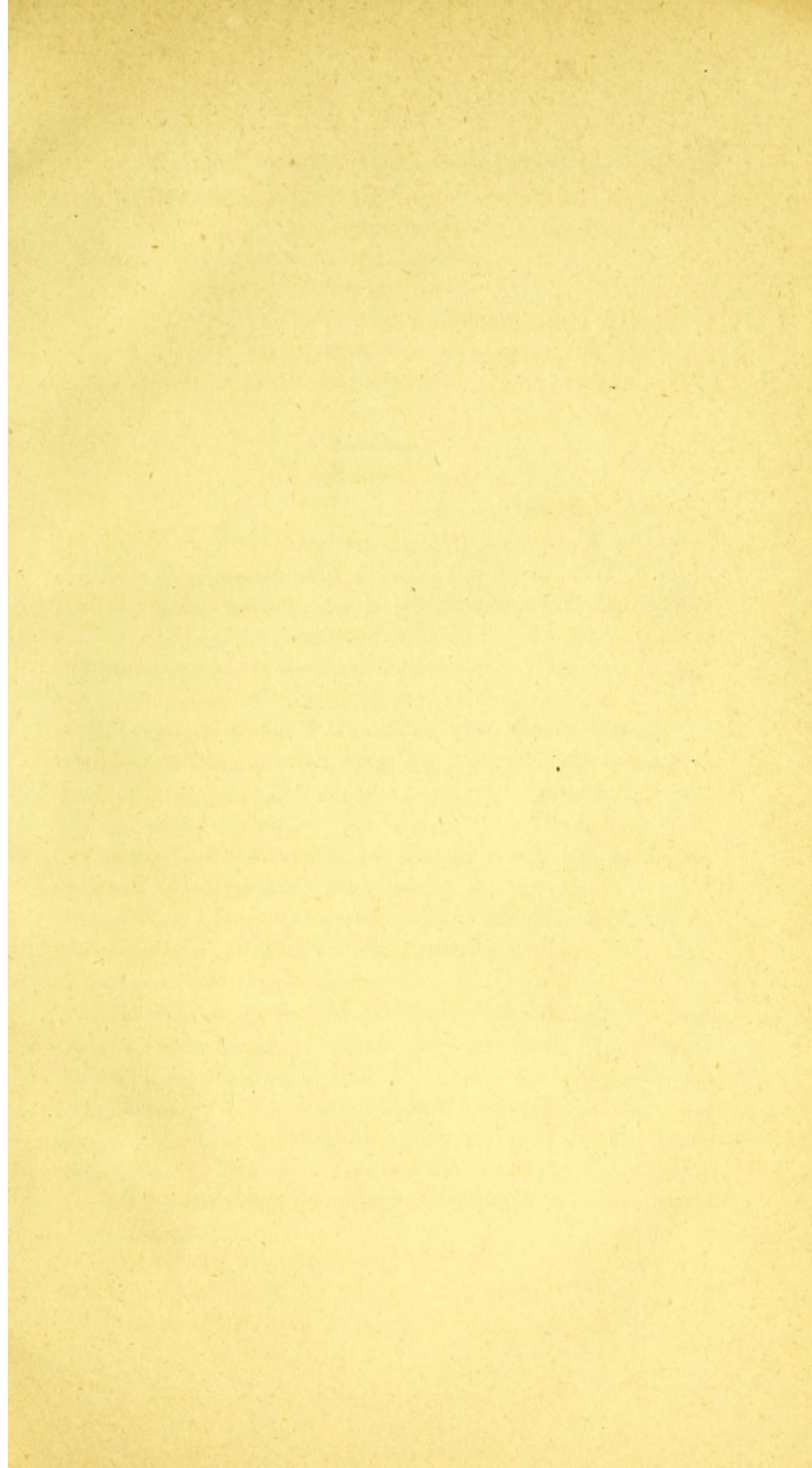
Symptoms of—

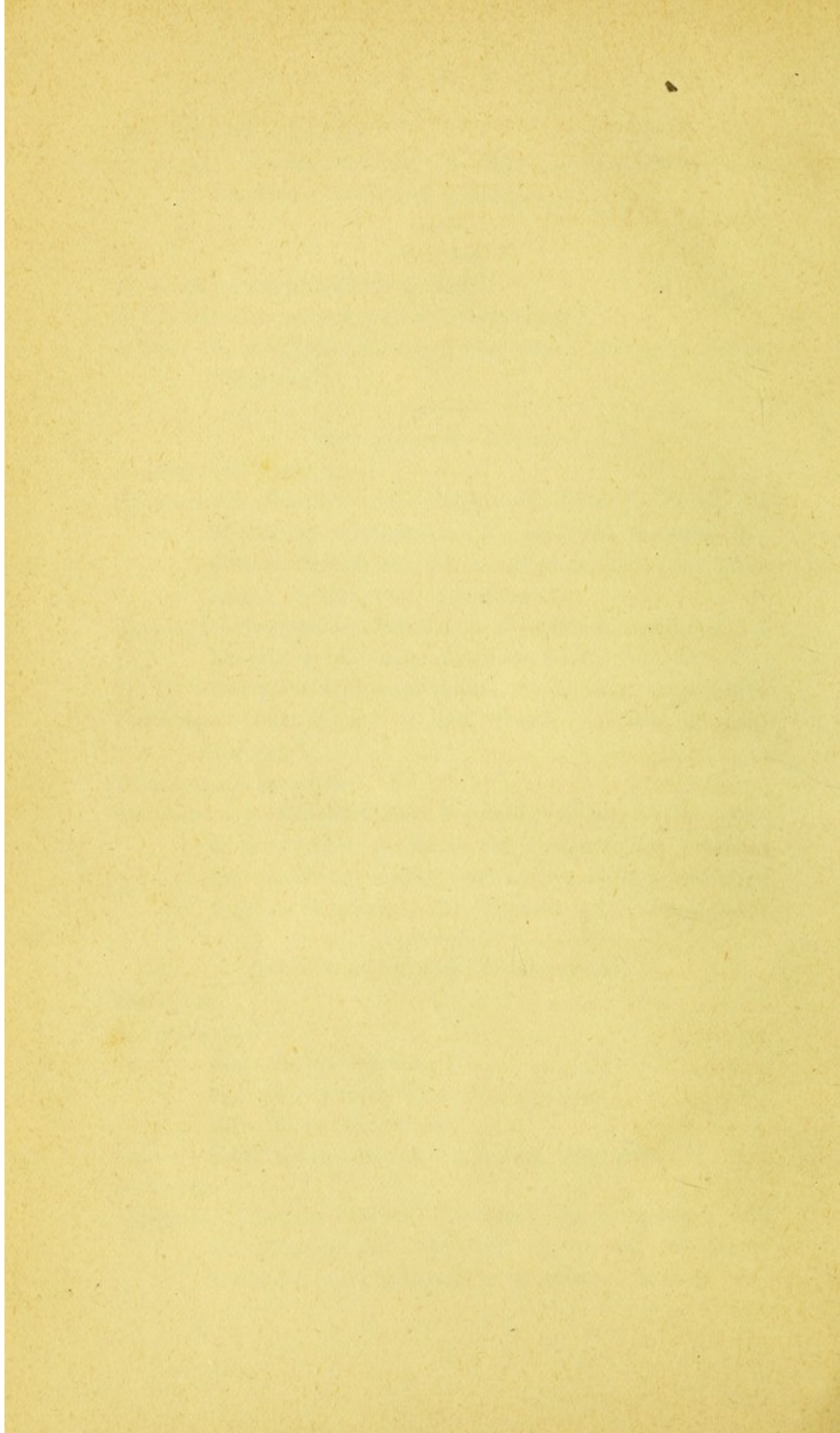
- (a.) Lepra Leprosa.
- (b.) Lepra anæsthetica.
- (c.) Lepra tuberculosa.

Causes.—Geographical distribution, heredity, contagion (?).

Pathology.

Treatment. 1—Constitutional. 2—Local, (a) Chaulmogra oil ; (b) Cashew nut oil ; (c) Gurjun oil. 3—Nerve-stretching and splitting in anæsthetic leprosy. 4—





Treatment of leprous ulcers. 5—Operations in cases of leprosy.

Surgical considerations connected with—

Scurvy.

The hæmorrhagic diathesis.

Diabetes.

Rheumatism.

Gout.

Malaria.

Anæmia.

SYPHILIS.

Three varieties of venereal disease :

1—Gonorrhœa. 2—Local venereal ulcer. 3—Syphilis.

Differential description of these.

Short sketch of the history of Syphilis.

LOCAL VENEREAL ULCER.

Symptoms. 1—Sites. 2—Varieties, (a) Simple Chancre ; (b) Phagedœnic Chancre ; (c) Sloughing Chancre ; (d) Serpigenous sore. 3—Sequelæ and complications, (a) bubo and sinus ; (b) Contracted cicatrices ; (c) Warts.

Causes. 1—Constitutional conditions. 2—Contagion. 3—Inoculation. 4—Lymphatic absorption.

Pathology. 1—Suppuration. 2—Molecular disintegration. 3—Inflammation. 4—Ulceration and sloughing.

Diagnosis and Prognosis.

Treatment. 1—*Of sore.* (a)—Destroy affected surface ; (b)—Subdue inflammation ; (c)—Soothe irritation ; (d)—Relieve tension ; (e)—Modify morbid action. 2—*Of bubo.* (a)—Prevent suppuration ; (b)—Lay open freely when suppuration takes place ; (c)—Destroy gland if necessary ; (d) Lay open sinuses. (e)—Destroy margin of serpigenous sore. 3—*Constitutional.* (a)—Allay irritation ; (b)—Improve health ; (c)—Guard against syphilitic infection.

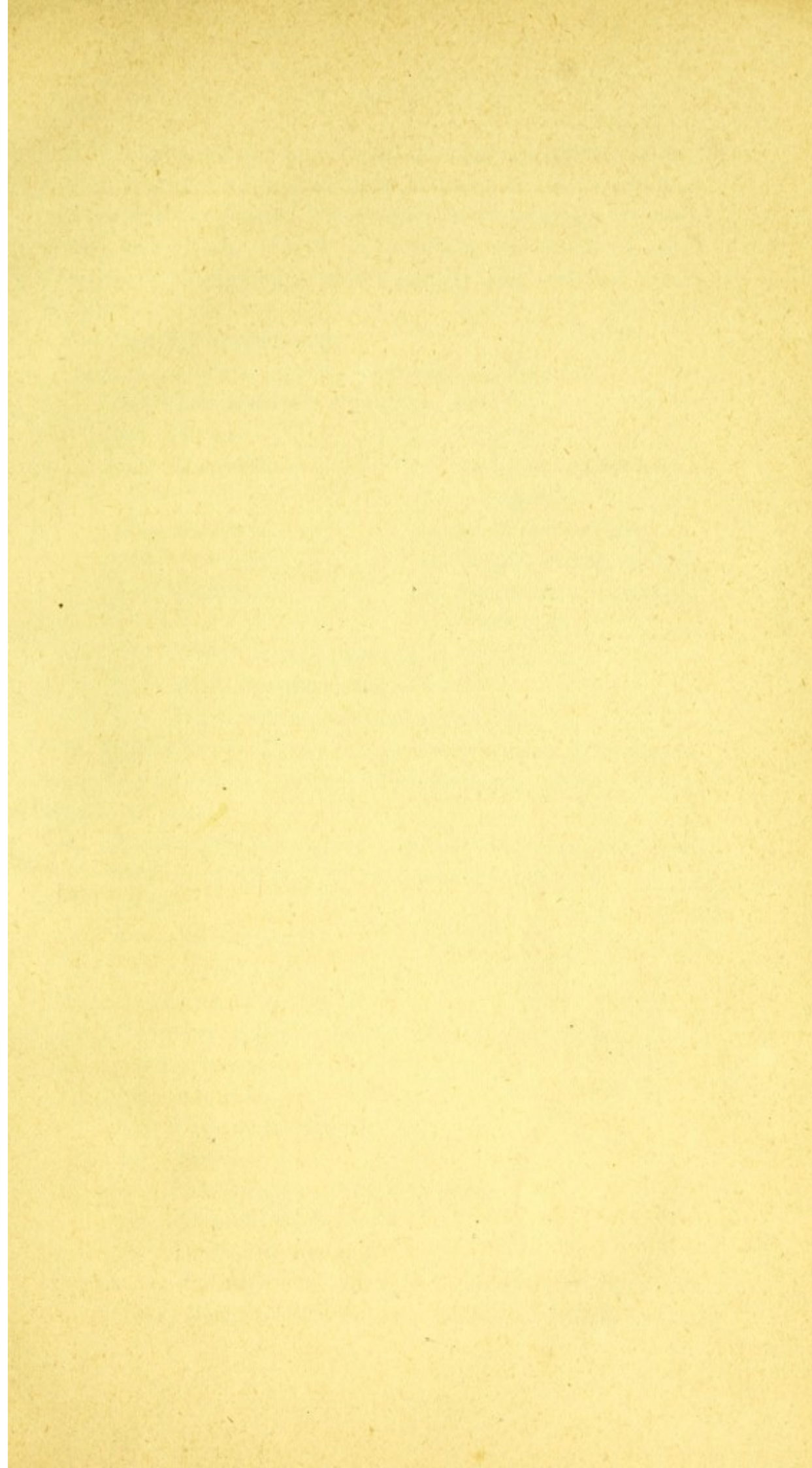
Differences between soft chancre and syphilis.

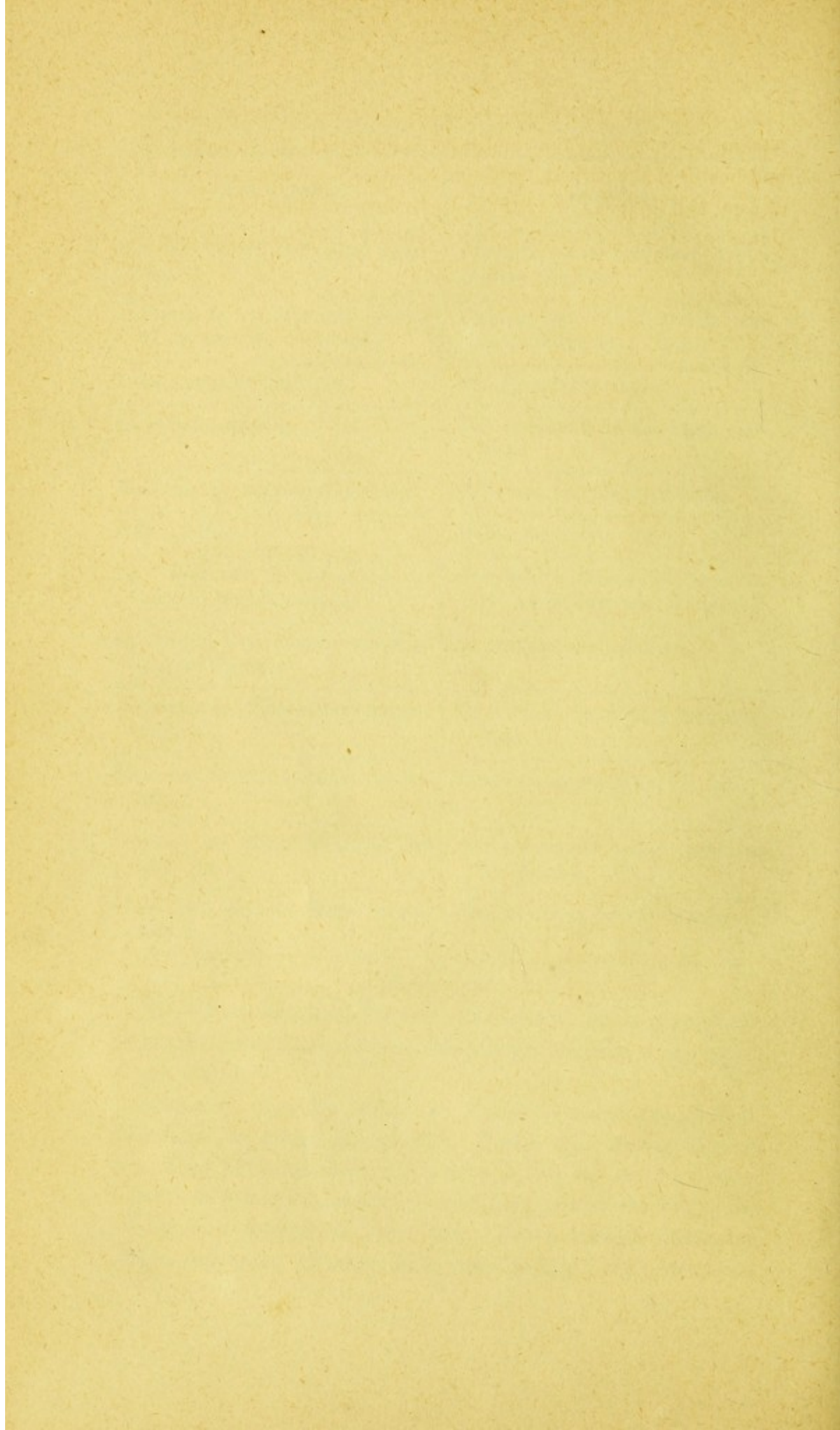
Soft chancre.	Syphilis.
Appears immediately after infection.	Does not appear for several weeks after infection.
Primary lesion soft and devoid of induration, suppurates.	Primary lesion hard, and indurated, seldom suppurates.
Sore generally multiple.	Sore generally single.
Is auto-inoculable.	Not inoculable on the same subject.
Followed by suppurating bubo.	Followed by indurated bubo.
Bubo single.	Bubos multiple.
Not followed by secondary or tertiary manifestations	Generally succeeded by secondary and tertiary manifestations.
Constitution not contaminated—a local disease.	A constitutional disease.
Not capable of hereditary transmission.	Capable of hereditary transmission.
Does not require mercury for its cure.	Requires mercury for its cure.
Capable of being destroyed by caustics.	Not capable of being destroyed by caustics.
Does not protect from future attack.	Protects from future attacks.

SYPHILIS.

(1.)—A constitutional disease. (2.)—Local lesion a neoplasm. (3.)—Manifestations greatly modified by the constitution and health of the patient.

Symptoms. 1.—*The initial or primary manifestation*—Seat. Induration, its special characteristic. Period of incubation. Typical sore, either (1) an abrasion, (2) a tubercle, (3) an indurated ulcer—the true Hunterian chancre. Circumstances under which suppuration occurs. Lymphatic absorption. Bubos multiple indurated, seldom suppurate. Primary sores not auto-inoculable ; exceptions.





2. *Secondary symptoms*.—Period of occurrence. Tissues affected—skin, mucous membrane and eye. Influence of the constitution and health of the patient. “Syphilitic fever”—renewed irritation of sore and glands. Sketch of secondary manifestations—their duration. Correspondence between primary and secondary manifestations.

3.—*Syphilitic skin diseases*.

General characters—neoplastic process, coppery colour.

- | | | |
|------|---|-------------------------------------|
| (a.) | Exanthematous syphilide ... | Roseola. |
| (b.) | Papular | ... Lichen. |
| (c.) | Tubercular | ... Tubercle, condyloma, rhagades. |
| (d.) | Squamous | ... Lepra and psoriasis. |
| (e.) | Vesicular | ... Herpes, eczema, rupia, &c. |
| (f.) | Pustular | ... Psudraceous, impetigo, ecthyma. |
| (g.) | Ulcers, consequent on boils or eruptions. | |
| (h.) | Affections of hair and nails. | |
| (i.) | Warts, excrescences and vegetations. | |

4. *Syphilitic affections of mucous membranes*.—(a.) exanthematous ; (b.) tubercular ; (c.) ulcerative affections of the nose, tongue, larynx and rectum.

5. *Tertiary Syphilis*—period of occurrence, general description.

6. *Tertiary affections of skin and mucous membranes*.

7. *Nodes*.

8. *Periostitis and osteitis*.

9. *Caries and necrosis*.

10. *Gummy deposits*.

11. *Hereditary Syphilis*.—Conditions of manifestation, prominent features.

- | | |
|-----|-----------------------------------|
| (a) | Abortion. |
| (b) | Cachexy and atrophy. |
| (c) | Snuffles. |
| (d) | Skin eruptions, mucous tubercles. |
| (e) | Affections of the teeth. |
| (f) | Interstitial keratitis. |

Causes. 1—Constitutional and hygienic conditions. 2—Contagion,

(a) Sources of the poison ; (1) Discharge from syphilitic

sores. (2) Blood of syphilitic subjects. (3) Secretions of syphilitic subjects. (4) Secretion of inflamed mucous surfaces ; (b) Modes of transference (1) Sexual intercourse. (2) Accidental contact. (3) Vaccination. (4) Physiological absorption. 3—Hereditary transmission.

Pathology.—Nature of poison unknown. Phenomena depend on effusion of fibro-plastic material which undergoes a variety of changes.

Diagnosis.—Incubation and induration principal characteristic of primary lesion ; infiltration and coppery tint of secondary ; destructiveness of tertiary.

Prognosis —When may a man marry after having had syphilis?

Treatment. 1—Preventive. 2—Maintain a high standard of health. 3—Destroy the poison if practicable. 4—Treatment of the primary sore. 5—Constitutional treatment, Mercury, Iodide of potassium, tonics, opium, &c. 6—Local applications for secondary and tertiary lesions. 7—Treatment of infantile syphilis. 8—Syphilization.

B.—TISSUE CHANGES UNDERLYING SURGICAL DISORDERS (Surgical Pathology.)

I.—*Nutrition*—normal and abnormal.

1—Hypertrophy. 2—Atrophy 3—Absorption 4—Degeneration.

II.—*Tumours.* **A**

III.—*The process of repair.*

IV.—*Congestion and determination.*

V.—*Effusion*—œdema.

VI.—*Inflammation*—acute, chronic and special.

VII.—*Suppuration and abscess.*

VIII.—*Ulceration.*

IX.—*Mortification.*

X.—*Necrosis.*

NUTRITION—NORMAL AND ABNORMAL.

1.—*Modes of Nutrition.* (a)—Development ; (b)—Growth ; (c)—Assimilation or maintenance.

Tissues derived from the epiblast, mesoblast and hypoblast.

Introductory or constitutional Notes Em-
bracing whole of preceding 17/6/81

^ III Conventions -

General & local atrophy -
Simple muscular & skeletal

- (1)
- (2) Thymus, uterus
- (3) ~~Muscle from disease of joint~~ Muscles from disease of joint
- (4) Atrophy, nutritive artery of bone
- (5)
- (6) Lymphatics after division of thoracic lymphatics
Muscles after division of nerve. Uterus,
7. Atrophy in starvation, kidney, hydrocele on amputation
8. Fat deg.

Degeneration, decay and death an inevitable law of all organic forms and products.

2. *Materials of nutrition*.—Plasma, blastema, proto-or bioplasm ;—characteristics and properties.

3. *Conditions of nutrition*. (1)—A natural state of the part or tissue. (2)—A proper quality of plasma or blood. (3)—A regular and sufficient supply of blood. (4)—Normal innervation.

4. *Excessive nutrition*—hypertrophy or hyperplasia ; (1)—Developmental ; (2)—Physiological ; (3)—Pathological ; (4)—From increased blood supply ; (5)—From improper state of plasma ; (6)—From irritation ; (7)—Tumours ; (8)—Inflammatory hypertrophy ; (9)—Hypertrophy from general disease.

5. *Defective nutrition*—atrophy or hypoplasia ; simple and substitutive atrophy. (1)—Developmental ; (2)—Physiological ; (3)—Pathological ; (4)—From deficient blood supply ; (5)—From improper state of blood ; (6)—From deficient innervation ; (7)—From pressure ; (8)—Degenerative atrophy.

6. *Absorption*, physiological and pathological.

7. *Degenerations*. (1)—Fatty ; (2)—Caseous ; (3)—Calcareous ; (4)—Fibroid ; (5)—Osseous ; (6)—Amyloid ; (7)—Mucous and colloid ; (8)—Pigmentary.

CLASSIFICATION OF TUMOURS.

A. CONNECTIVE TISSUE SERIES.

<i>I.—Normal type of tissue.</i>			<i>II.—Embryonal type.</i>
1	Fibrous tumour	... Fibroma.	Sarcoma.
2	Fatty tumour	... Lipoma.	Myxoma.
3	Cartilaginous tumour	... Chondroma.	Chondro-Sarcoma.
4	Bony tumour	... Osteoma.	Osteo-Sarcoma.
5	Muscle tumour	... Myoma.	Myo-Sarcoma.
6	Lymph-gland tumour	... Lymphoma.	Lympho-Sarcoma.
7	Vascular tumour	... Angioma.	Fibro-Sarcoma.
8	Nerve tissue tumour	... Neuroma.	Myxo-Sarcoma, &c.

B. EPITHELIAL TISSUE SERIES.

1.—*Typical.*

- | | | |
|-----------------|-----|------------|
| 1. Warty tumour | ... | Papilloma. |
| 2. Gland tumour | ... | Adenoma. |

2.—*Atypical.*

- | |
|------------------------|
| 1. Cancer(a) Scirrhus. |
| (b) Encephaloid. |
| (c) Colloid. |
| (d) Cyndroma. |

C. CYSTIC TUMOURS.

1. From dilatation of ducts.
2. From development of cysts.
3. From breaking down or degeneration of other tumours.

TUMOURS.

General considerations. (a) definition—a purposeless hyperplasia ; (b) Meaning of terms homoplasia and hetero-plasia ; (c) Features common to all tumours—*i.* Composed of structural elements similar to those found in the healthy body. *ii.* Obey the general laws of nutrition. *iii.* Possess similar arrangements for nutrition as the tissues of the body. *iv.* Are subject to structural disease, and *v.* degeneration. *vi.* Arise from tissue elements already existing in the body. *vii.* Mode of primary origin and secondary dissemination should be distinguished. (d.) Classification—principles and details.

III 22/6/81 -

FIBROMA.—*Varieties*

- | | | | | | |
|----------------|---|----------------|-----------------|---|-------------------------------------|
| <i>i.</i> Soft | { | diffuse | <i>ii.</i> Firm | { | dermoid, |
| | | circumscribed. | | | periosteal, |
| | | | | | Fibroma of nerve, |
| | | | | | Painful subcutaneous tu-
bercle. |
| | | | | | Some uterine fibroids. |

Physical characters and structure of each variety.

Influence of age.—Grow mostly in middle life.

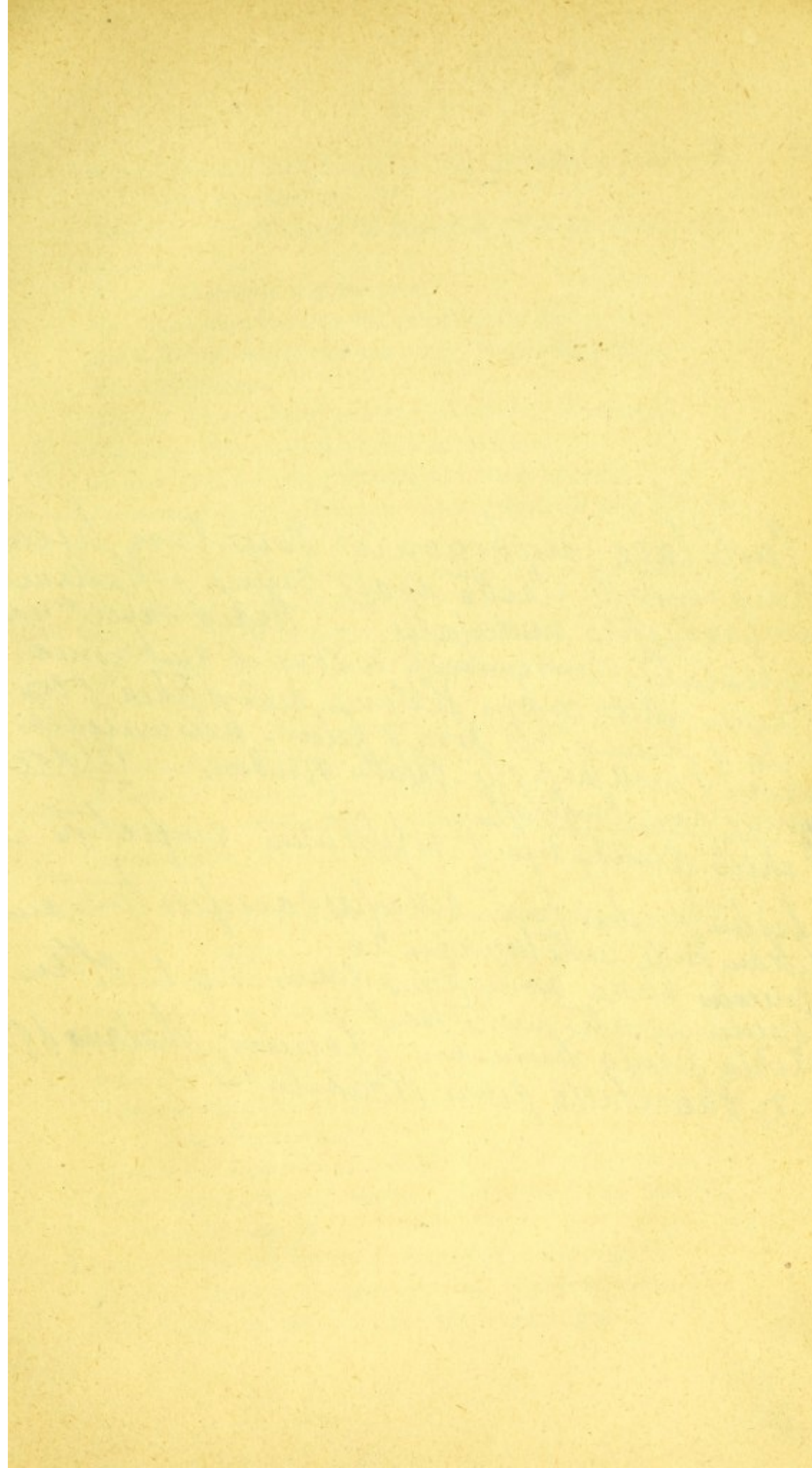
—————*sex.*—More common in women.

Natural history.—Mostly slow growing ; rarely infect or recur.

Diseases.—Inflammation, suppuration, sloughing.

Degenerations.—Cystic, calcification and ossification.

Inconveniences, injuries and risks caused by fibromata.—Deformity, pain, functional impairment.



Cartilage embryonic. Mature tissue
"Hard smooth elastic cold yellow or flattened
surface, often nodulated" - Rapid variety not
capsulated, surrounded by a zone of embryonic
tissue. Metacarpus, phalanx, head of tibia, cor-
dyl of femur, ribs, bones of pelvis - intermuscular
spaces of neck thigh etc. - Sheath of tendons - eldom
spring from cartilage.

Rapid destruction life & infiltration infection -
Distinctly pushed from calcified ossified tumour
fibrous fatty cartilaginous to
mucous like sometimes cases No 1. often
communicating with joint
Osteitis phalange humerus of femur, phalanx of toe
2/3 Face skull pelvis & scapula -

LIPOMA.—Distinguished from (1)—fatty accumulation, and (2)—fatty degeneration.

Varieties. (1)—Diffused or continuous ; (2)—Circumscribed or encapsuled.

Physical characters and structure.

Situation.—Subcutaneous fat, intermuscular spaces, &c.

Age.—Rarely congenital—commonly between 30 and 50.

Sex.—Indifferent.

Natural history.—Slow, painless, not infecting or recurring.

Diseases.—Inflammation, ulceration, sloughing.

Degenerations.—Rare ; partitions may calcify or ossify.

Inconveniences, &c.—Deformity and inconvenience from size and bulk.

CHONDROMA. *Varieties.*—Slow and rapid ; hyaline and fibrous.

Physical characters and structure.

Situation.—Bones, intermuscular spaces, glands. (or any testicle, mamma)

Age.—Occur chiefly in youth. (longitudinal fissure, callosity of hand)

Sex.—Indifferent.

Natural history.—Slow (encapsuled variety) and rapid (infiltrating), latter infectious locally and generally.

Diseases.—Ulceration, superficial and deep.

Degenerations.—Calcification, ossification, mucous softening. cystic.

Inconveniences, &c.—Interfere with functions of fingers and joints.

OSTEOMA. (1)—Spongy. (2)—Compact. (3)—Ivory. (4)—Tendonous.

Physical characters and structure.

Situation.—Bone, dura mater, tendon.

Age.—Young most prone.

Sex.—Men more liable than females.

Natural history.—Growth slow and painless. Do not infect nor recur after removal.

Diseases and degenerations.—None. (Fracture)

Inconveniences.—Impair movements of joints ; may press on brain, nerves, arteries, &c.

MYOMA.—Striped and unstriped ; former extremely rare.

Situation.—(Unstriped) uterus, prostate, œsophagus, stomach.

Age.—Uterine activity in females, advanced life in males.

Sex.—Females more liable than males.

Natural history.—Uterine myomata cease to grow after change of life and become more fibrous. All myomata non-malignant ; do not infect nor recur.

Diseases.—Inflammation, sloughing, self-enucleation.

Degenerations.—Fibroid, calcareous, osseous.

Inconveniences, &c.—Menorrhagia, uterine displacement, &c. Retention caused by prostatic myomata. *V/27/6/81*

LYMPHOMA. (1)—Lymphangioma. (2)—~~Lymphadenoma~~ or Hodgkin's disease.

Situation.—Neck, axilla, mediastinum, mesentery, &c.

Age.—Young adult life.

Sex.—Indifferent.

Natural history.—Multiple, localized or general ; grow slowly ; may cease to grow ; do not suppurate.

Inconveniences, &c.—Associated with cachexy and sometimes leucocythemia ; serious results produced by pressure.

ANGIOMA. (1)—plexiform (nævus). 2—Cavernous (erectile), 3—Villous.

Situation.—Skin, subcutaneous areolar tissue, liver, spleen, kidneys, &c.

Age.—Congenital or infantile.

Sex.—Indifferent.

Natural history.—Multiple ; grow slowly ; non-malignant ; may cease growing or undergo atrophy ; not liable to disease or degeneration.

Inconveniences, &c.—Bleeding ; absorption of bone.

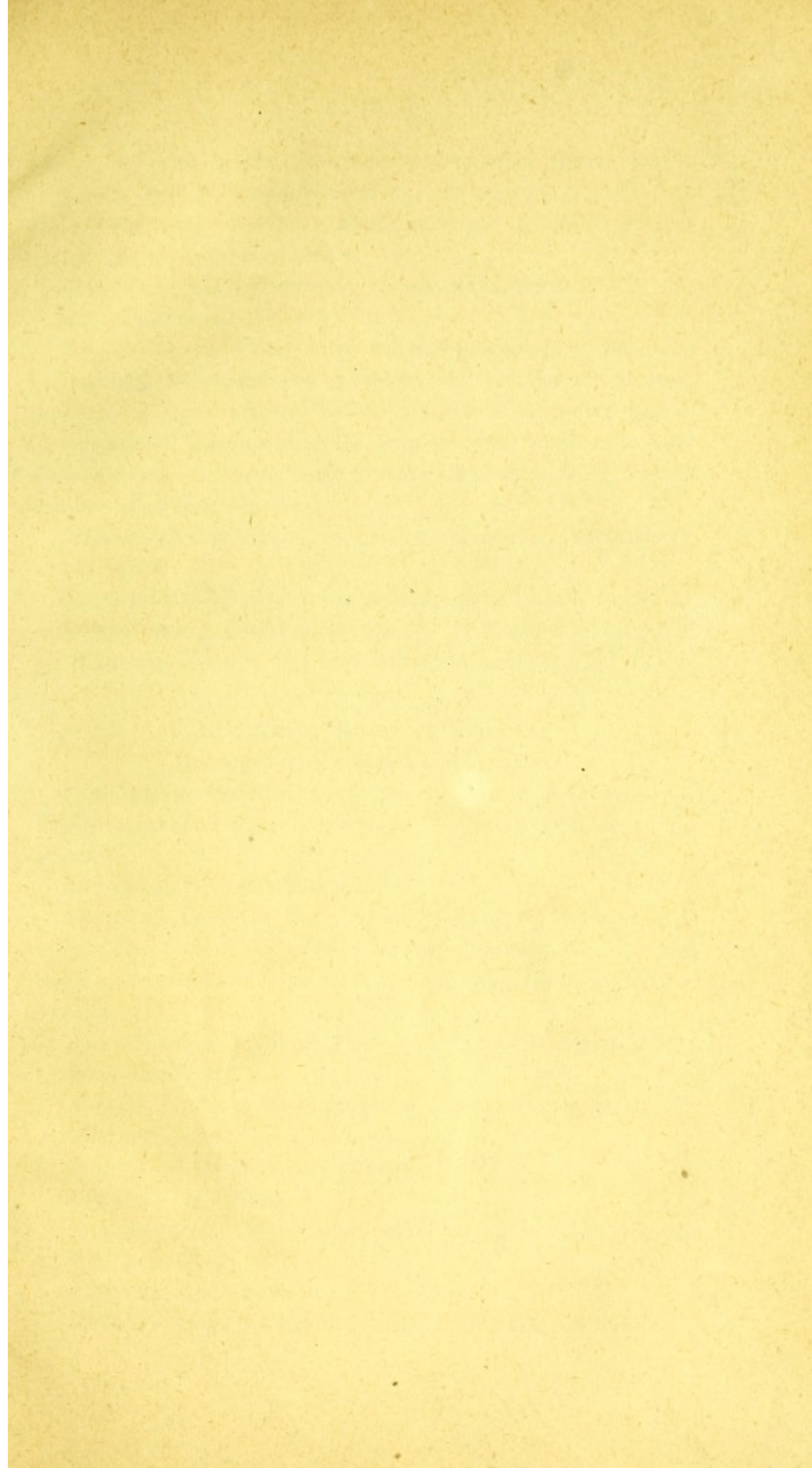
NEUROMA.—True tumour of nerve very rare ; generally connected with cicatrization. *V/29/6/81*

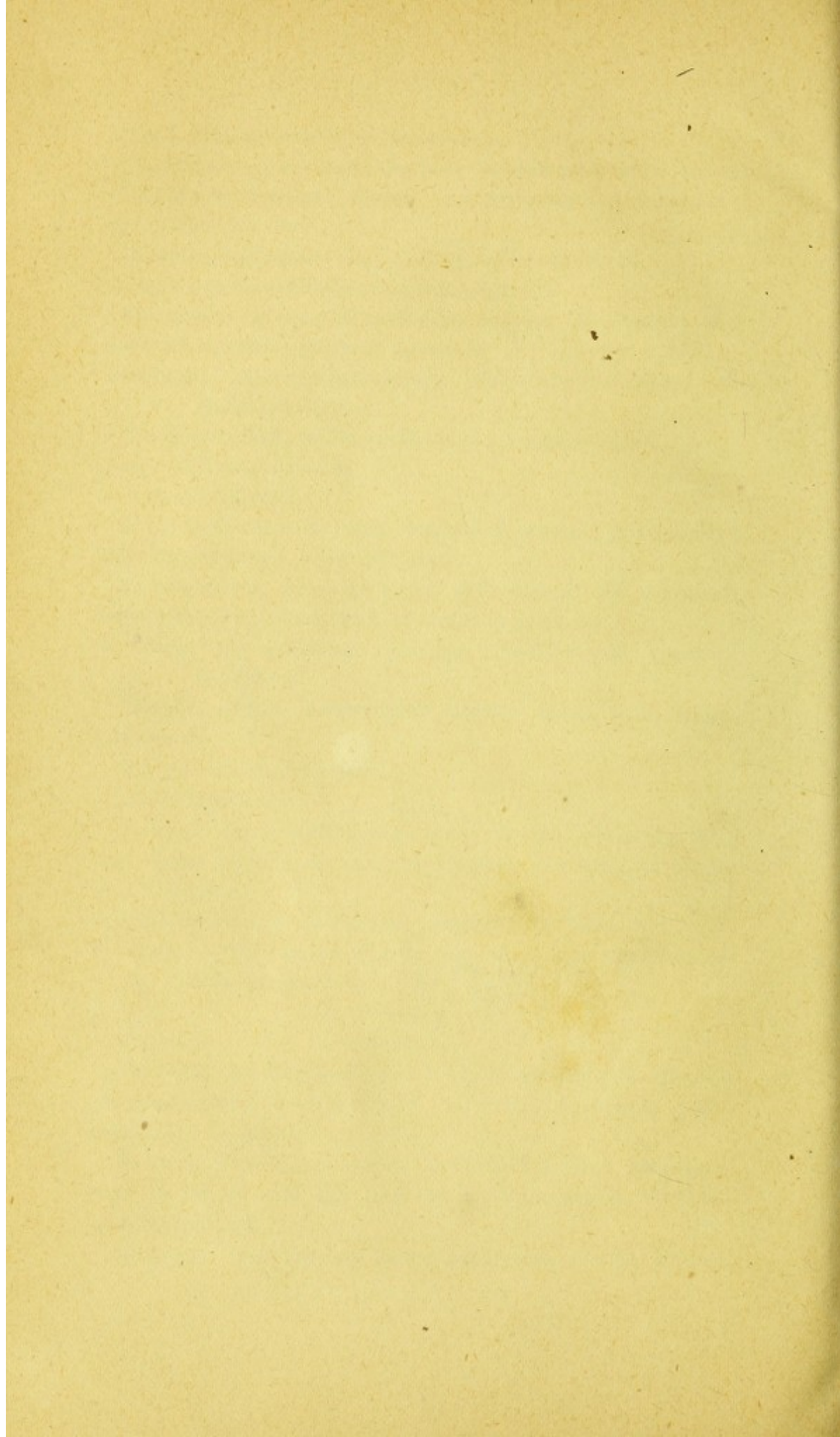
SARCOMA.

Varieties. 1—Round-celled ; 2—Spindle-celled ; 3—Myeloid or giant-celled ; 4—Net-celled ; myxoma ; 5—alveolar ; 6—melanotic ; 7—mixed.

Structure, &c.—Varies greatly in different species ; consists of cells of various size and form set in a homogeneous, fibrillated or fibrous stroma.

Situation. 1—Skin, bone, subcutaneous areolar tissue, muscles,





glands. 2—Fasciæ, skin, tendons, intermuscular spaces, sheaths of nerves, &c. 3—Bones, parotid (?) and mamma (?). 4—Any part of the body. 5—Cutis, bones, muscles. 6—Skin, choroid coat of eye and lymphatic glands.

Age.—Youth and middle age ; glioma in childhood.

Sex.—Indifferent.

Natural history.—Vary in growth and infectiveness. The more rudimentary the tissue and succulent and cellular the tumour, the more malignant and *vice versa*. Melanotic sarcomata specially malignant. Distributed by the agency of the vascular system. Spindle-celled sarcomata liable to recur after extirpation ; myeloid and net-celled most innocent.

Diseases.—Extravasation, ulceration, sloughing, hæmorrhage, bloody cysts.

Degenerations.—Fatty, cystic, mucous, cartilaginous, ossific.

Inconveniences, &c.—May destroy life by frequent recurrence or infecting vital organs ; may impair function seriously. *VII/7/81*

EPITHELIAL SERIES OF TUMOURS.

Developed from epiblast and hypoblast.

PAPILLOMA.—*Varieties*. 1—Corns. 2—Warts. 3—Horns. 4—Condylomata and mucous tubercles. 5—Some polypi, and villous growths.

Structure.—Hypertrophied papillæ.

Situation.—Corns on feet ; warts on skin of hands, genital organs, &c. ; horns on scalp, face, &c. ; condylomata on anus, vagina, perinæum, &c. ; polypi in rectum, &c. ; villous growths in bladder.

Age.—Warts and polypi in children, horns in advanced life.

Sex.—Indifferent.

Natural history.—Slow growth ; disappear spontaneously ; usually innocent.

Diseases.—Ulceration, hæmorrhage.

Degenerations.—None.

Inconveniences, &c.—Villous growths on bladder give rise to fatal hæmorrhage.

ADENOMA.—(1) cylindrical ; (2) racemose.

Structure similar to that of tubular and racemose glands.

Situation.—Cylindrical on mucous surfaces,—nose, rectum, uterus; racemose in racemose glands, mamma, parotid, &c.

Age.—Polypus in children, racemose in young adults.

Sex.—Women most liable to racemose adenomata.

Natural history.—Grow slowly; do not infect locally or generally.

Diseases.—Cystic developments—from absence of ducts.

Degenerations.—Fatty, mucous.

Inconveniences, &c.—Deformity, size.

CARCINOMATA.

General characters. 1—Developed from epiblast and hypoblast. 2—Consist of epithelial proliferations in meshes of fibrous stroma. 3—Infiltrate surrounding tissues. 4—Infect lymphatic glands and viscera. 5—Elements short lived and prone to degeneration. 6—Cachexia accompanies. 7—Apt to prove fatal. 8—Sometimes hereditary.

Varieties. 1—Epithelioma; 2—Scirrhus; 3—Encephaloid; 4—Cylindroma; 5—Colloid.

Structure, &c.—Cylinders and cavities full of epithelial cells contained in a vascular fibrous stroma infiltrated with small round cells. Relative amount of cells and stroma differs in several varieties. In colloid cells undergo mucous degeneration, bursting and giving rise to colloid cavities. ~~VIII~~ 4/7/81

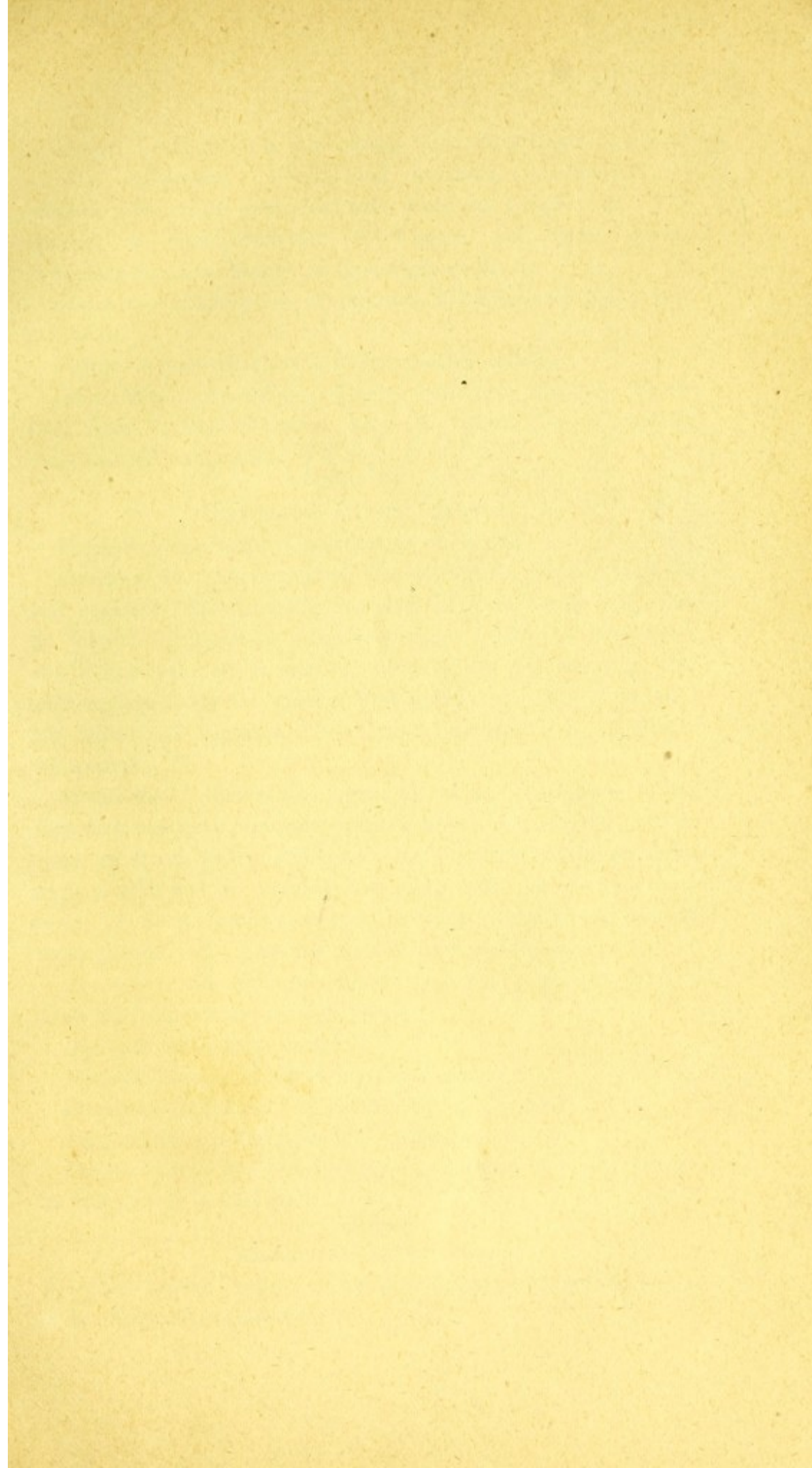
Situation.—Generally skin, mucous membrane, and excretory glands; secondarily, lymphatic glands, lungs, liver and other viscera. Special seats. *Epithelioma.*—Lips, tongue, mouth, eyelids, penis, vagina, anus, and integument. *Scirrhus.*—Mamma, œsophagus, pylorus, sigmoid flexure, rectum, penis, skin. *Encephaloid.*—Testes and mamma. *Cylindroma.*—Digestive tube. *Colloid.*—Stomach, omentum, peritoneum and rectum.

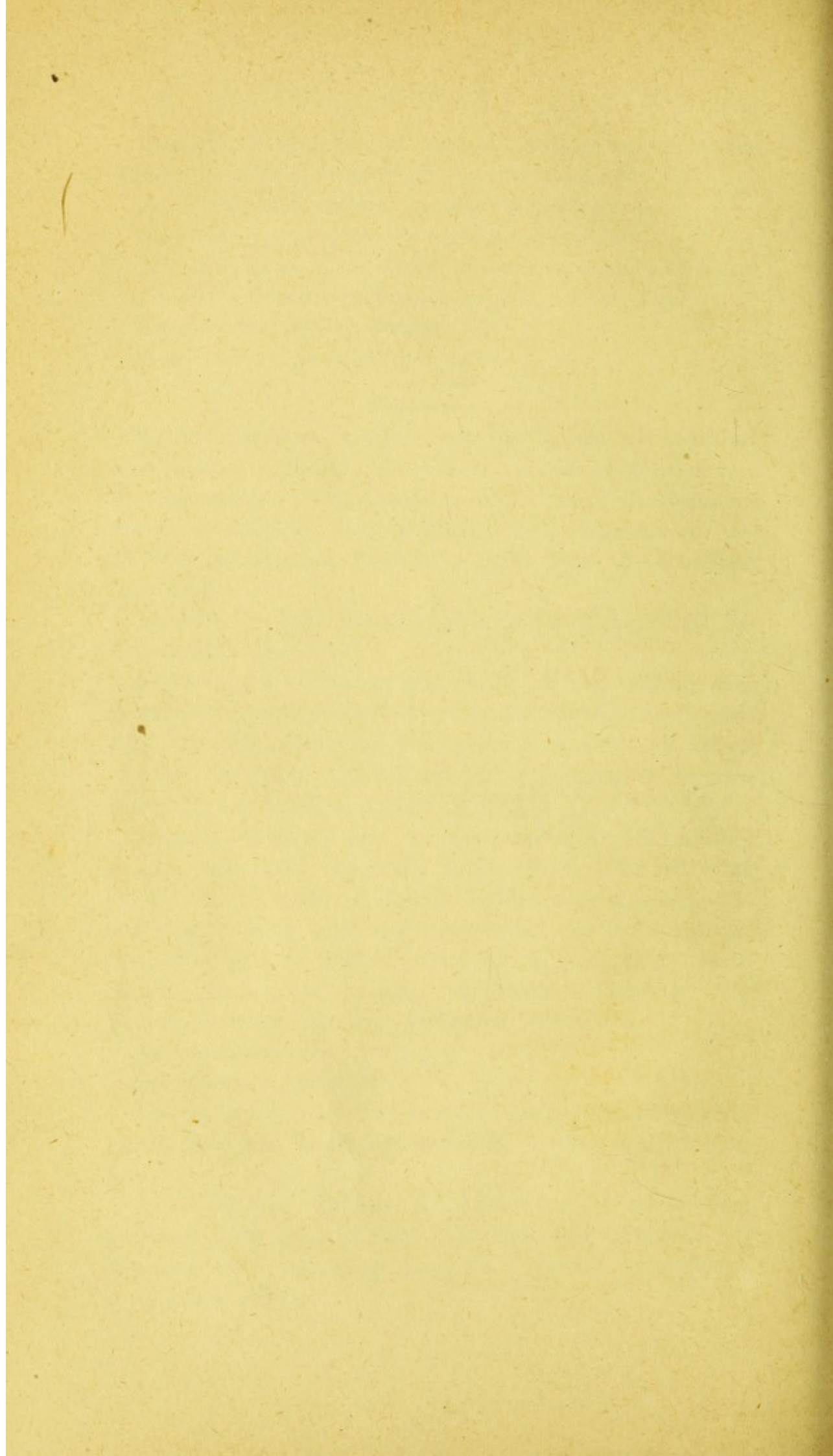
Age.—Advanced life.

Sex.—Females more liable.

Natural history. 1—Very vascular, 2—Infiltrate surrounding tissues. 3—Infect locally and generally. 4—Cell elements short lived.

Origin. Theories. (a) (Thiersch and Waldeyer) from epithelium; (b) (Köster) from endothelium of lymphatics; (c) (Classen) from wandering leucocytes. Question of constitutional or local origin.





Causes. 1—Heredity in $\frac{1}{3}$ of cases. 2—Intermittent functional activity. 3—Injury. 4—Habitual irritation. 5—Mental depression. *Secondary formations* take place in 1—Cicatrix. 2—Glands. 3—Neighbourhood. 4—Viscera and distant parts. Secondary deposits resemble in type original disease.

Diseases.—Inflammation, suppuration, ulceration, sloughing, hæmorrhage.

Degenerations.—Cicatricial, fatty, mucous, colloid.

Inconveniences, &c.—Pain, offensive discharges, cachexy. Prove fatal from—1, local ulceration, &c.; 2, visceral deposit; and 3, constitutional exhaustion.

IX/6/7/81-
CYSTOMATA.—CYSTIC TUMOURS.

Varieties.—See below (Classification of cysts.)

Structure, &c. 1—Consist of fibrous capsule, special cyst wall, and contents. 2—Generally rounded in form, rarely oval, flat or lobulated. 3—Most commonly single; may be compound. 4—Distinctness of fluctuation depends on (a) situation and surroundings; (b) thickness of cyst wall; (c) tension of sac; (d) nature of contents. 5—Always circumscribed, generally encapsuled.

Situation.—Atheromatous cysts on skin, specially on scalp, face, neck and head; mucous cysts in mouth and vagina; bursal cysts on knee, nates and great toe; dermoid cysts on outer angle of orbit and in ovaries, mesentery and omentum; serous cysts in neck; proliferous cysts in ovary; sanguineous cysts in neck, parotid, &c.; parasitic cysts in liver and lungs, &c.

Age.—Dermoid cysts sometimes congenital; ovarian cysts in adult life; atheromatous in advanced.

Sex.—Females more liable.

Natural history.—Grow slowly; non-malignant.

Diseases.—Inflammation, suppuration, sloughing.

Degenerations.—Fatty, caseous, calcareous, ossific.

Inconveniences, &c.—Disfigurement, mischief due to pressure on and growth in vital parts.

CLASSIFICATION OF CYSTS.

I.—Cysts arising from the closure and dilatation of natural ducts—

1. Sebaceous or atheromatous cysts.

2. Salivary cysts—ranula.
3. Mammary cysts.
4. Mucous cysts.
5. Meibomian cysts.

II.—Cysts arising from dilatation of natural sacs—

1. Hydrocele and hæmatocele.
2. Bursal cysts—bunion.
3. Ganglia and thecal cysts.
4. Ovarian cysts from dilatations of Graafian vesicle.

III.—Neoplastic cysts—

1. Dermoid cysts.
2. Serous or simple cysts.
3. Compound proliferous or multilocular cysts.
4. Sanguineous cysts or hæmatoma.
5. Encysted hydrocele.
6. Ovarian cysts from new growth.

IV.—Cysts caused by degeneration or breaking down by softening or hæmorrhage of tumours—

1. Serous ; 2, sanguineous ; 3, colloid and mucous ; 4, adenoid.

V.—Parasitic cysts—Hydatids—

1. Cysticercus cellulosæ—(Tænia solium)
2. Echinococcus hominis. (Tænia echinococcus.)

X/8/7/81

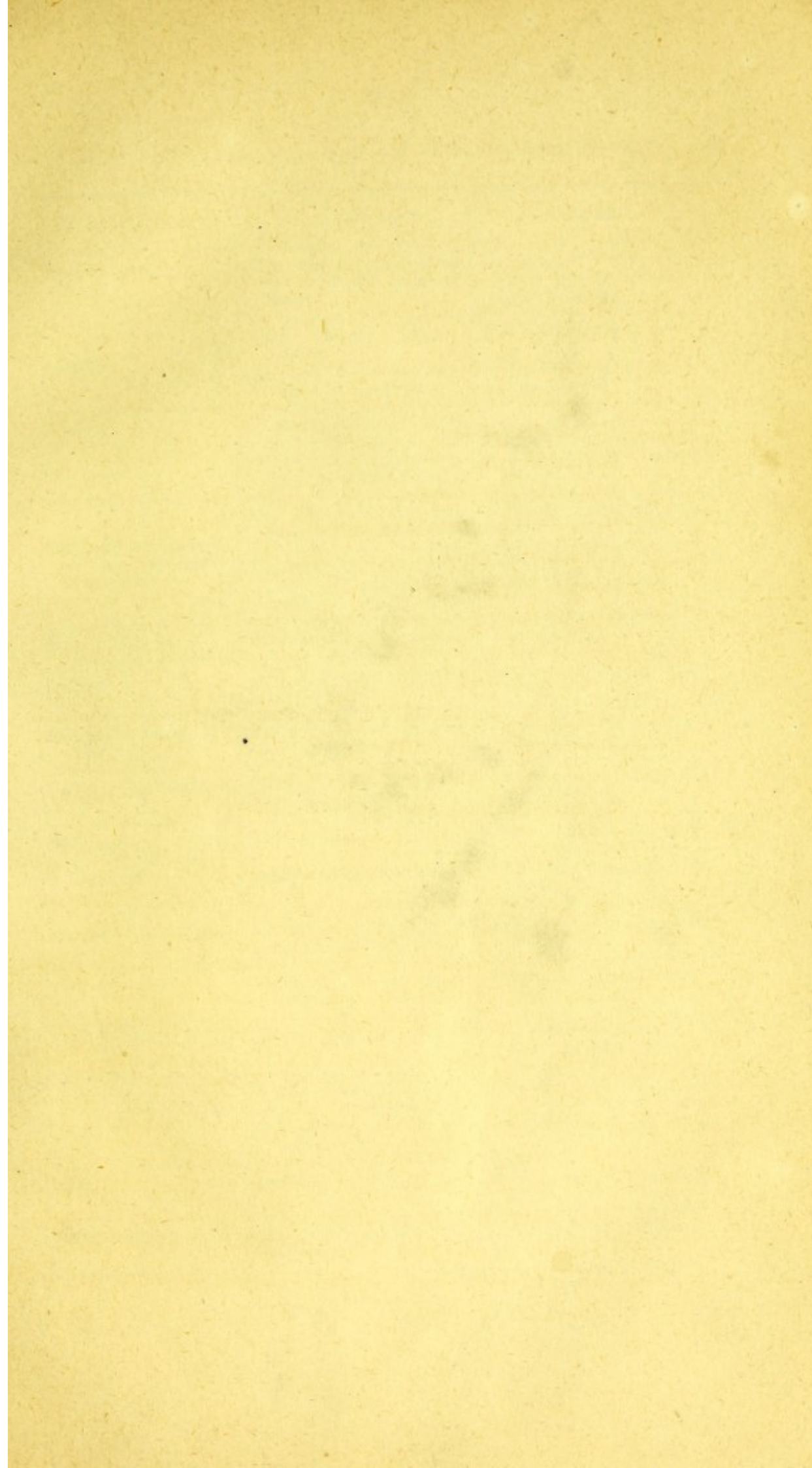
TUMOURS GENERALLY CONSIDERED.

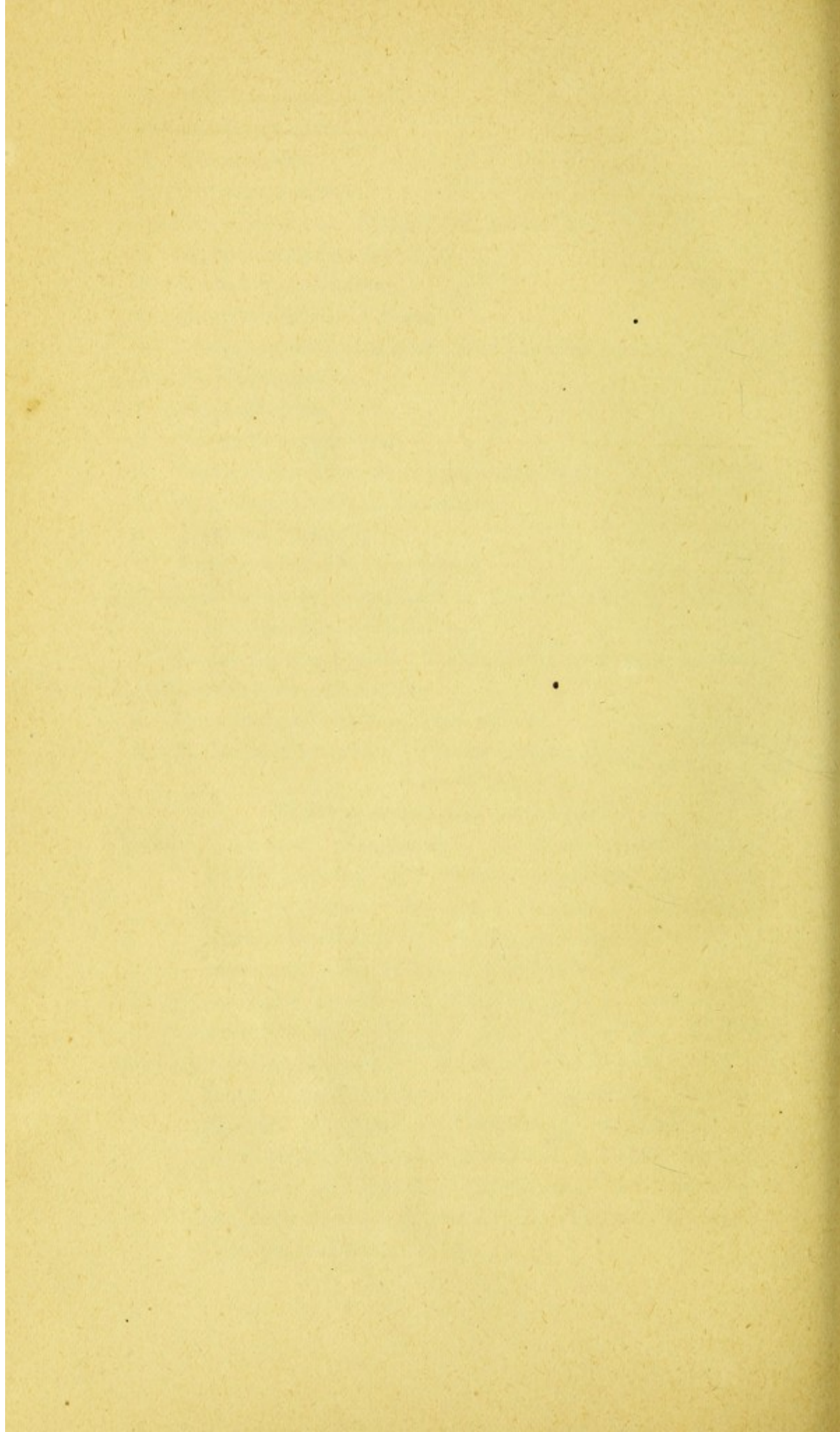
Causes of tumours. 1—Heredity. 2—Constitutional causes. 3—Geographical and climatic conditions. 4—Errors of development. 5—Age. 6—Sex. 7—Intermittent functional activity. 8—Natural disuse. 9—Cicatrices. 10—Injury, pressure, irritation, &c.

Pathology.—Clinical aspects and classification of tumours—(Vide separate table.)

XI/11/7/81 (Exam)

Diagnosis.—Principal points : 1—Age. 2—Situation. 3—Shape. 4—Prominence. 5—Vascularity. 6—Implication of skin. 7—Consistence. 8—Fluctuation. 9—Mobility. 10—Circumscription and encapsulation. 11—Rate of growth. 12—Pain. 13—Cachexy. 14—Aspiration and puncture. 15—Chloroform. 16—Pulsation and bruit,





Differences between Malignant and Non-malignant Tumours.

Points of difference.	Non-Malignant.	Malignant.
Type of tissue.	Present a mature or highly developed type of tissue.	Composed of embryonic or lowly developed tissue—mostly cellular.
Isolation.	Mass strictly circumscribed.	Not circumscribed.
	Enclosed in a capsule.	Not encapsuled.
Number.	Generally single; if multiple each separate and independent, and developed in similar tissue.	Generally multiple either primarily or secondarily; developed in diverse tissues.
Effect on nutrition of neighbouring structures.	Do not infiltrate surrounding tissues.	Infiltrate surrounding tissues.
	Displace but don't supplant neighbouring parts.	Supplant and convert neighbouring parts.
Rate of growth.	Generally of slow growth.	Grow rapidly.
Vitality.	Life of tumour elements long.	Elements of tumour short-lived.
Liability to decay.	Degenerate, and die after a long period.	Prone to early degeneration and death.
Liability to ulceration.	Seldom undergo ulceration and sloughing.	Very prone to ulceration and sloughing.
Hæmorrhage.	Seldom bleed.	Bleed often and profusely.
Recurrence.	Seldom return after removal.	Frequently recur after removal.
Lymphatic infection.	Do not infect neighbouring lymphatic glands.	Infect neighbouring lymphatic glands.
Visceral deposit.	Secondary visceral deposits rare.	Visceral infection common.
Local or constitutional.	Strictly local diseases.	Constitution implicated primarily or secondarily.
Cachexy.	No constitutional cachexy.	Constitutional cachexy.
Heredity.	Seldom or never hereditary.	Hereditary in a large proportion of cases.
Pain.	Growth generally painless.	Growth often accompanied with pain.
Effect on life of subject	Life seldom imperilled or shortened.	Life invariably shortened.

CLINICAL CLASSIFICATION OF TUMOURS.

I.—Non-malignant.

- | | |
|---------------|----------------------------|
| 1. Fibroma. | 8. Neuroma. |
| 2. Lipoma. | 9. Some myeloid sarcomata. |
| 3. Chondroma. | 10. Most myxomata. |
| 4. Osteoma. | 11. Papilloma. |
| 5. Myoma. | 12. Adenoma. |
| 6. Lymphoma | 13. Most cysts. |
| 7. Angioma. | |

II.—Semi-malignant.

1. Fibro-Sarcomata.
2. Spindle-celled Sarcomata.
3. Some myeloid Sarcomata.
4. Myxo-Sarcomata.
5. Alveolar Sarcoma.
6. Rodent ulcer (skin cancer).
7. Sarcomatous hæmatomata.

III.—Malignant.

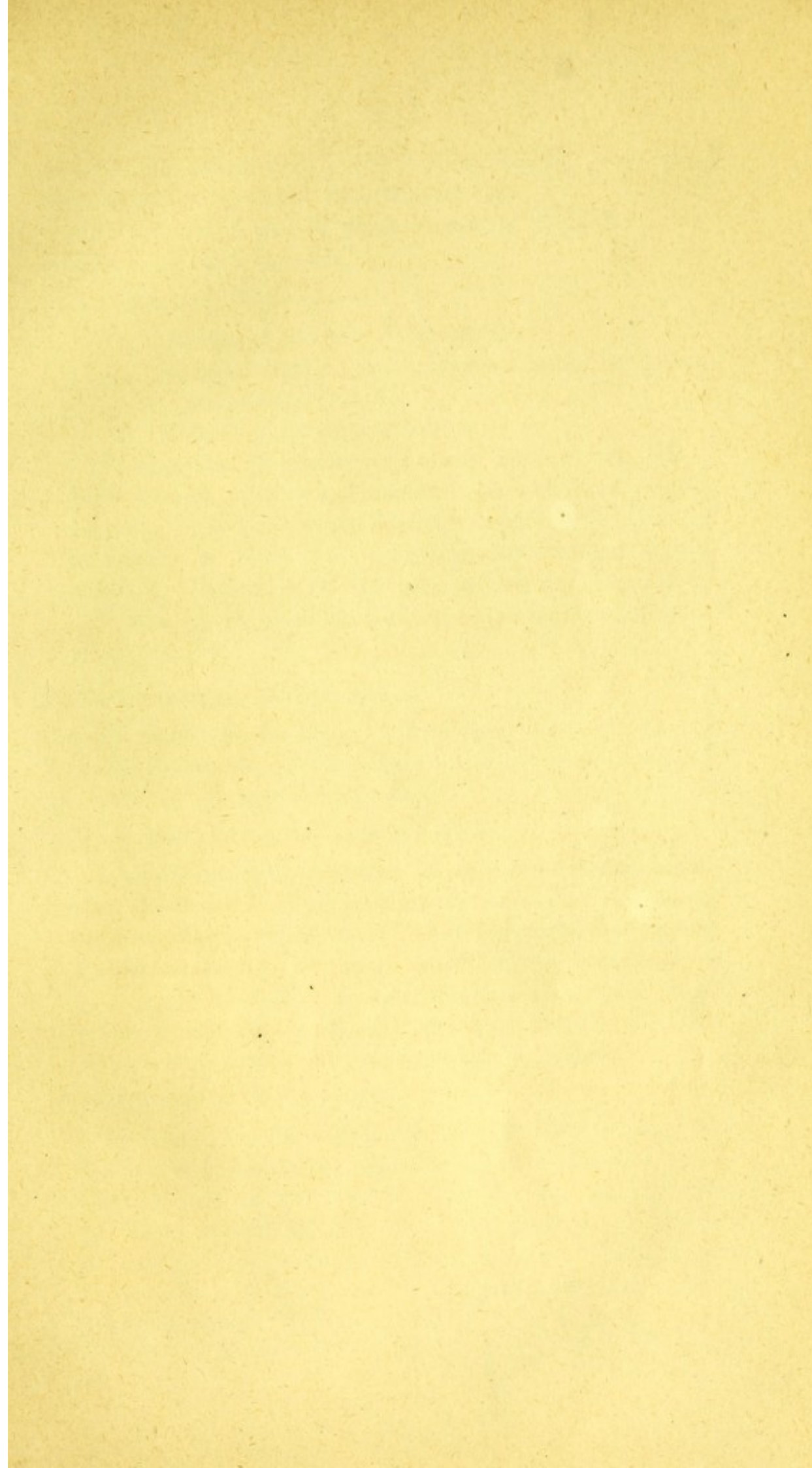
1. Soft, rapidly growing chondroma.
2. Round-celled Sarcoma.
3. Melanotic Sarcoma.
4. All Carcinomata.

Prognosis.—Principal points—history and structural peculiarities.

Treatment. *I.—Of innocent growths—*

1.—By medicines and medicinal applications. 2—Is removal always necessary? Reasons for removal. 1st—Deformity; 2nd—Inconvenience; 3rd—Discomfort or pain; 4th—Interference with function; 5th—Danger to life.

3. Methods of removal; (1)—Removal of tumour only: (a) By caustics; (b) By cautery; (c) By ligature; (d) By elastic ligature; (e) By ecraseur; (f) By galvanic ecraseur; (g) By avulsion; (h) By clamp, scissors and cautery; (i) By knife. Principles of operation: i.—Remove all the growth and nothing but the growth. ii.—Retain all healthy skin. iii.—Cut on the tumour and divide its capsule. iv.—Shell out or enucleate. v.—Keep blade of knife towards tumour. vi.—Tie deep connections before dividing. vii.—If an out-growth, remove the whole. viii.—Secure bleeding points.



Onychium + Calcutta
here

Treatment of Tumours

(25)

ix.—Perform antiseptically. x.—Provide drainage. xi.—Bring edges accurately together. xii.—Support flaps. XII 13/7/81

(2). Removal of part in which tumour is situated—(a) By excision; (b) By amputation.

II.—Treatment of Angiomata—

1. Question of necessity of interference.
2. Medicinal applications,—pressure, iodine, collodion, cold, tannin, lead, &c.
3. Methods of radical treatment—

(1)—Incisions in shallow and widely diffused nævi. (2)—Destruction by caustics and cautery. (3)—Excision. (4)—Ligature. (5)—Excision and ligature combined. (6)—Causing coagulation of blood. (7)—Exciting inflammation by—i. Setons, ii. Vaccination, iii. Galvano puncture, iv. Hot needles, v. Croton oil, vi. Breaking them up. (8)—Ligation of main artery.

III.—Treatment of Cystic tumours—

1—Tapping. 2—Exciting inflammation by—(1) Laying open, (2) Setons, &c., (3) Injections. 3—Causing destruction of cyst wall. 4—Avulsion. 5—Excision.

IV.—Treatment of semi-malignant growths—

1—Early removal advisable. 2—Complete removal necessary. 3—Removal of recurrent growths as long as it can safely be done should be resorted to. 4—When encapsuled, nothing but the tumour need be taken. 5—When not encapsuled, a wide margin of healthy tissue should be removed. 6—When a bone is affected the whole of it should be removed. 7—When a whole limb is diseased amputation is necessary.

V.—Treatment of Carcinomata—

1—Objects, (1) Prolongation of life; (2) Relief of pain, &c. 2—Very early removal advisable. 3—When lymphatics affected operation may be performed if they also can be removed. 4—When visceral deposits occur case hopeless. 5—When a gland affected whole should be removed. 6—Caustics. 7—Ecraseur. 8—Excision. 9—Palliatives—against pain, foetor and cachexy. XIII 15/7/81

The Process of Repair

(26)

THE PROCESS OF REPAIR.

Repair presupposes injury or disease causing *solution of continuity*. Hæmorrhage a constant feature of the former. Violence causing injury may be direct or indirect. Wound may or may not be exposed to causes of putrefaction. There may or may not be death of tissue.

CLASSIFICATION OF INJURIES.

I.—Simple solution of continuity. (Incised and punctured wounds inflicted by keen-edged weapons.)

1. Not exposed to septic influences.
2. Exposed to septic influences.

II.—Solution of continuity with laceration. (Injuries inflicted by blunt instruments including gunshot wounds, and by indirect violence.)

1. Not exposed to septic influences. (1) Bruise ; (2)—Rupture of soft parts ; (3) Simple fracture ; (4)—Simple dislocation.
2. Exposed to septic influences. (1)—Lacerated wounds of all kinds ; (2) Rupture of soft parts ; (3) Compound fracture ; (4) Compound dislocation.

III.—Solution of continuity with loss of substance. (Incised and lacerated wounds in which a portion of the body has been removed.)

1. Not exposed to septic influences.
2. Exposed to septic influences.

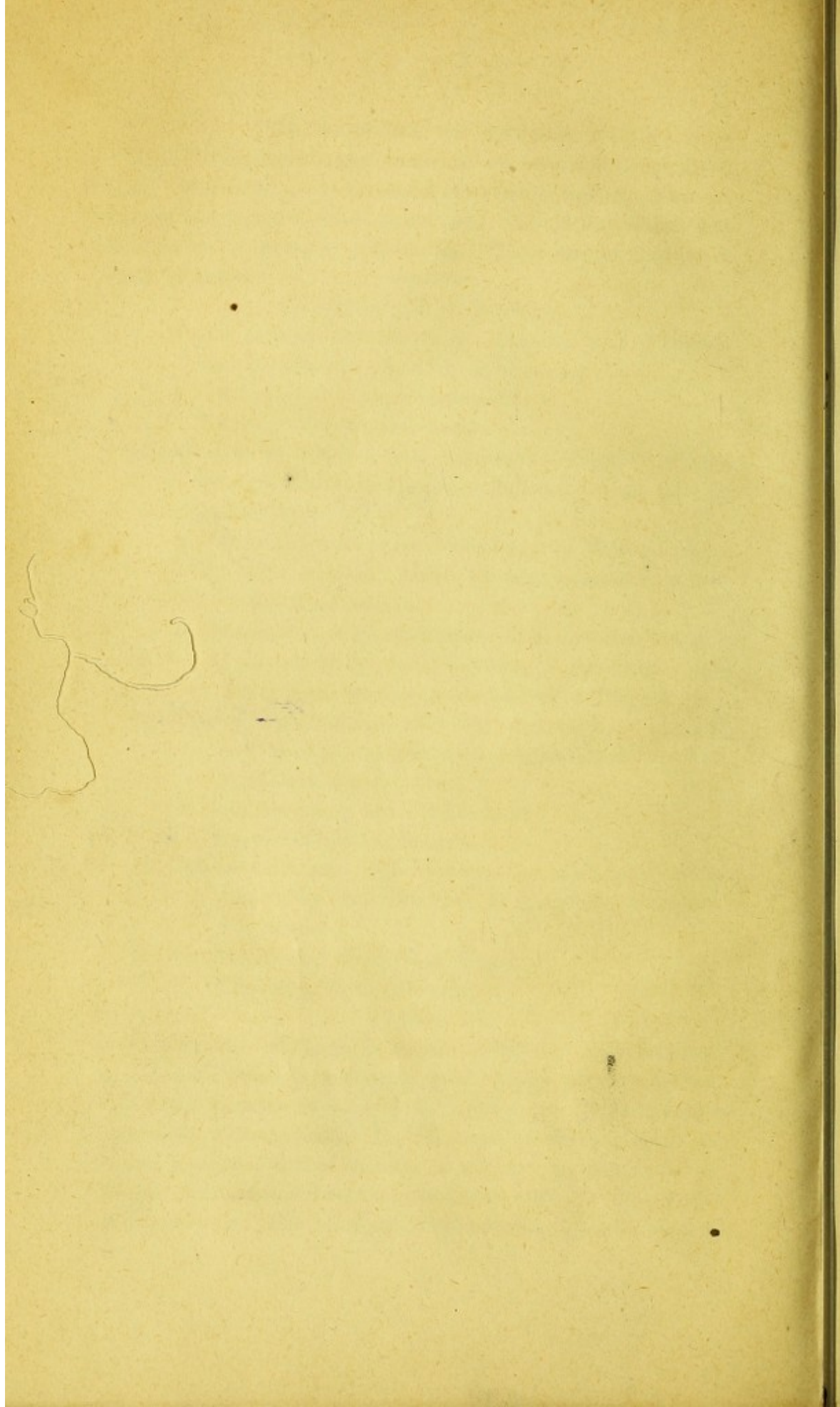
IV.—Solution of continuity consequent on disease. (Lesions caused by inflammation, suppuration, ulceration, gangrene, &c.)

1. Not exposed to septic influences.
2. Exposed to septic influences.

Classification of modes of repair—(Paget's.) 1—Immediate union. 2—Healing by scabbing. 3—Union by primary adhesion. 4—Repair by granulation.

General Considerations. 1—Inflammation not necessary for repair. 2—Some tissues capable of restoration, others not so. 3—Essential element of repair—granulation cells. 4—Phenomena of repair.—(1) Dilatation of blood-vessels ; (2)—Effusion of





serum ; (3) Infiltration and effusion of lymph ; (4) Vascularization.

5—Organization. 6—Absorption and contraction (cicatrization.)

Healing by immediate union.—Phenomena. Microscopic changes.

Conditions.

Healing by scabbing.—Phenomena. Microscopic changes.

Conditions.

Repair of subcutaneous injuries.

Union by primary adhesion or first intention.

Union by granulation.

Repair of special tissues—muscle, nerve, bone.

Repair of the several varieties of injury.

Conditions favourable to repair.

1—A healthy constitution. 2—Nutritive activity of the part.

3—A sound state of the part. 4—Good supply of blood. 5—A

good quality of blood. 6—Rest, mechanical and physiological.

7—Accurate and close apposition. 8—Absence of tension. 9—

Absence of hæmorrhage. 10—Absence of foreign bodies. 11

—Absence of bruising, tearing and loss of tissue. 12—Absence

of putrefaction. 13—Absence of inflammation. 14—Efficient

drainage. 15—Apposition of similar or homogeneous structures.

Conditions unfavourable to repair. ~~XV~~ 20/7/81.

The opposite of those above enumerated.

Treatment necessary for securing rapid and effective repair.—

Consists generally in the adoption of measures devised to promote

the conditions favourable to repair. ~~XVI~~ 22/7/81.

ACUTE OR ACTIVE CONGESTION OR DETERMINATION.—An ab-

normal flow of blood to a part—an exaltation of arterial supply ;

may be physiological or pathological.

Symptoms. 1—Swelling. 2—Redness. 3—Increased tempera-

ture. 4—Uneasiness. 5—Modification of function.

Terminations. 1—Resolution. 2—Effusion. 3—Increased se-

cretion. 4—Inflammation. 5—Alteration in the nutri-

tion of the part (induration or hypertrophy).

Causes. 1—Excessive use. 2—Direct nervous influence. 3—

Reflex nervous influence. 4—Mechanical conditions mo-

difying distribution of blood. 5—Irritation. 6—Injury.

Treatment. 1—Do not interfere if object beneficial. 2—Remove

cause. 3—Attend to position. 4—Restrain afflux—cold,

astringents, &c. 5—Elastic pressure. 6—Rest. 7—Vascular depressants—tartar emetic, digitalis, veratrum.

CONGESTION—PASSIVE CONGESTION.—An impeded flow of blood from depression of venous function—generally pathological.

Symptoms. 1—Swelling. 2—Alteration in colour. 3—Alteration in consistence. 4—Depression of temperature. 5—Impaired function. 6—Uneasiness.

Terminations. 1—Oedema. 2—Ecchymosis. 3—Chronic induration. 4—Softening. 5—Ulceration.

Causes. 1—Obstructed return of blood from (1) pressure on veins, or (2) dependent position. 2—Enfeeblement of vessels. 3—Nervous influences.

Treatment. 1—Remove cause. 2—Attend to position. 3—Elastic pressure. 4—Astringents (iron, lead, silver, &c.). 5—Unload vessels (scarification, puncture, leeches, &c.).

EFFUSION.—Extravasation. Material effused may be 1—Serum. 2—Serum tinted with blood. 3—Blood. 4—Fibrine.

Symptoms. 1—Swelling. 2—Discoloration. 3—Pitting. 4—Fluctuation. 5—Heat in some cases. 6—Brawny induration.

Terminations. 1—Absorption. 2—Gradual accumulation. 3—Organization. 4—Ulceration or gangrene.

Causes. 1—Obstruction to return of blood from (1) pressure, (2) disease of vein, (3) filariæ. 2—Lymph stasis from disease of lymphatic vessels or glands. 3—Feeble circulation. 4—Cold. 5—Disease of heart, liver or lungs. 6—Impoverished blood. 7—Active or passive congestion. 8—Inflammation.

Treatment. 1—Remove cause. 2—Attend to position. 3—Elastic pressure. 4—Stimulant and absorbent applications. 5—Remove fluid if necessary (puncture, tapping &c.) 6—Administer purgatives, diuretics and tonics as indicated by the nature of the case. 7—Excite inflammation if other measures fail.

INFLAMMATION.

Essential phenomena. 1.—Dilatation of blood-vessels. 2—Slowing and stasis of circulation. 3—Effusion and migration of corpuscles. 4—Alteration in nutrition,

5

3 Defective constitution of blood

Inflammation

(29)

- Varieties.* 1. *Intensity and duration.*—Acute, subacute and chronic.
2. *Constitutional vigour.*—Sthenic and asthenic.
3. *Causation.*—Common and specific.
4. *Extent and character.*—Circumscribed, diffuse, parenchymatous, interstitial, &c.
5. *Result.*—Catarrhal, croupous, fibrinous, diphtheritic, adhesive, phlegmonous, suppurative, ulcerative, gangrenous.
6. *Constitutional origin.*—Scrofulous, rheumatic, gouty, syphilitic, &c.

Symptoms.—Local and constitutional—relation.

Constitutional symptoms.—1—Of common inflammation. Inflammatory, irritative, typhoid and hectic fevers. 2—Special constitutional symptoms in specific inflammations.

Local signs. 1—Redness,—causes, varieties. 2—Swelling and consistence,—causes and variations. 3—Pain—causes and conditions. 4—Heat. 5—Modification of function. 6—Modification of nutrition—softening—hyperplasia.

Results or Terminations. 1—Resolution. 2—Extension. 3—Metastasis. 4—Effusion. 5—Induration and organization. 6—Adhesion. 7—Softening. 8—Suppuration. 9—Ulceration. 10—Gangrene.

CAUSES OF INFLAMMATION.

A. *Predisposing.*

- I.—Constitutional. 1—Idiopathic conditions. 2—Plethora. 3—Asthenia. 4—Age. 5—Deranged health. 6—Special dyscrasiae. 7—Syphilis. 8—Unfavourable hygienic influences. 9—Cold.
II.—Local. 1—Natural proclivity. 2—Overuse. 3—Injury. 4—Vascular disturbance. 5—Disturbed or defective innervation. 6—Previous inflammation. 7—Imperfect development.

B. *Exciting.*

- I.—Constitutional. 1—Specific constitutional states. 2—Specific fever. 3—Toxic and miasmatic poisons.
II.—Local. 1—Overuse. 2—Injury and irritation. 3—

Inflammation.

(30)

Foreign bodies and parasites. 4—Chemical agents.

5—Cold and heat. 6—Poisons—organic and inorganic. *

7—Septic poisons. 8—Embolism and metastasis.

9—Nervous/sympathy. 10—Tension and pressure.

influence direct
Pathology. 1. General nature of the process depressed and disordered nutrition.

2. Primary disturbance due to vascular, nervous or lymphatic derangement, or to diseased condition of tissue.

3. Tendency of process mostly destructive.

4. Constitutional symptoms due to poison locally elaborated.

Diagnosis.

Prognosis.

Treatment, Preventive and curative.—1—Interference not always necessary or judicious. 2—Remove cause. 3—Ensure rest, mechanical and physiological. 4—Allay irritation—warmth, opiates, &c. 5—Subdue vascular excitement—Purgatives, emetics, bleeding, counter-irritation, depressants, cold, deligation, and pressure. 6—Reduce temperature of body and part. 7—Purify blood—Purgatives, emetics, mercury. 8—Remedy general dyscrasia. 9—Promote ^{removal or} absorption of products—Incision, mercury, stimulants, pressure. 10—Give tonics and stimulants if indicated. 11—Support strength. 12—Attend to hygiene.

Varieties of Inflammation.

1. Chronic inflammation. Symptoms, terminations, causes, pathology, treatment.

2. Dyscrasial inflammations. (1)—Scrofulous; (2)—Tubercular; (3)—Scorbutic; (4)—Gouty; (5)—Rheumatic; (6)—Syphilitic; (7)—Diabetic; (8)—Elephantoid; (9)—Septic, Toxic, and Miasmatic.

3. Croupous and Diphtheritic inflammations.

Inflammation of different tissues and organs.

1. Connective tissues, (1)—Areolar tissue; (2)—Periosteum;

(3)—Bone; (4)—Muscle. 2—Serous membranes.

3—Thecal and bursal sacs. 4—Synovial membranes

and joints. 5—Skin, 6—Mucous membrane. 7—

* *whenever directly applied or conveyed through the blood.*

3. Morbid products. Stone - ^{tubercle} Dead parts &
 Solids & fluids of the body in the wrong place
 sequestra, extravasated urine, bile &c -
 6. Inflammatory products pus -
 Specific poisons. Vaccinia syphilis &c -
 ? 24 Inflammation infectious (union &c)

substance of ulcer

Friction, douching pressure astringents
 Counter irritants, local blood letting -

cartilage -
 (5) nerve. (6) Arteries veins & lymphatics.

Pur Sp gr 1030 - 33

Water -	887.6
Pus cells & mucus	46.5.
Albumen -	43.8
Fat & Cholesterol	10.9.
Sodium Chloride	5.9
Other Alkaline salt	3.2
Earthy Phosphates & Iron	2.1
	<hr/> 1000.0 <hr/>

Lymphatic glands. 8.—Salivary glands. 9.—Tonsils.
10.—Mammary glands. 11.—Testes (orchitis and epididymitis.)

XXX 24/8/81

SUPPURATION AND ABSCESS.

Nature and origin of pus.

Varieties of pus.—Laudable, ichorous, sanious, curdy, putrid, gangrenous, &c.

Suppuration, one of the terminations of inflammation, is invariably a destructive process; pus being an unorganizable fluid.

May occur (1) on surfaces, (2) in sacs, and (3) in tissues and organs.

Circumstances favouring suppuration; (1)—Constitutional; (2)—Local; (a) Natural proclivity; (b) Speciality of inflammatory process; (c) Irritation.

Abscess, definition and varieties.

Symptoms.—Constitutional and local.

Terminations.—Absorption, evacuation.

Causes. (1)—Constitutional, and (2)—Local.

(1)—Scrofula, pyæmia, blood diseases (exanthemata, &c.)

(2)—Injury, irritation (mechanical and chemical), cold, foreign bodies, tension, putrefaction.

Pathology, and pathological anatomy.

Diagnosis.—Fluctuation, exploration.

Prognosis and risks.

Varieties. (1)—Acute. (2)—Chronic. (3)—Diffuse. (4)—Multiple. (5)—Congestive. (6)—Gaseous.

Treatment. (1)—Repressive; (2)—Evacuation by—(a) Aspiration; (b) Tapping; (c) Incision,—Abernethy's and Hilton's plans; (d) Antiseptic incision. (3)—Constitutional management.

XXXII 31/8/81

SINUS AND FISTULA.

Definition.

Anatomy and symptoms.

Causes. 1—Constitutional debility. 2—Foreign bodies. 3—Insufficient opening. 4—Movement. 5—Irritating contents.

Treatment. 1—Constitutional. 2—Rest and removal of foreign bodies, &c. 3—Pressure. 4—Stimulating injections. 5—Caustic and cautery. 6—Incision.

Special fistulæ.

- | | |
|----------------------|------------------------------|
| 1. Salivary fistula. | 6. Anal fistula. |
| 2. Lacteal „ | 7. Biliary „ |
| 3. Fæcal „ | 8. Lachrymal „ |
| 4. Urinary „ | 9. Recto- and vesico-vaginal |
| 5. Perineal „ | 10. Recto-vesical. |

ULCERATION.

A molecular death of tissue causing breach of surface. Process may affect normal or abnormal tissues.

Phenomena.—Destruction and repair : Excoriation and ulceration : Proliferation and breaking down : Anatomy of ulcers : (a.) Shape and size ; (b.) Edges ; (c.) Floor ; (d.) Neighbourhood and surroundings ; (e.) Discharge.

Causes. I.—*Predisposing.* 1—Special proclivity. 2—Feeble constitution. 3—Dyscrasia. 4—Imperfect circulation. 5—Deficient innervation. 6—Impaired general or local nutrition.

II.—*Exciting.* 1.—Mechanical and chemical irritation or injury. 2—Inflammation, acute and chronic. 3—Vesicles and pustules. 4—Abscess. 5—Alternations and extremes of temperature. 6—Specific irritations.

Pathology.—Death of tissue may be immediate or preceded by a short-lived or imperfectly nourished neoplasm.

Treatment. 1—Remove cause. 2—Rest. 3—Position. 4—Arrest disintegration. 5—Moderate proliferation. 6—Promote repair.

Varieties of Ulcers and their treatment. 1—Healing ulcer. 2—Weak ulcer. 3—Callous ulcer. 4—Irritable ulcer. 5—Inflamed ulcer. 6—Phagedœnic ulcer. 7—Sloughing ulcer. 8—Hæmorrhagic ulcer. 9—Specific ulcers.

MORTIFICATION.

Definition.

Parts and tissues most prone to gangrene.

3a. Dramall -

8 Lull

4 Spading Wamwale
Gaupe

Phenomena.—Moist and dry gangrene: Inflammatory and non-inflammatory.

Symptoms. 1—Constitutional and 2—local:—change of (1) colour, (2) temperature, (3) sensitiveness, (4) consistence, (5) size; (6) Vesication; (7) Crepitation. Natural cure of gangrene. ~~XXXXV~~ 7/9/87

Causes. I.—*Constitutional.* 1—Age. 2—Ill health. 3—Acute disease. 4—Starvation. 5—Dyscrasia. 6—Poisoning by ergot, mercury, phosphorus, &c.

II.—*Local.* 1—Mechanical and chemical injury. 2—Extremes of temperature. 3—Organic poison. 4—Pressure and tension. 5—Inflammation. 6—Arterial disease. 7—Embolism and thrombosis. 8—Disturbance of circulation. 9—Defective innervation. 10—Disturbance of nutrition.

Pathology.—Death of tissue in mass due to an abrogation of the principal conditions of nutrition.

Diagnosis.

Prognosis.

Treatment. 1—Correct constitutional vice. 2—Remove cause. 3—Moderate inflammation. 4—Relieve tension. 5—Subdue pain, irritability and vascular excitement. 6—Promote separation and repair. 7—Disinfect slough. 8—Improve general health and maintain strength. 9—Modify stump or amputate when necessary—(Question of propriety and time of amputation in gangrene of local and constitutional origin.)

Special forms of gangrene.

1. Hospital gangrene.
2. Bed sore.
3. Gangrena Senilis.

AMPUTATION IN GANGRENE.

Amputate at once—

1. When mortification is inevitable and dependent on local causes; the constitution being good, (*e. g.* smash, lacerated artery, ligature of artery, traumatic aneurism, &c.)

2. When mortification due to local causes has occurred, the constitution being sound and risk of constitutional infection exists.

3. When mortification due to local causes is rapidly spreading, more especially if preceded by inflammatory effusion or great serous infiltration, if the patient can bear the shock.

Wait for a line of demarcation.

1. In burns and frost bites.
2. In gangrena senilis.
3. In gangrene due to constitutional causes only.
4. In gangrene due to constitutional and local causes combined when not spreading rapidly nor preceded by much inflammatory effusion or serous infiltration.

Points to be considered.

1. State of constitution.
2. Cause of mortification.
3. Rate of progress.
4. Existence of œdema or infiltration.

CARIES.

XXXXVII/12/9/81
E. H. H.

Meaning of the term.

Symptoms. 1—The inflammatory stage. 2—The destructive stage. 3—The reparative stage.

Causes. 1—Constitutional (syphilis and struma). 2—Local (injury, &c.)

Pathology.—A chronic inflammation of bone resulting in softening suppuration and death, molecular or in mass.

Parts most commonly affected.

Diagnosis and Prognosis.

Treatment. 1—Constitutional. 2—Subdue inflammation. 3—Rest. 4—Open abscess. 5—Remove carious bone by (a) resection, (b) amputation.

NECROSIS.

XXXXVIII/14/9/81
E. H. H.

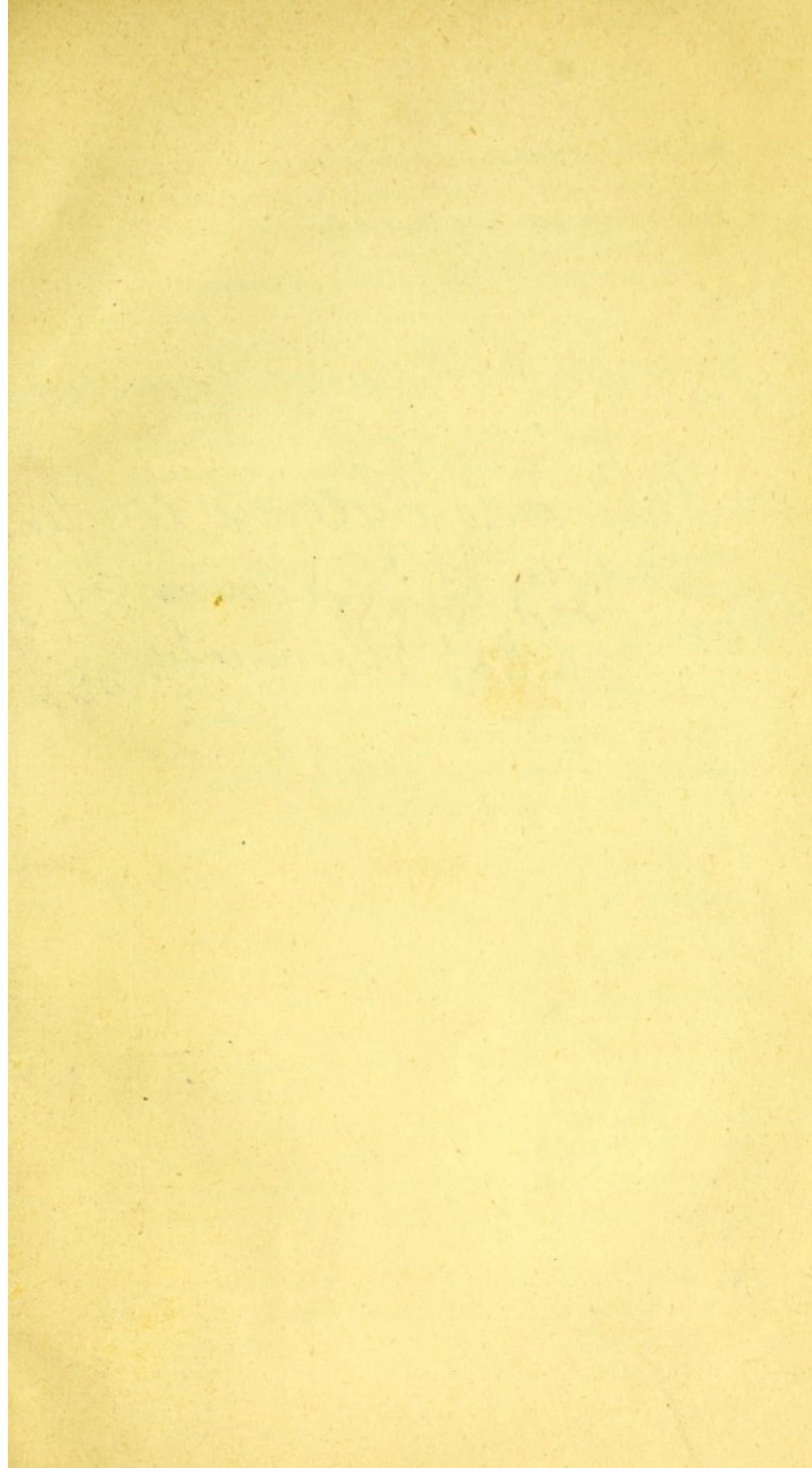
Definition and varieties.

Symptoms. 1—Inflammatory stage. 2—Reparative stage.

Causes. 1—Traumatic. 2—Inflammatory. 3—Acute or chronic inflammation. 4—Poisons.

Pathology.—Strangulation of bone through injury or inflammation resulting in separation and extrusion of strangulated mass.

Diagnosis and Prognosis.



Recd 40 to 46 Calculi & Concretions

Morton's Sado glycerine solution
Indyie gr $\frac{x}{xxx}$ } Glycerine 37
P. Man. Sado gr $\frac{xxx}{xxx}$ }
37 to 37 also injected

Treatment. 1—Subdue inflammation. 2—Antiseptics. 3—Correct constitutional vice. 4—Evacuate abscess and relieve tension. 5—Remove sequestrum—when and how.

C. DISORDERS OF DEVELOPMENT (MALFORMATIONS)

I.—By excess.

1. Congenital hypertrophies, (fingers, &c.)
2. Congenital tumours (naevi, warts, &c.) moles, molluscum and dermoid cysts.
3. Supernumerary parts (breasts, fingers, toes, &c.).
4. Abnormal adhesions (webbed fingers, &c.)
5. Fusion of two fetuses.

II.—By defect.

1. Imperfect fusion, (a) hare-lip, (b) cleft palate, (c) epispadias and hypospadias, (d) meningocele and encephalocele, (e) spina bifida.
2. Imperfect closure, (a) of umbilicus (causing umbilical hernia), (b) of processus vaginalis (causing congenital hernia and hydrocele).
3. Defective development, (a) of abdominal wall (causing extroversion of bladder), (b) of cheek (causing fissures), (c) of diaphragm (causing diaphragmatic hernia, (d) of eyelids (coloboma).
4. Persistent closure, (a) of anus (imperforate anus), (b) of vagina (imperforate hymen), (c) of prepuce (congenital phimosis).
5. Delayed descent of testes and displaced testicle.
6. Non-development, (a) of rectum, (b) of uterus and ovaries, (c) of limbs, (d) of eyelids.
7. Intrauterine fractures, amputations, &c.

III.—DEFORMITIES.

1. *Wryneck* (torticollis), caused by (a) congenital defect, (b) spinal curvature; (c) caries of spine; (d) inflammation of muscle; (e) rigidity and atrophy of muscle; (f) disordered innervation causing paralysis or spasm.

Treatment, according to cause, by (a)—Medicinal agents local and general; (b)—Mechanical appliances, and (c)—Tenotomy.

2. *Spinal curvature* caused by, (a) constitutional debility, (b) bad habit, (c) lameness, (d) caries.

Treatment mainly mechanical and tonic.

3. *Genu valgum*—Caused by, (a) rickets, (b) standing, (c) unequal development of condyles.

Treatment.—(a)—Mechanical. (b)—Operative.

4. *Talipes*—(Club foot.)

Varieties.—(a)—Varus. (b)—Valgus. (c)—Equinus. (d)—Calcaneus.

Causes.—(a) development, (b) nervous, (c) mechanical.

Treatment. (a) Medicinal. (b) Mechanical. (c) Tenotomy. (d) —Excision.

D. INJURIES.

CLASSIFICATION OF INJURIES.

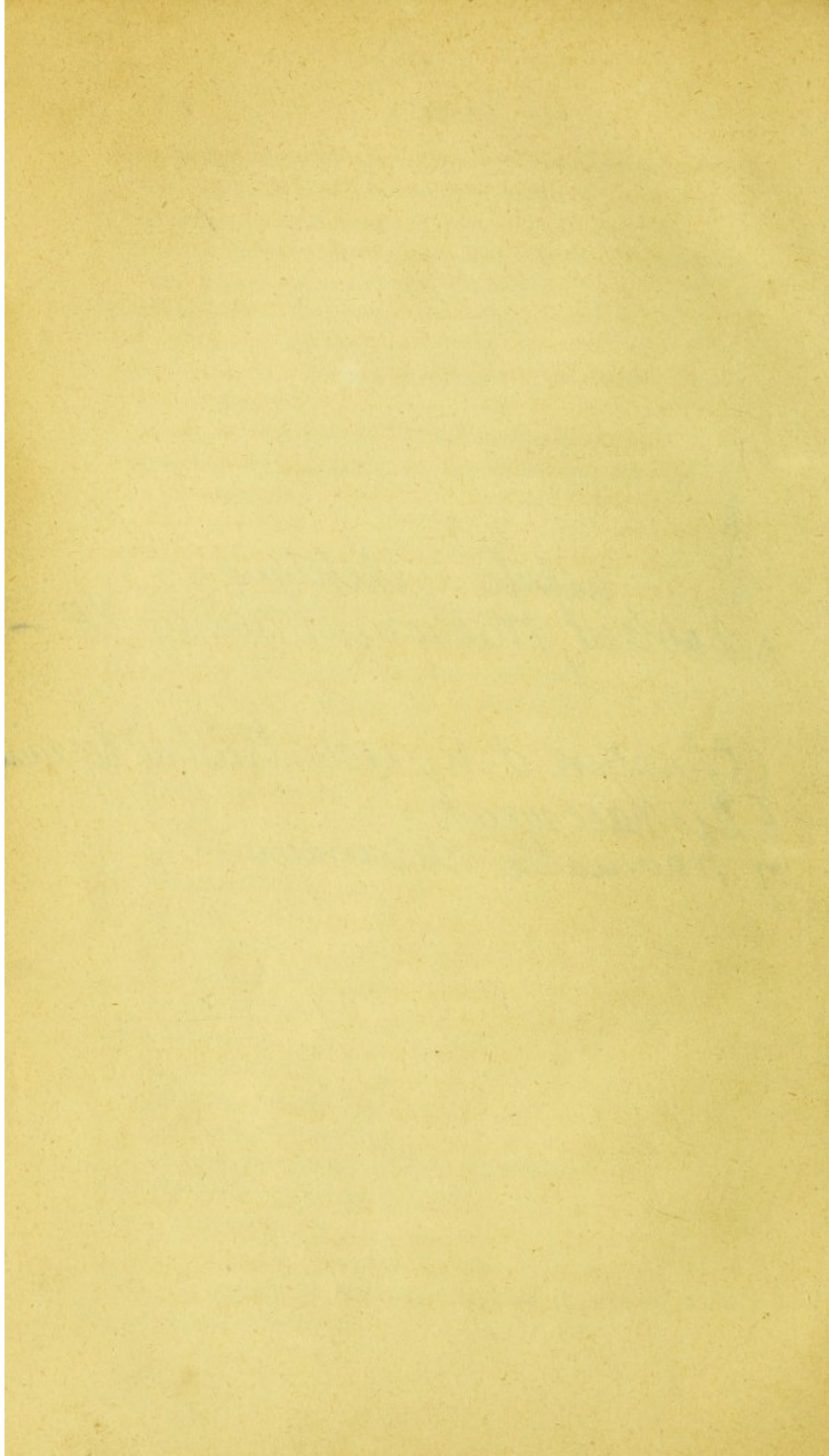
- I. Injuries inflicted by cutting instruments.
- II. Injuries inflicted by pointed instruments.
- III. Injuries inflicted by blunt instruments.
 - 1.—Bruise, (1) simple, (2) with hæmorrhage, (3) with gangrene, (4) Sprain.
 - 2.—Lacerated wound.
 - 3.—Contused wound.
 - 4.—Fracture, (1) simple, (2) compound.
 - 5.—Dislocation, (1) simple, (2) compound.
- IV. Gunshot wounds.
- V. Poisoned wounds.
 - 1.—Snake bite.
 - 2.—Hydrophobia.
 - 3.—Poisonous insects.
 - 4.—Parasites.
 - 5.—Glanders.
 - 6.—Malignant pustule.
 - 7.—Dissection wounds.
- VI. Mineral and vegetable irritants and caustics.
- VII. Heat—Burns and scalds.
- VIII. Cold—frost bite.

INCISED WOUNDS.

Wounds caused by keen-edged cutting instruments whose length exceeds their depth.

^ ^{unipulse} ^{stretches} ^{traction} ^{traction} ^{traction} &c -

(5) Rupture of muscle tendon ligament
6 Displacement
7 traumatic aneurism.



Symptoms. 1—Pain. 2—Hæmorrhage. 3—Separation of parts.

Complications. 1—Division of muscle, bone, artery, vein, nerve.
2—Laying open joint cavity. 3—Laying open serous cavity. 4—Division of organ. 5—Division of duct or canal. LV/18/11/81

Mode of repair. 1—By scabbing without inflammation. 2—By primary union (without inflammation). 3—By secondary adhesion. 4—By granulation. L 17/11/81

Principles of treatment. 1—Stop bleeding. 2—Remove foreign bodies. 3—Coapt accurately. 4—Make provision for drainage. 5—Prevent putrefaction. 6—Maintain rest. 7—Prevent inflammation. 8—Avoid stimulation.

Hæmostatics. 1—Position. 2—Pressure. 3—Cold. 4—Heat. L 1/9
5—Styptics. 6—Ligation. 7—Torsion. 8—Acupressure. 9—Forcipressure. 10—Cautery.

Means of coaptation. 1—Position. 2—Bandaging and support. L 11/1
3—Plasters. 4—Sutures, (1)—Interrupted; (2)—Glover's; (3)—Twisted; (4)—Quill and button suture. L 11/14/11/81

The antiseptic system.—Essentials. 1—A pure wound. 2—Pure skin. 3—Pure air. 4—Pure hands and instruments. 5—Protective arrangements. 6—Arrangements for maintaining purity. L 11/16/11/81

PUNCTURED WOUNDS.

Wounds whose depth exceeds their length, caused by thrusting instruments and frequently accompanied by laceration and bruising.

Risks. 1—Hæmorrhage. 2—Lodgment of foreign bodies. 3—Injury to deep structures. 4—Inflammation and suppuration. 5—Putrefaction.

Subcutaneous incision. 1—Mode of repair. 2—Precautions necessary for (a) avoiding injury to vessels, (b) preventing entrance of air.

Treatment of punctured wounds. 1—Arrest of hæmorrhage. 2—Removal of foreign bodies. 3—Drainage. 4—Antiseptic precautions. 5—Management of cases in which viscera, cavities, &c., have been wounded. L 11/21/11/81

Punctured arteries. 1—Mode of repair. 2—Liability to subsequent aneurism. 3—Treatment—(a) complete division, (b) double ligature.

Punctured intestines. 1—Mode of repair. 2—Management.] LVI 23/11/87

BRUISE.

Subcutaneous laceration of soft parts.

Varieties. 1—Simple (ecchymosis). 2—With hæmorrhage. 3—With gangrene of tissue.

Mode of repair.—Changes undergone by blood ; absorption of effused blood and cicatrization.

Risks.—Inflammation, gangrene.

Treatment. 1—Promote absorption. 2—Subdue inflammation. 3—Evacuate abscess if necessary. 4—Wait for line of demarcation. 5—Use antiseptics if open wound results.] LVI

Sprain.

Bruise of soft parts surrounding a joint with or without laceration.

Treatment. 1—Perfect rest. 2—Cooling and absorbent lotions. 3—Passive movement.

CONTUSED AND LACERATED WOUNDS.

Wounds of soft parts with bruising or tearing.

Hæmorrhage slight—reason. Liability to sloughing, inflammation, gangrene, septic disease.

Mode of repair.—Separation of slough and granulation.

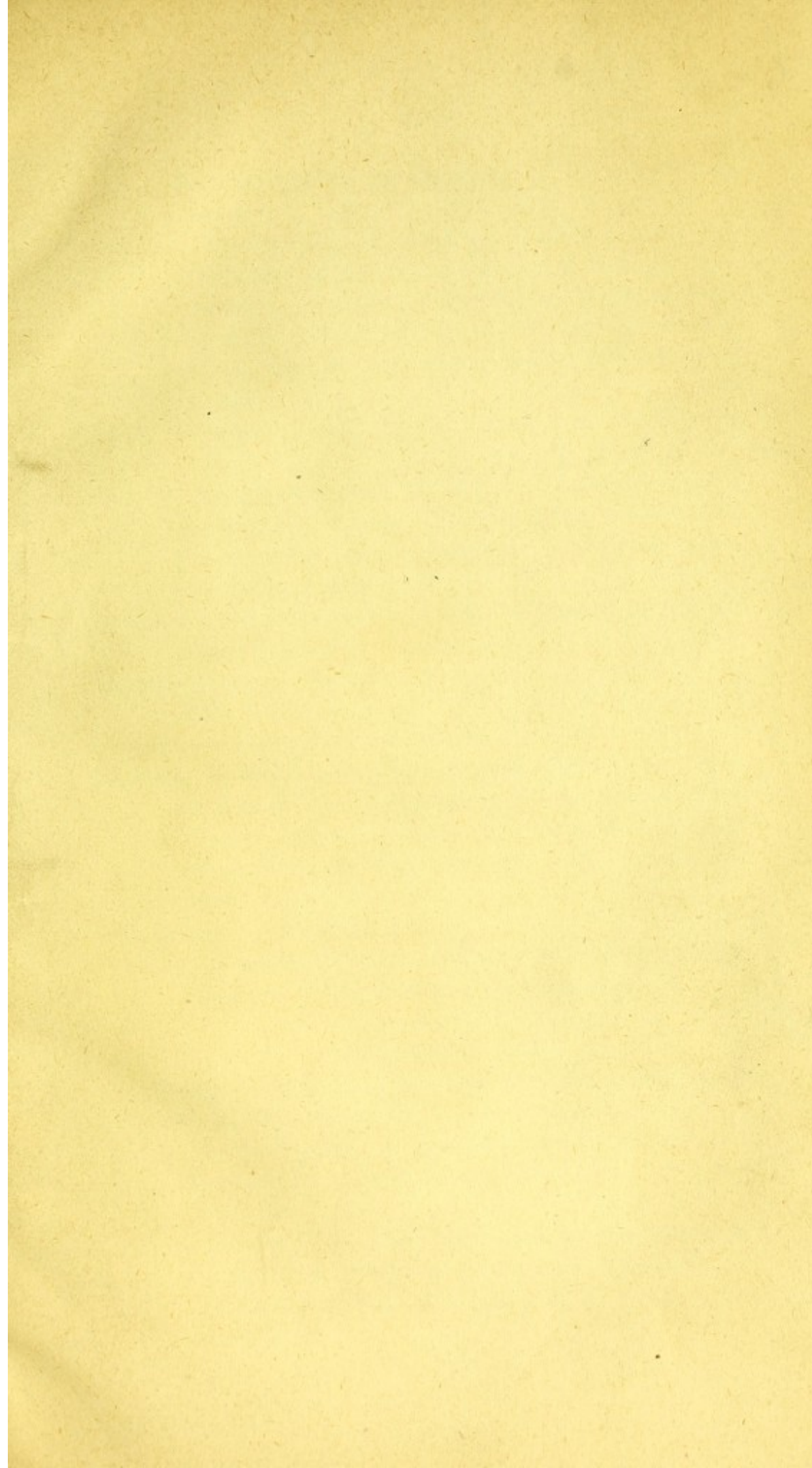
Treatment. 1—Apposition. 2—Antiseptics.

Gangrene due to, 1—Actual deprivation of vitality of parts. 2—Injury to vessels. 3—Constitutional debility (spreading traumatic gangrene). Question of amputation.] LVI 25/7/87

FRACTURE.

Solution of continuity of bone with or without laceration of the surrounding soft parts.

Varieties. 1.—Simple. 2—Compound. { 3—Incomplete—(a) Fissure ; (b) Infraction (greenstick fracture) ; (c) Splintered ; (d) Perforated. 4—Epiphysial. 5—Complete, (a) Transverse, (b) Oblique ; (c) Longitudi-



6- Pathological .

4. Disease -

nal ; (d) Dentate ; (e) Multiple ; (f) Comminuted ; (g) Impacted.

Symptoms. 1—Deformity. 2—Swelling. 3—Discoloration. 4—Disturbance of function. 5—Abnormal mobility. 6—Crepitation. 7—Displacement, (a) lateral ; (b) angular ; (c) rotation ; (d) shortening. 8—Wound—(a) communicating and (b) not communicating with cavity of fracture.

Causes. 1—Direct violence. 2—Indirect violence. 3 Muscular action.

Mode of repair.—Formation of callus. 1—Provisional, (a) external, (b) internal. (2)—Permanent or definitive. 3—Absorption and moulding : Sources of callus. Absorption of old bone.

Treatment—1—Position. 2—Reduction. 3—Fixation. 4—Extension. Duration of treatment.

Treatment of open or compound fracture.—1—Antiseptics. 2—Rest. 3—Drainage.

False joint.—*Causes.* 1—Constitutional. 2—Local.

Treatment. 1—Fixation. 2—Constitutional remedies. 3—Iodine, blisters, &c. 4—Manipulation. 5—Acupuncture. 6—Electro-puncture. 7—Seton. 8—Subcutaneous resection (freshening). 9—Resection—with ivory pegs or wire suture.

Obliquely united fracture.—*Causes.*

Treatment. 1—Forcible bending. 2—Refracture. 3—Subcutaneous osteotomy. 4—Removal of a wedge-shaped piece.

DISLOCATION.

Displacement of bones from their normal relation to each other, accompanied by bruise, laceration, fracture or wound.

Varieties. 1—Incomplete (subluxation). 2—Complete. 3—Spontaneous. 4—Congenital. 5—Pathological. 6—Compound.

Signs. 1—Deformity. 2—Pain and swelling. 3—Alteration as regards (a) relation of prominences, (b) position of articular extremities, (c) length of limb. 4—Impaired motion.

Causes. 1—Some kinds of joints and some joints more liable.
2—Age (young and middle-aged more prone). 3—Sex
(men more subject). 4—General and special debility.
5—External violence. 6—Muscular action.

Pathology. 1—Results, (a) laceration of ligaments, capsule &c.;
(b) displacement by muscular action. 2—Changes in
unreduced dislocation, (a) filling up of old cavity;
(b) formation of new.

Diagnosis from fracture.

Treatment. 1.—Effect, reduction by (a) relaxing muscles; (b)
manipulation; (c) extension; (d) mechanical appliances.
2—Prevent inflammation. 3—If compound, reduce
and treat like wound of joint. 4—In severe cases,
resection and amputation. 5—If combined with fracture,
set and reduce at once.

Period within which reduction possible.

GUNSHOT WOUNDS.

Injuries caused by—1—Gunpowder; 2—Wadding; 3—small
shot; 4—bullets; 5—cannon balls; 6—shells, &c.

Symptoms. 1—Pain. 2—Shock. 3—Hæmorrhage primary and
secondary. 4—Inflammation. 5—Visceral complications.

Peculiarities. 1—Aperture of entrance and exit. 2—Single aper-
ture. 3—Multiple apertures. 4—Laceration and con-
tusion.

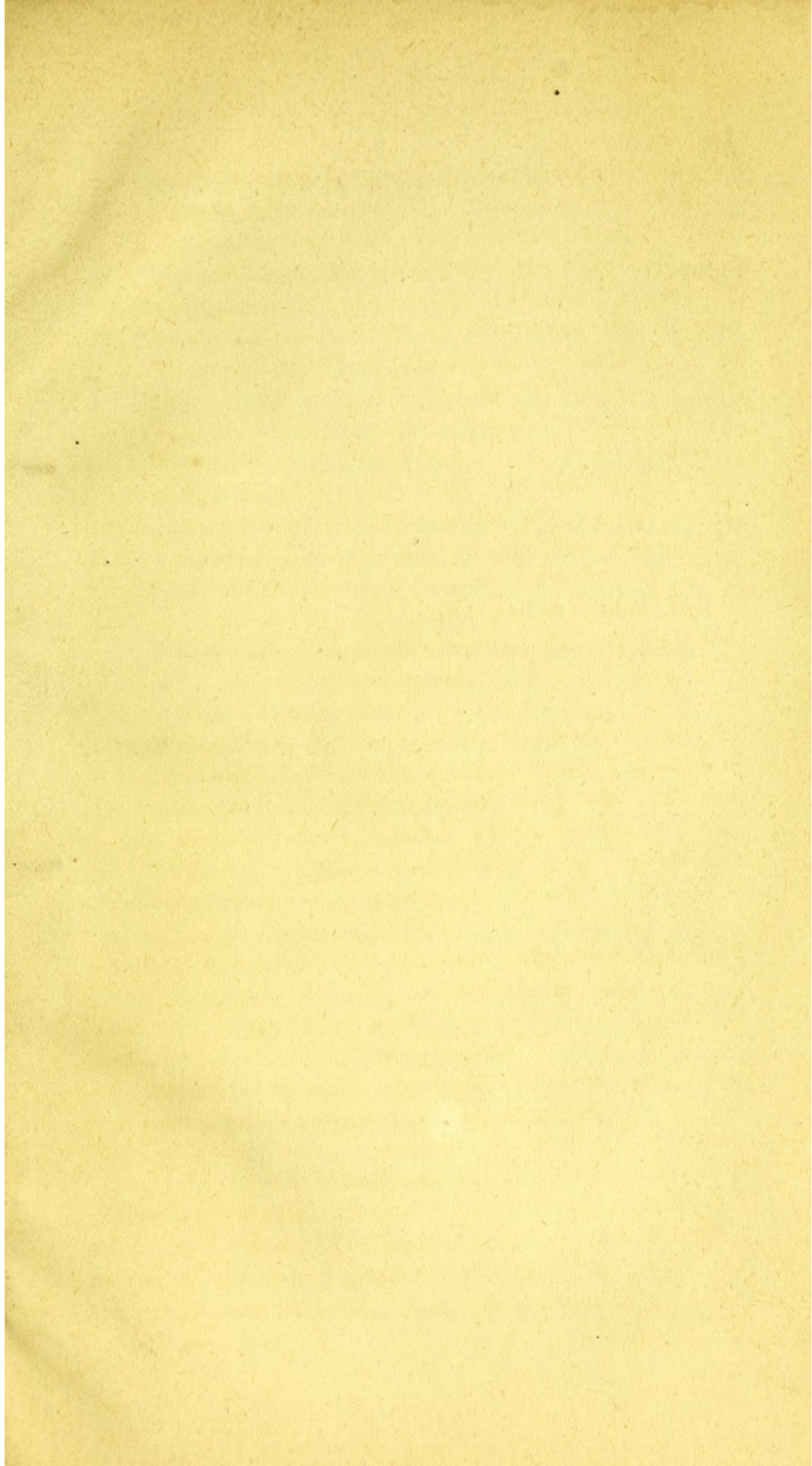
Diagnosis. 1—Direction of wound. 2—Injury of viscera. 3—
Lodgment of bullet, &c.

Treatment. 1—Arrest of hæmorrhage, (a) primary; (b) secondary.
2—Extract foreign body. 3—Prevent inflammation.
4—Provide drainage. 5—Relieve pain and shock. 6—
Resection and amputation necessary in severe cases.

POISONED WOUNDS.

Gravity due more to injection of venom than severity of wound.

1. *Snake bite.*—(a) Most common poisonous snakes. (b)—
Characteristics of effective bite. (c)—Symptoms,
constitutional and local. (d)—Treatment—local and
general.



Lightening
Chubbam

2. *Hydrophobia*.—(a) Symptoms of rabies in the dog. (b)—Of hydrophobia in man. (c)—Treatment—preventive and curative.
3. *Poisonous insects*.—(a) Mosquito. (b)—Bee. (c)—Wasp. (d)—Scorpion. (e)—Pipisa.
4. *Parasites*.—(a) Guinea worm (*dracunculus*). (b)—Echinococcus. (c)—*Cysticercus*.
5. *Glanders and farcy*.—(a) Symptoms of acute and chronic glanders and farcy. (b)—Treatment.
6. *Malignant pustule*.—(a) Origin. (b)—Symptoms. (c)—Treatment.
7. *Dissection wounds*.—(a) Causation by putrid and infective material. (b)—Symptoms of different varieties. (c)—Treatment, preventive, immediate and curative.

MINERAL AND VEGETABLE IRRITANTS AND CAUSTICS.

1. Acids—Sulphuric, nitric, carbolic, &c.
2. Alkalies—Caustic, potash, Liq. ammoniæ, &c.
3. Salts—Chloride of lime, nitrate of silver, &c.
4. Vegetable juices.

Treatment. 1—Immediate. 2—Remote.

BURNS AND SCALDS.

Varieties—Dupuytren's classification.

Symptoms. 1—Local. 2—Constitutional, (a) Shock; (b) Reaction.

Complications and sequelæ. 1—Congestion. 2—Inflammation. 3—Suppuration. 4—Ulceration. 5—Gangrene.

Treatment. 1—Local. 2—Constitutional. Amputation required primarily when destruction of limb complete or secondarily when exhaustion from suppuration and gangrene severe.

FROST BITE.

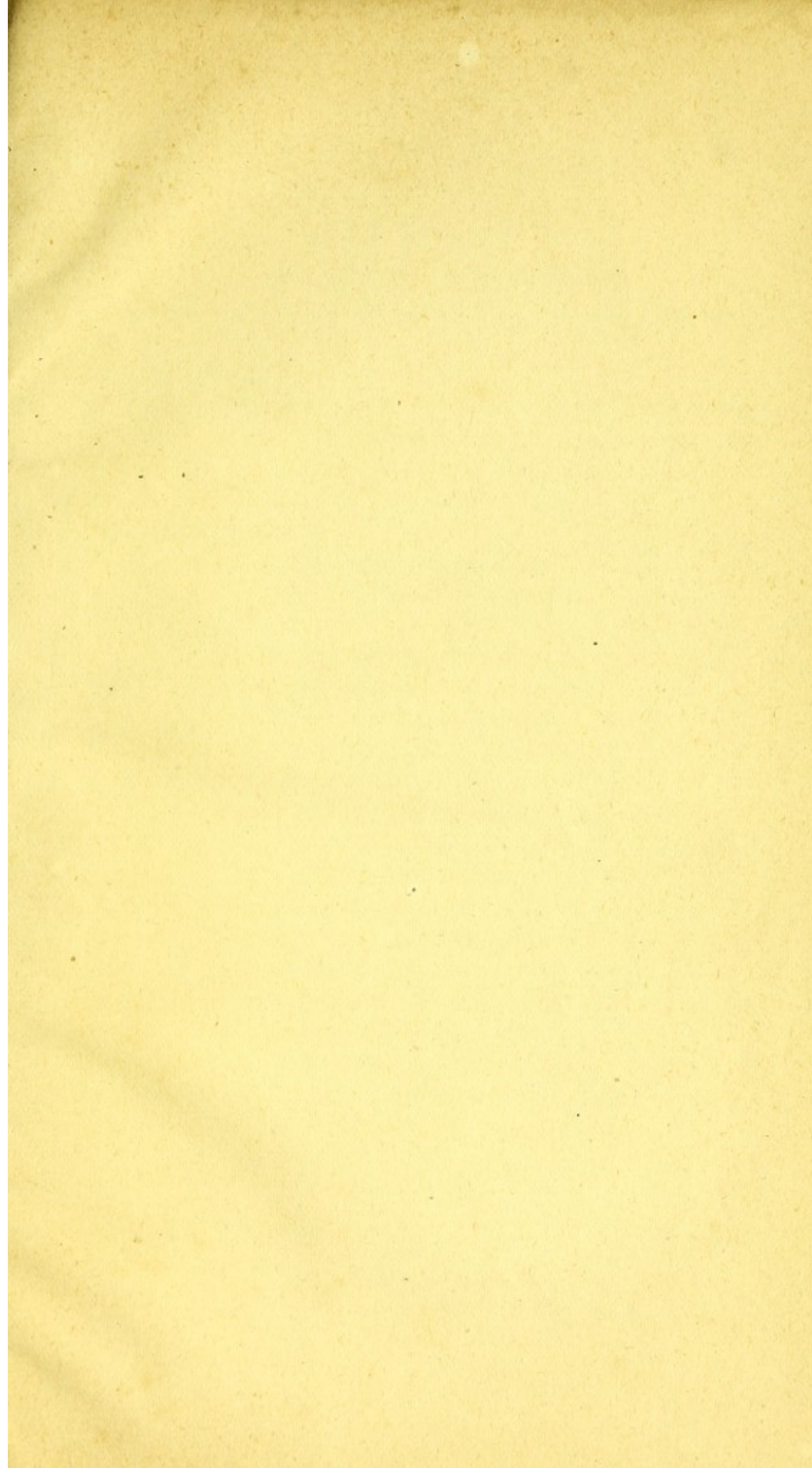
Varieties.

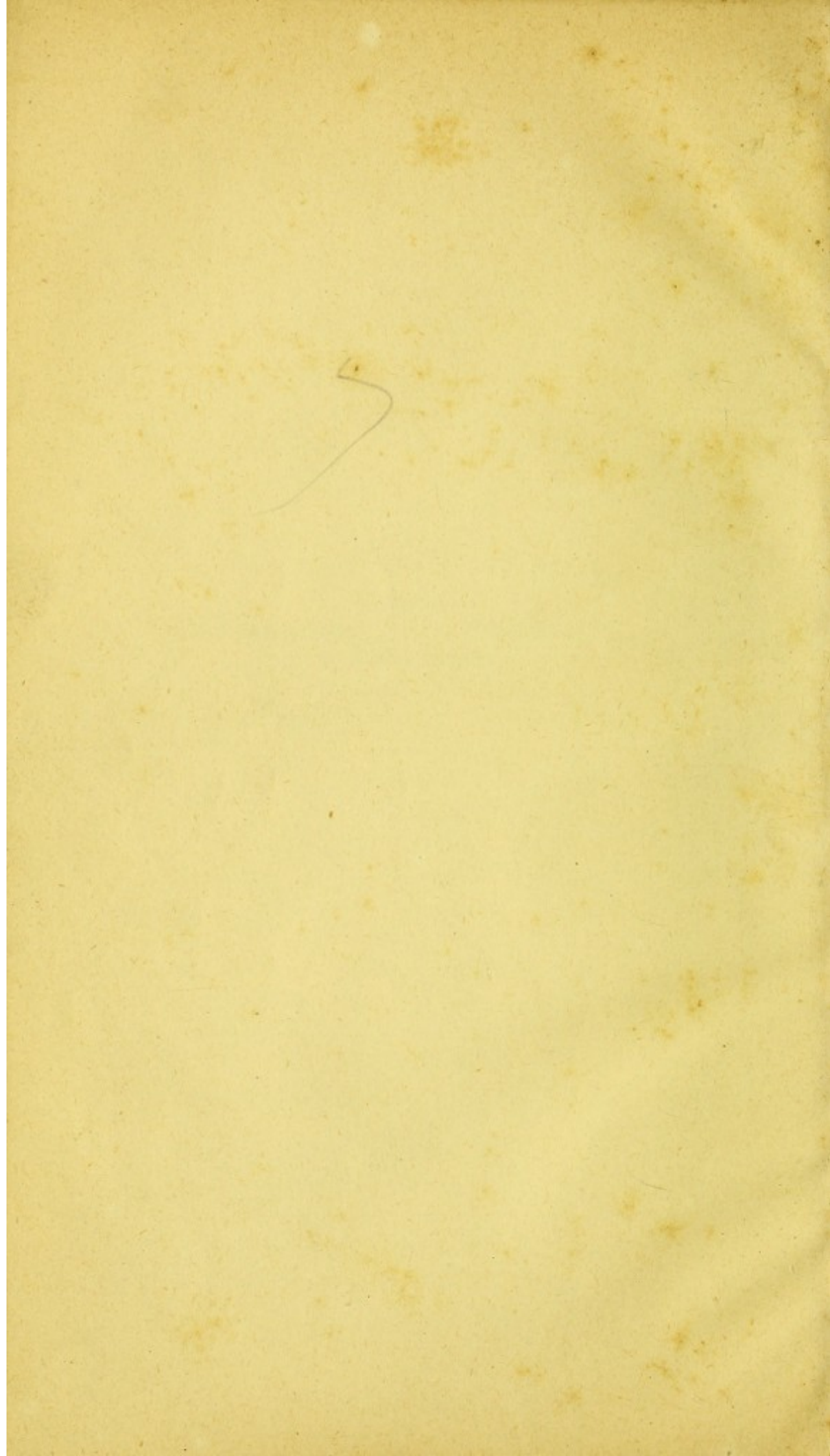
Symptoms.

Treatment. 1—Gradual restoration of circulation and avoidance of severe reaction. 2—Amputation unsuitable in cases of frost bite.

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12, Waterloo Street.





APPENDIX.

I CONCRETIONS AND CALCULI.

Morbid masses located within the body, due to degeneration of its solids or fluids.

I.—Classification.

1. *In tissues.*—(a.) Calcareous masses resulting from mineral degeneration of fibrous and serous membranes, blood vessels, &c.
(b.) Chalk stones or tophi.
2. *In blood vessels.*
(a.) Fibrinous or proteid.
(b.) Calcareous (phleboliths).
3. *In closed sacs.*
(a.) Thecal.
(b.) Bursal.
(c.) Loose bodies in joints.
(d.) Concretions in hernial sacs.
4. *Of pathological products and formations.*
(a.) Mineral degeneration of tumours.
(b.) ————— of tubercle and cancer.
(c.) ————— of caseated granulation material.
(d.) ————— of exudations.
5. *Of secretions—in glands and ducts.*
(a.) Lachrymal.
(b.) Salivary.
(c.) Lacteal.
(d.) Biliary.
(e.) Prostatic.
(f.) Preputial.
(g.) Sebaceous.
(h.) Tonsillar.
(i.) Nasal (rhinoliths).
(j.) Concretions in external meatus of ear.

6 *Of excretions—in gland ducts, receptacles and canals.*

(a) Intestinal.

(b.) Urinary.

i.—Renal.

ii.—Vesical.

iii.—Urethral.

II—*General Considerations*

1. *Chemical Composition* —(a.) Protein (fibrine). (b.) Colloid. (c.) Fat and fat salts (olein margarine and cholesterine). (d.) Earthy salts (phosphate and carbonate of lime and magnesia). (e.) Pigment. (f) Special salts and substances in special secretions (urates, oxalates and phosphates in urine &c.)
- 2.—*Causation and Pathology*.—(a.) result from—i. alteration in the part or fluid, or ii. change in the conditions or existence and nutrition of the part or fluid. (b.) Age an important cause of degenerative changes. (c.) Morbid products and growths specially prone to degeneration. (d.) Formation of calculi a reversion to inorganic type. (e.) Process of formation consists in—i. inspissation with or without decomposition ; ii. precipitation ; iii. molecular coalescence ; iv. crystallization ; v. cementing ; or vi. a combination of two or more of these.
- 3.—*Symptoms and effects* —(a.) Act generally as foreign bodies. (b.) May give rise to no disturbance. (c) May become encysted. (d.) May cause—i. functional disturbance ; ii. irritation and pain ; iii. obstruction ; iv. inflammation ; v. abscess ; vi. ulceration ; vii. fistula.
- 4.—*Principles of treatment*.—(a) Interference not always necessary. (b.) If necessary and removal impossible, palliatives advisable. (c) Removal may be effected by—i. solution ; ii. dilatation and prehension ; iii. crushing ; iv. excision ; (d.) *Fistulae* treated by removal of concretion and restoration of natural passage.

IV—*Special Concretions and Calculi.*

- 1.—*Degenerated tissues* seldom admit of surgical interference.
- 2.—*Chalk stones or tophi*. (a.) Composed of urate of soda (b.) May be removed when abscess forms around them or ulceration exposes them.

- 3.—*Fibrinous thrombi* in blood vessels seldom demand interference.
- 4.—*Phleboliths* may be removed by operation if very large or causing deformity or discomfort.
- 5.—*Thecal and bursal concretions* should be removed antiseptically.
- 6.—*Loose bodies in joints* (*a.*) may consist of—i. coagula of blood or exudation ; ii. detached synovial outgrowths ; iii. detached cartilaginous capsular or osseous outgrowths ; iv. chips of cartilage and bone broken off. (*b.*) Knee, elbow, shoulder and lower jaw most frequently affected. (*c.*) Symptoms—sudden pain followed by slight inflammation. (*d.*) Treatment ; i. palliative—elastic bandage ; ii. radical—antiseptic removal.
- 7.—*Degenerated pathological formations* generally become encysted and are best left alone.
- 8.—*Lachrymal calculi* (dacryoliths) (*a.*) Form in canaliculi or sac. (*b.*) Composed of lime salts. (*c.*) Cause obstruction inflammation and stillicidium. (*d.*) Should be removed by incision and scoop.
- 9.—*Salivary calculi* (*a.*) Most frequently found in Wharton's duct; may occur in Steno's. (*b.*) Cause obstruction or ranula. (*c.*) Require removal by incision and scoop.
- 10.—*Lacteal Calculi* (*a.*) Generally occupy terminal ducts. (*b.*) Cause lacteal cyst. (*c.*) Treatment by aspiration or incision with removal of concretion if possible.
- 11.—*Biliary calculi* (*a.*) Form in gall bladder. (*b.*) Composed of cholesterine bile pigment, &c. (*c.*) May obstruct cystic or common duct. (*d.*) May cause hepatic colic and jaundice and escape ; or become encysted ; or cause inflammation, ulceration and perforation into stomach, bowel, peritoneum, &c. (*e.*) Surgical interference seldom necessary.
- 12.—*Prostatic Calculi* (*a.*) Form in prostatic urethra or ducts of prostate. (*b.*) Composed of phosphate or carbonate of lime. (*c.*) Cause retention, irritation or inflammation. (*d.*) May be detected by sound or rectal examination. (*e.*) May be removed by urethra, or median lithotomy. (*f.*) If embedded in gland and not causing much inconvenience, palliative treatment best.

- 13.—*Preputial Calculi* (a.) Form in preputial cavity. (b.) Consist of inspissated and disorganized smegma (c.) Generally due to phimosis. (d.) Cause balanitis &c. (e.) Remove by slitting or circumcision.
- 14.—*Nasal Calculi* (rhinoliths.) (a.) Generally situated in inferior meatus. (b.) Composed of carbonate or phosphate of lime often surrounding foreign body. (c.) Cause chronic catarrh and ulceration. (d.) Should be removed by scoop.
- 15.—*Concretions in external auditory meatus.* (a.) Consist of inspissated wax sometimes mixed with inflammatory products. (b.) Cause deafness and discomfort. (c.) Remove by injection.
- 16.—*Intestinal Calculi* (a.) Cæcum and appendix most common seat. (b.) Consist commonly of foreign body with additions derived from contents of canal. (c.) Cause irritation, colic and obstruction, sometimes ulceration and abscess. (d.) Treatment according to symptoms.
- 17.—*Urinary Calculi* (a.) Healthy urine clear, salts held in solution. (b.) Turbidity and precipitation of salts due either to—i. morbid state of fluid, or ii. of passages. (c.) Urates, oxalates and phosphates the most common precipitates indicating three distinct diatheses. (d.) The uric or lithic diathesis :—i state of urine ; ii. character and form of deposits ; iii. causes ; iv. treatment. (e.) The oxalic diathesis, i. ii. iii. iv. as under (d). (f.) The phosphatic diathesis, ditto ditto. (g) Varieties of stone:—i. Uric acid. ii. Urate of ammonia. (rare) iii. Oxalate of lime (mulberry calculus). iv. Phosphate of lime (rare) v. Triple phosphate (of ammonia and magnesia). iv. Fusible calculus (combination of iv. and v.) vii. Carbonate of lime (rare.) viii, Cystine (rare). ix. Xanthine or xanthic or uric oxide (rare). x. Fibrine, blood ; &c. xi. Alternating calculi. (h.) Comparative frequency of different varieties (i.) Causation ; Age. ii Sex. iii. Race. iv. Locality. v. Hard water. vi. Disease of the urinary tract.
- 18.—*Renal Calculi.* (a.) Generally of diathetic origin and either uric or oxalic. (b.) May—i, pass down through ureter to bladder or ii. remain in kidney. (c.) In passing down give rise to renal colic. (d.) Symptoms of renal colic. (e.) Treatment.

(*f.*) May stick in ureter causing—i. hydronephrosis, and ii. dilatation and atrophy of kidney. (*g.*) If retained in kidney grow large and may cause—i. pyelitis; ii. hydronephrosis; iii. atrophy of kidney; iv. abscess of kidney (pyonephrosis); v. abscess around kidney (perinephritis). (*h.*) Symptoms of these (*i.*) Calculus may escape through lumbar fistula consequent on pointing of abscess in loins or into colon or pleura, (*j.*) Symptoms and diagnosis of retained renal calculus (*k.*) Treatment—nephrotomy and nephrectomy.

19.—*Vesical calculi.* (*a.*) Physical characters,—i; composition; ii. size, iii; weight, iv. hardness; v. shape; vi. number; (*b.*) Position—free and encysted, (*c.*) Symptoms—i. uneasiness and pain; ii. increased frequency of micturition; iii. discharge of blood mucus or pus; iv. stoppage of flow; v. prolapse of anus; vi. priapism; vii. pulling penis. (*d.*) Detection,—i. rectal and pubic examination; ii. sounding; instruments used and manner of use (*e.*) Pathological changes caused by stone—i cystitis; ii. thickening of coats and hypertrophy of bladder; iii. contraction or dilatation of bladder; iv. ulceration and perforation; v. abscess and fistula; vi. extension of inflammation to kidney or seminal ducts; vii. prostatic enlargement; viii. obstruction to parturition. (*f.*) Spontaneous rupture, disintegration and discharge of calculi. (*g.*)—Treatment;—i. solution; ii. extraction without cutting; iii. crushing without cutting; iv. incision with or without crushing and extraction through incision.

20.—*Solution of calculi* (lithontriptics) (*a.*) Acids, (*b.*) Alkalis, (*c.*) Acetate of lead, (*d.*) Electrolysis. Solvents as a rule inefficient.

21.—*Extraction of calculi without operation*—(*a.*) Position, (*b.*) Manipulation, (*c.*) Dilatation by bougies, (*d.*) Removal by forceps.

22.—*Crushing* (lithotrity and litholapaxy) (Civiale, Bigelow) (*a.*) Favourable conditions as regards—i. age; ii. size of stone; iii. composition of stone; iv. state of urethra; v. state of bladder; vi. state of kidneys; vii. general health; viii. position of stone. (*b.*) Instruments employed for crush-

ing. (c) Manner of seizing (Brodie's and Civiale's) and crushing. (d) Anæsthetics. (e) Duration of operation. (f) Removal of fragments and debris. (g) Preparatory and after treatment. (h) Risks and sequelæ :—i. Shock. ii. Urethral fever. iii. Suppression of urine. iv. Pyæmia. v. Hemorrhage. vi. Cystitis. vii. Injury of bladder. viii. Nephritis and orchitis. ix. Impaction of fragments. x. Atony of bladder. xi. Impaction of fragments between blades of instrument. (i) Mortality of lithotrity.

23.—*Lateral lithotomy.* (Cheselden) (a)—Suitable cases as regards—i. age ; ii. size of stone ; iii. composition of stone ; iv. position of stone ; v. state of urethra, bladder and kidneys ; vi. general health. (b) Instruments required. (c) Parts divided. (d) Method of operating. (e) Preparatory and after treatment. (f) Management of large stones. (g) Risks and sequelæ :—i. Shock ; ii. Hæmorrhage. iii. Cystitis. iv. Pelvic cellulitis. v. Peritonitis. vi. Pyæmia. vii. Sloughing. viii. Fistula. (h) Mortality according to age, size of stone, &c.

24 *Bilateral lithotomy.* (Dupuytren) Mode of operating and alleged advantages.

25 *Median lithotomy.* (Allarton) " "

26 *Medio lateral and bilateral.* (Civiale, Ferguson) " "

27 *Supra-pubic.* (Peter Franco) " "

28 *Recto-vesical.* (Sanson) " "

29 *Removal of stone from the female bladder.* (a) By rapid dilatation ; (b) lithotrity ; (c) urethral lithotomy ; (d) vaginal do. ; (e) supra pubic do.

30 *Urethral Calculi.* (a) May be—i. impacted or ii. encysted. (b) May be removed by—i. manipulation ; ii. extraction ; iii. crushing ; iv. pushing back into bladder and crushing or cutting ; v. incision and extraction, N. B. Incision should never be made if possible in front of the scrotum.

II. DISPLACEMENTS.

I.—*Congenital.*—Of brain, heart, testes, &c.

II.—*Pathological.*—1. from effusion—of heart, lungs, &c.

2. From destructive disease—of bones.
 III.—*Traumatic*. 1. Of Viscera. 2. Of muscles, tendons, &c. 3. Of bones and joints (dislocations).
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HERNIA.

- I.—*Definition*.—Partial or entire protrusion of a viscus or viscera out of one of the cavities of the body.
- II.—*Varieties*. 1. *Non abdominal*. (*a*) Of brain or its membranes. (*b*) Of the spinal cord or its membranes. (*c*) Of the iris. (*d*) Of the lung. (*e*) Of the testicle.
2. *Abdominal*.
- A.—*According to situation*.—(*a*) Inguinal. *i*. Direct. *ii*. Oblique. *iii*. Congenital. *iv*. Infantile. *v*. Bubonocoele. *vi*. Scrotal. (*b*) Crural or femoral. (*c*) Umbilical. (*d*) Ventral. (*e*) Thyroid. (*f*) Sciatic. (*g*) Perinæal. (*h*) Pudendal. (*i*) Vaginal. (*j*) Diaphragmatic or phrenic. (*k*) Intra abdominal.—*i*. Mesenteric. *ii*. Mesocolic. *iii*. Omental. *iv*. Intestinal. (*l*) Multiple.
- B.—*According to contents*. (*a*) Enterocoele. (*b*) Epiplocele. (*c*) Entero-Epiplocele. (*d*) Gastrocele. (*e*) Cystocoele. (*f*) Hysterocele. (*g*) Cœcocoele. (*h*) Rectocoele.
- C.—*According to condition*.—(*a*) Reducible. (*b*) Irreducible. (*c*) Obstructed. (*d*) Inflamed. (*e*) Strangulated.
- III.—*Anatomy of Hernia*. 1. Sac. 2. Coverings. 3. Contents.
- 1.—*Sac*—(*a*) Consists of body and neck: (*b*) Serous and omental: (*c*) Single and multiple: (*d*) Partially or totally absent in—*i* congenital hernia; *ii*. umbilical hernia; *iii*. parietal after wound, abscess or gangrene; *iv*. cœcocoele and cystocoele.
- 2.—*Coverings*.—(*a*) Consist of skin and tissues intervening between skin and sac.
- 3.—*Contents*.—(*a*) Intestine (enterocoele): (*b*) Omentum (epiplocele): (*c*) Both intestine and omentum or mesentery (entero-epiplocele): (*d*) Other viscera: (*e*) Fluid: (*f*) Foreign bodies.

IV.—*Pathological changes occurring in.*—

- 1.—*Sac.*—(a) Becomes flask shaped : (b) Neck puckered or thickened : (c) Subserous tissue thickened : (d) Body thickened or thinned : (e) Tissue congested, inflamed or gangrenous : (f) Hour glass contraction : (g) Contracts adhesions to surrounding tissues.
 - 2.—*Coverings.*—(a) Become thickened and hypertrophied or thinned : (b) Layers become adherent to each other : (c) Opening widened and displaced, or thickened and contracted : (d) Congested, inflamed or gangrenous.
 - 3.—*Contents.*—(a) Intestine becomes dilated and dull on surface : (b) Omentum matted and adherent : (c) Intestine distended with flatus or fæces or foreign bodies : (d) May become congested, inflamed or strangulated : (e) Adhesions may form between—*i.* coils of intestines ; *ii.* layers of mesentery and omentum ; *iii.* intestine and omentum ; *iv.* contents and sac ; *v.* band may stretch across cavity ; *vi.* holes form in omentum &c., *vii.* fluid may accumulate in sac and become encysted.
- V. *Causes.* 1.—Predisposing. (a) Sex : (b) Age : (c) Heredity : (d) Defective development : (e) Natural weakness, or laxity of parts or patency of apertures : (f) Occupation : (g) Natural malformation : (h) Effect of wound, abscess, &c. : (i) Distension of abdominal walls by pregnancy, obesity, &c. : (j) Laxity of attachments of viscera.
- 2.—Exciting (a) Violence, falls, &c. : (b) Coughing, straining, &c. : (c) Stone in the bladder : (d) Stricture of urethra.

REDUCIBLE HERNIA.

- I. *Symptoms.*—1 Tumour or swelling ; (a) Soft and elastic : (b) Situated opposite a natural or morbid opening : (c) Increased by erect position, straining, coughing, &c. : (d) Possessing a distensile impulse : (e) Reducible by position, pressure or manipulation ; return being accompanied by gurgling sensation : (f) Mostly tympanitic. 2. Uneasy sensations locally and gastric disturbance (dyspepsia, constipation, &c.)

- II. *Diagnosis*.—1. From solid tumour. 2. From fluid tumour. 3. From varicocele.
- III. *Prognosis and risks*.—1 Increase of size. 2 May become irreducible. 3. May undergo strangulation.
- IV. *Treatment*.—1. By truss : (a) Should afford continuous and comfortable pressure : (b) Should be applied over opening : (c) Should retain the hernia, and (d) be constantly worn.
- 2—*Radical* (a) Objects—*i.* obliteration of sac ; *ii.* plugging of opening ; *iii.* constriction of opening ; *iv.* two or more of these combined.

(b) Methods. *i.*—Continuous application of truss ; *ii.*—Irritants applied locally (Fabricius, Verdue, Pare, &c.) *iii.*—Compression (Celsus &c.) ; with astringents (Fournier &c.) *iv.*—Recumbent position (Ravin, Riviere &c.) ; *v.*—Cauterising neck of sac (Avicenna, Franco, &c.) ; *vi.*—Incision and suture of sac (Armand, &c.) ; *vii.*—Incision and application of Iodine (Hinman), *viii.*—Excision of sac (Bertrandi, Lanfranc, &c.) ; *ix.*—Ligature of sac (Desault, Dupuytren, &c.) ; *x.*—Ligature of ring (Wood, Dowell, &c.) ; *xi.*—Castration ; *xii.*—Scarification of neck (Le Blanc Guerrin.) ; *xiii.*—Plugging with epiploon (Cooper &c.) ; *xiv.*—with the testicle or sac (Scultetus, Steffen) ; *xv.*—with integument (Jameson) *xvi.*—with invaginated skin (Gerdy Wützer &c.) ; *xvii.*—Acupuncture (Bonnet) ; *xviii.*—Injection (Vepleau, Heaton, Warren) ; *xix.*—Wood's operation. *xx.*—Antiseptic operation (Annandale McLeod).

IRREDUCIBLE HERNIA.

- I. *Causes of irreducibility*.—1. Nature of Hernia,—cæcum, bladder, &c. 2.—Structure of sac, thickening of neck, hour glass contraction, &c. 3.—Matting of omentum or mesentery. 4.—Growth of fat in omentum. 5.—Adhesion of contents or contents and sac. 6.—Reduced capacity of abdomen.

- II. *Symptoms*—1.—Colic, constipation and dyspepsia; 2.—Local discomfort; 3.—Risk of injury and strangulation.
- III. *Treatment*—1.—Support and protection, (hollow truss); 2.—Reduction of size of contents (low diet, purges, mercury, iodide of potassium &c.)
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OBSTRUCTED (INCARCERATED) HERNIA.

- I. *Causes of obstruction*, 1—Accumulation of flatus, fæces, foreign bodies, &c. 2—Spasm. 3—Twist (volvulus). 4—Band or adhesion.
- II. *Symptoms*. 1—Constipation. 2—Eructations or vomiting. 3—Uneasiness, locally.
- III. *Treatment*. 1—Evacuate contents,—purge, enema. 2—Reduce bulk and allay irritation,—ice. 3—Abolish spasm,—opium, belladonna. 4—If medicines unavailing and obstruction permanent, open sac.
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INFLAMED HERNIA.

- I. *Causes of inflammation*. (a)—Injury; (b)—Irritating contents; (c)—Participation in general inflammation; (d)—Strangulation.
- II. *Symptoms*. 1—Heat, pain, swelling, tension, redness locally. 2—General peritoneal irritation. 3—Vomiting. 4—Constipation.
- III. *Treatment*. 1—Cold, and astringents locally. 2—Leeches. 3—Calomel and opium. 4—Low diet. 5—Rest.
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STRANGULATED HERNIA.

A hernia in which the circulation of sac and contents—one or both—is impeded or abolished; congestion, inflammation or gangrene ensuing; irreducibility and obstruction coexist.

- I.—*Causes of strangulation*. 1—Tension from over distension; 2—Constriction of neck.
- II.—*Circumstances of strangulation*. 1—Recent protrusion. 2—New descent. 3—Distension with flatus or fæces.

- III.—*Seat of constriction.* 1—Neck of sac. 2—Thickened tissue outside of neck. 3—Ring. 4—Hour glass contraction. 5—Bands or aperture.
- IV.—*Consequences of strangulation.* 1—Swelling and change of colour and consistence of contents. 2—Effusion into sac. 3—Congestion of sac. 4—Inflammation of contents, sac and coverings. 5—Gangrene of contents, sac and coverings. 6—Sloughing of contents, sac and coverings. 7—Peritonitis.
- V. *Symptoms.* *Local.* (a)—Increased size ; (b)—Increased tension ; (c)—Irreducibility ; (d)—Pain ; (e)—Absence of impulse.
- 2 *Constitutional.* (a)—Constipation ; (b)—Vomiting (c)—Restlessness ; (d)—If peritonitis, hard, small, quick pulse, dry tongue, fever, &c. (e) If gangrene, cessation of pain, hiccup, clammy skin, cold sweats, prostration, &c.
- VI *Diagnosis.* From—1—obstructed irreducible hernia. 2—inflamed irreducible hernia.
- VII *Prognosis* depends on degree of tension and constriction, age of hernia and duration of strangulation.
- VIII *Treatment.* Principles. 1—Reduction of hernia. 2—Division of constriction.
1. *The taxis*—(a) Method of application ; (b) Auxiliaries—*i.* relaxation by position ; *ii.* inversion ; *iii.* chloroform ; *iv.* ice ; *v.* warm bath, opium, &c.
2. *Herniotomy*—(a) Without opening sac—(b) With opening sac—(c) risks ; *i.* wounding artery or intestine ; *ii.* inflammation ; (d) Treatment of contents when—*i.* congested ; *ii.* inflamed ; *iii.* gangrenous ; *iv.* adherent. (e) Radical cure.
3. *Persistent strangulation after reduction by taxis*—Bryant's four varieties ; (a) Reduction en bloc ; (b) Thrusting between layers of abdominal wall ; (c) Rupture of sac ; (d) Reduction of neck.

III. ANEURISM.

Definition. A tumour containing blood communicating with the interior of an artery.

Varieties. 1—Traumatic (varicose aneurism and aneurismal varix). 2—Non-traumatic. (a)—Cylindrical. (b)—Fusiform. (c)—Sacculated. (d)—Dissecting.

True and false aneurism—circumscribed and diffused.

Causes. 1—Diseases of arterial coats (atheroma). 2.—Violence.

Pathological changes. 1—Inflammatory thickening of adventitia and surrounding tissues. 2—Coagulation of contained blood. 3—Gradual increase in size.

Effects on neighbouring parts. 1—Interference with distal circulation. 2—Disturbance of innervation. 3—Absorption of bone, &c.

Terminations. 1—Diffusion. 2—Sloughing. 3—Opening on surface. 4—Opening into adjoining cavities and tubes. 5—Gangrene of limb. 6—Spontaneous cure.

Modes of spontaneous cure. 1—Inflammation. 2—By sloughing. 3—By coagulation of contents. 5—By plugging. 6—By compression of artery.

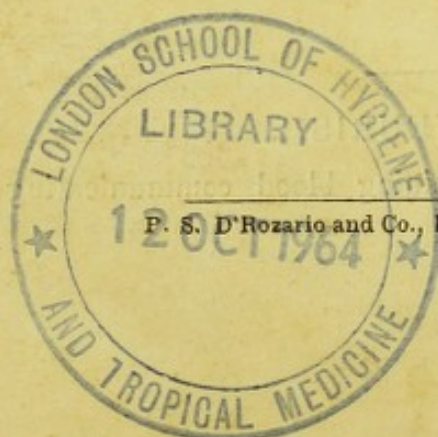
Symptoms. 1—Swelling. 2—Fluctuation. 3—Pulsation (distensile). 4—Effect of proximal compression. 5—Bruit. 6—Symptoms depending on pressure, &c. 7—Symptoms depending on interference with distal circulation.

Diagnosis. 1—From tumours; (a) pulsating; (b) non-pulsating. 2—From other fluid swellings.

Prognosis. For the most part unfavourable.

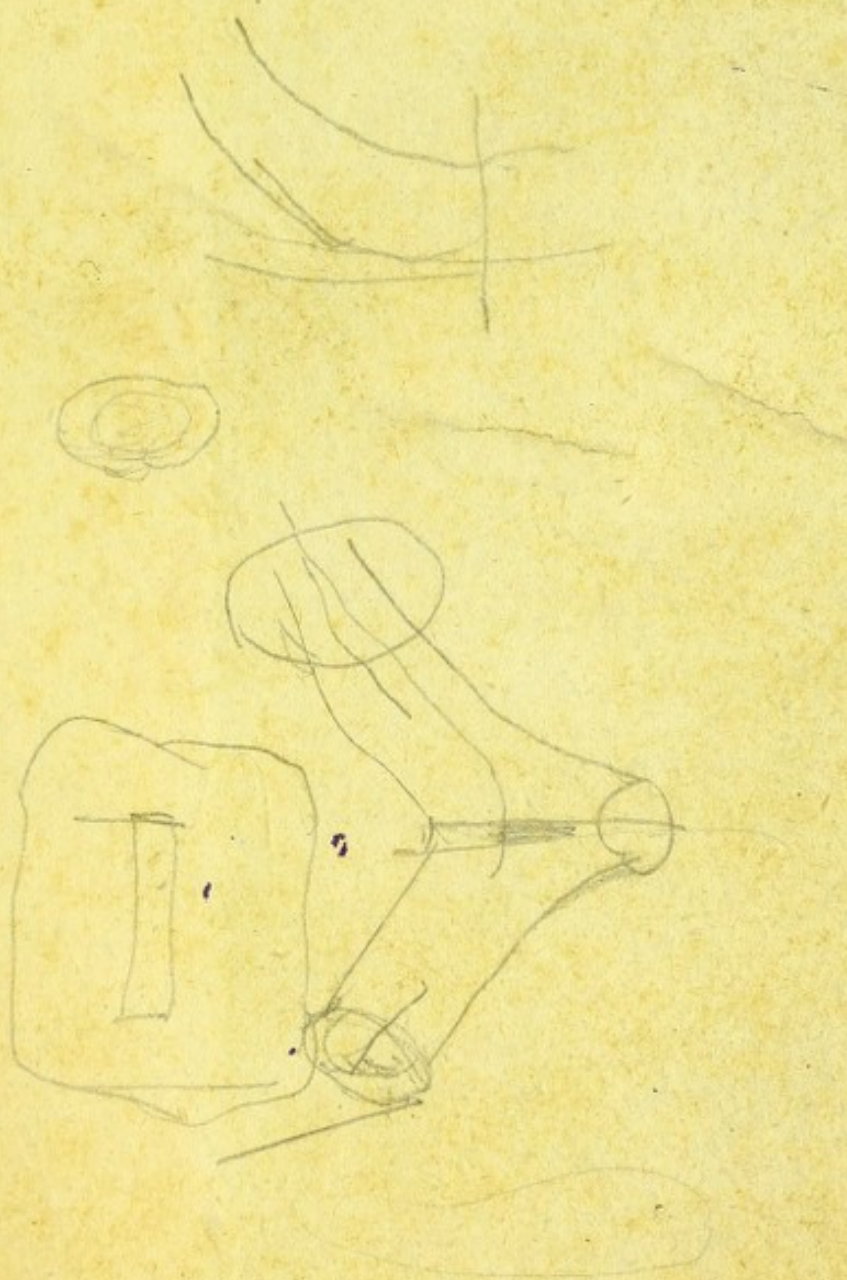
Treatment. Principles. 1—Diminish blood pressure. 2—Delay or abolish circulation through tumour. 3—Promote coagulability of blood.

Methods 1—Medical treatment. 2—Compression. 3—Flexion. 4—Esmarch's bandage. 4—Ligation of artery. 5—Manipulation. 6—Injection of ergotine, &c. 7—Galvanic puncture. 8—Setons. 9—Laying open sac. 10—Amputation of limb.



b. AG

1881



W. H. P.

