CONSTIPATION. - inability to empty colon at regular intervals - usually daily.

Aet. - Faulty habits - fails to empty at same time.
Diet - lack of roughage + fluid, irregular meals + freq. Snacks.
Worry.
Diseases of colon - Local: colon, rectum (h'hoids) obstruction.
General diseases - severe Anaemia.

Tr. 1. Reassurance.
2. Diet - extra roughage, green vegetables, wheat, wh'meal bread, all-bran.
Fruit.
Extra-fluid - firstly in morning.
3. Regular meals (four only) avoid snacks.
No pastry, cakes, chocs (!)
4. Exercise
5. Develop good habits.
Advise to see Doc. (abd. pain, blood in stool, etc.)
Aperient - taking discouraged, far as poss.
Liq. Paraffin ℥ii T.D.S.
Cascara Sag. gr. 3-6 (followed by Paraffin later)
Salts - Magnesium Sulphate

EXPECTORANTS. Encourage flow and coughing up of sputum.
Potassium Iodide gr. x
Ipecacuanha. m. v
Senega ℥ss
} May be combined as Mist. Expectorant.
Ammon. Carbonate
(Sodi-Bic. added by many

RESP. SEDATIVES. Linctuses (sugar, sometimes honey) - Codein gr. 1/8 in ℥i
Scillae (Squills)
Heroin gr. 1/12 - ℥i (D.D.A. - rarely used)

RESP. STIMULANTS. Nikethamide 3cc.
Lobelia 1cc.
Megimide (0.6% soln.) 10cc. every 5m. up. to 200 mls.
Picrotoxin (2cc.)

ANTISPASMODICS OF RESP. SYSTEM.

Adrenalin 1:1000
Aminophyllin
Ephedrine (gr. ½ T.D.S)
Neo-epinine
Stramonium (bet. attacks of asthma).

DIABETES MELLITUS

Disorder of carbohydrate metabolism due to lack of insulin (Hormone) produced in the Islets of Langerhans in pancreas.

Blood sugar remains constant in health. 80–120 mg in 100 mls. blood, level rises after carbohydrate intake, but rarely above 180 mg. Returns to fasting level in 2 hours. Controlled by Insulin

In Diabetes, fasting blood sugar high, rise after Chs intake considerable and does not return to fasting level for several hours.

METABOLISM < burning of sugar – Energy
storing of sugar – glycogen.
Excess

Fat metabolism is interfered with.

FAT METABOLISM – Fat = energy + H_2O + CO_2

Incomplete combustion = acids – acetone
Diacetic } Ketones. Ketosis = coma.

S.+S. 1. Thirst – losing lot of water
2. polyuria. (kidneys trying to get rid of excess sugar)
3. constipation.
4. lack of energy (young – more noticable)
5. loss of weight. "
6. hunger.
7. boils, carbuncles, pruritis ani (or vulvae)

Diag. confirmed Urine – glycosuria.
+ Ketonuria.
Blood – hyperglycaemia.

Disease can be severe or mild.

DIABETES MELLITUS (cont.)

Complications — Boils, carbuncles
Neuritis
Eye – Cataracts
– Retinitis (may be severe)
Blood-vessels – arteriosclerosis
– gangrene.
kidney degeneration
Coma.

Treatment depends on age, weight, occupation, height, sex
Elderly, obese patients with mild diabetes may be treated with diet alone
Young patients require diet and insulin.
Diet: reduction in carbohydrate intake – amt. depends on above. ↑
At onset Ch. intakes may be reduced to 200 c. per day, and when blood sugar controlled this may be increased to provide ~~enough~~ sufficient carbohydrates to keep weight just under average for age group.
12-14 calories per pound body weight.
140 lbs. × 12 = 1680 cals. if underweight or active – need more.
C.H.O. = 250 grams = 1,000 cals.
Protein = 100 " 400 "
Fats 100 " 900
2,300 Calories
Some Doctors give more CHO than protein, etc.
INSULIN often nec. to control metabolism.
Regular – acts quickly – effects last until 6 hours.
Protamine Zinc – acts slowly – action maintained for 24 hours.
Lente, semi Lente.
Ultra-lente: similar to Protamine Zinc but more satisfactory.
Type depends on a, w, o, h, sesa.
Sometimes mixtures of Regular & Protamine, & lentes given.
Strengths 1 cc. = 20 (single) 1 cc = 40 (double)
Given 20 m. a/c

DIABETES MELLITUS

Effects of Insulin: 1. Hypoglycaemia: causes giddiness, headache, flushing, sweating, unsteady gait, slurring of speech, irritable, COMA.

2. Hyperglycaemia: onset gradual, p. drowsy and grad. devel. of coma. Skin dry, ~~eyes~~ puckers + inelastic, eyeballs low. Tongue dry + furry (S. of dehydration) Pulse weak + rapid, resps. ↑ deep + sighing (Ketosis) Breath - acetone - sweet - fruity. Vomiting (dangerous) Reflexes absent. Urine: sugar + ketones esp. diacetic ~~test~~. Blood Sugar - hyperglycaemia (400 mg.)

Admitted to hospital for regulation. O/a weighed, Skin examined for boils, and feet for gangrene. Rest important if p. very ill, but encouraged to move about as soon as poss. Daily bath, with particular attention to care of feet + toes, and chiropodist should treat any foot ailments such as corns + cutting of the nails, important. Reassurance and bright and cheerful atmosphere. Simple explanation of condition to p. Knowledge of elementary dietetics important, with spec. ref. to p.'s own diet. Food weighed (carbohydrates), and p. should keep strictly to amount allowed. Diet sheet should be provided, and, where poss., p. is encouraged to eat ordinary food provided in his home. (no special breads, etc., only spec. jams etc.) Saccharine instead of sugar.

Urine tested every four hours, + spec. chart kept of results of test. P. shown how to test his own urine + to give own insulin (if poss.) >12 yrs. P. should be allowed to experience srs. of mild hypoglycaemia (depends on Doc.) Advised to carry lumps of sugar in pocket to counteract mild hypoglycaemia.

When p. discharged from hosp. - should be confident; advised to report to Doc. regularly (monthly) or to Diabetic clinic, Provided + equipment for testing urine, diet chart and should have scales to weigh the food. Also advised to report to Doc. if any other illnesses, such as colds, infections, and if loss of appetite (take glucose instead) Diab. worse + infections.

DIAB. MELL.

Hyperglycaemia: Tr. 1. R.I.B. in left lateral position.
Instruments on locker tongue forceps, etc. K.D.
2. Insulin (Regular) in large doses (200) (I.V.–I.V.) then sub-cutaneously.
3. I.V. fluid for dehydration (may die from heart failure)
4. Ryles' tube & asp. gastric contents to control vomiting.

Regular spec. of blood & Path. to control condition & careful observations for signs of hypoglycaemia. I.V. Dextrose may be given (1G. for every 3 of insulin) General nursing care. When patient recovers, careful treatment with diet and insulin to stabilise condition. Change position every 2 hours when comatose. Care of mouth, pressure areas, and observation for hypoglyc. signs.

Hypoglycaemic (cf) insulin

Onset sudden, skin moist, eye tension normal, Pulse-good volume, maybe rapid, resp's. normal & breath normal. No vomiting, and reflexes-brisk tendon jerks. Twitching of muscles of face or whole body-convulsions. Urine: little, or no sugar - no ketones. Blood sugar: low - hypoglycaemia
Tr. urgent - glucose given - I.V. or Ryles' tube if I.V. not poss.
½ oc. Adrenalin may be given to change glycogen to glucose. G. G. N. C.
Mild overdose - Sugar by mouth.

Operations in Diabetic Patients

All diabetic p.'s undergoing ops. should have insulin & glucose beforehand to control ketosis. Post-operatively - glucose must be given c N/S I.V. until p. can take fluids by mouth. Freq. examinations of blood sugar and urine tests carried out and small frequent doses of insulin given. Chloroform & Ether should not be given to Diabetics.

Infection & sepsis in Diab. Patient.

Septic foci should be tr. as early as possible and p. kept under medical supervision during the period.

Tr. of Gangrene & Cataracts done before.

OVARIAN CYSTS.

Tumour containing fluid; common; any age affected.

3 varieties 1. pseudomucinous.
2. serous - watery.
3. dermoid - tissues - teeth, bones, hair, epith.
4. chocolate cyst.

1. ~~Pseudomucinous~~.

S.+S. often done - may be discovered in routine medical exam, if s. present - pressure symptoms - abdominal discomfort, pain. pressure on bladder.

severe symptoms, due to torsion of pedicle, and p. complains of severe abdominal pain, vomiting, tenderness. Possible for cyst to rupture - severe s. + free fluid in peritoneal cavity.

Serous dermoid cysts may become malignant.

Tr. remove it. - ovary may be removed as well.
malignant cyst - deep x-Ray therapy after op.

HEAD INJURIES

no head injury - however slight - should be neglected, + however serious - don't despair. Maybe bruised, cut + bleeding, or skull fractured.

Vault may be fractured, or base. Anterior, middle + posterior fossae in base, and any part may be #'d.

Results may be concussion, compression + cerebral irritation.

Concussion: state of shock, p. recovers within 24 hours (conc. alone)

Compression: pressure on brain - oedema, clot, depressed #

Cerebr. Irritation: may be result of minute haem.'s on surface of brain.

#'d Base of Skull - # anterior fossa (over eyes) - swelling + bruising round eyes discharge of blood & C.S.F. fluid from nose.

middle fossa (over ear) bleeding of C.S.F. through ears.

post. fossa: after few days - bruising back of neck.

CONCUSSION: S+S. loss of consciousness not always in concussion alone - react to painful stimuli
shock - rapid pulse, shallow resp.'s, cold, clammy skin.
low B.P.
pupils = react sluggishly to light, slightly dilated.

As p. recovers, face becomes flushed, grad. regains conc., p. improves, may be vomiting, headache.

CONCUSSION 2r. R.I.B. in quiet room or quiet corner of ward.
While unconsc. - position - recumbent - changed from side to side 2 hourly.
Clear mouth - teeth, etc. kept clean.
Observations important - for signs of complications.
Patient suffers from retrograde amnesia - before accident.
Analgesics - never Morphia - Codein for headache. (Morph. causes complic.'s)
Light diet.
Gradually allowed pillows as head improves.
Encouraged to move about bed.

COMPRESSION 2ndy. to conc. Unconsciousness deep - no react. to painful stimuli.
Respirations slow & stertorous.
Pulse - full, slow
B.P. rises
Pupil on affected side - lesion - constricts but later dilated & fixed.
Pupil on other eye undergoes same changes later.
Twitching of muscles - convulsions.
Paralysis of muscles of opposite side of body.
Later, in terminal stages — Pulse increases
B.P. falls.
Hyperpyrexia
Cheyne - Stokes' respirations.

CEREB. IRRITATION P. in stupor - react to stimuli - such as calling by name. Noisy, delirious and restless. P.V Resp. normal. - Photophobia.

Middle Meningeal Arterial Haemorrhage.

Serious comp. P. regains consciousness from concussion, complains of a severe headache, and gradually lapses into deep coma, with signs of compression. Period of consciousness — lucid interval.

L.

NURSING CARE AND OBSERVATIONS OF H.I.

P. admitted to well-protected bed – padded head of bed. While deeply unconsc. – nursed in lateral position, and position changed every two hours to prevent pneumonia & pressure sores. Mouth inspected for loose teeth, blots, mucus; kept clean.

P. protected from cold, & avoid overheating.

Watch for signs of retention of urine – cath. may be necessary.

Observations: 1. depth of unconsciousness e.g.: deep in compression

2. respirations: shallow in concussion,
slow & noisy in compression.

3. pulse – weak & rapid in concussion & term. stages compression
slow & full in compression.

4. Blood pressure – high in compression, falling in terminal stages.
low in concussion.

5. pupils: =, but reaction sluggish in concussion.
unequal in compression.

6. paralysis of limbs in compression.

7. Convulsions or fits in comp.
lucid interval in middle meningeal arterial haemorrhage.

8. vomiting – in concussion.

9. photophobia, irritability, restlessness in irritation.

10. pyrexia – sometimes occurs in compression.

Pupils should be observed every 10-15 minutes.

Spec. tr. Surgery nec. in comp. to arrest haem., remove clots or bones.
Scalp, bones cleaned & sutured (if bones broken, cover & st. dressing)
Shaving of head imps. before skull operations.
Tracheostomy may be nec. if resp. centre effected.

Drugs: A.T.S. and anti-gas-gangrene serum.
antibiotics.
analgesics – sedatives – barbitures often necessary.
Morphia never given unless absolutely necessary (resp. depressant & mask symptoms)

Sp. sponging in c evaporating lotions & fans nec. & hyperpyrexia.

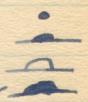
Feeding – if P. unconsc. for some time artificial feeding necessary.

Pressure areas. – changing bed for incontinence.

G.G.N.G. . Shading of light.

When P. recovers, changes of personality may be noticed - headaches may occur weeks or months later.

CHICKEN POX

Virus infection 14-21 days - droplet infection, direct contact.
Onset gradual. Rash after gen. malaise, anorexia.
Rash more abundant on trunk - appears in crops.
Macules appear first, become papules, then vesicles, pustules last. Contents dry up and form a crust. 

Tr. low pyrexia - 100-101°
isolation.
rash irritating - calamine - don't scratch, as may infect.
may be nec. to lightly splint child's arms to prevent scratching.
Usually clears up without complications.
Child should have nourishing diet, kept clean.
Isolated until last lesions have disappeared.

HERPES ZOSTER:

Inflammation of nerve endings or along surface of nerve. Cause is virus, caused in adults who have come into contact with chicken pox.

Sts. severe pain along course of nerve.
inflammation.
crop of vesicles may become pustules then crusts.

If occurs in opthalmic branch of trigeminal nerve may involve conjunctiva or cornea, may cause corneal ulcers.

Tr. isolation during acute stages.
analgesics for pain - Codein.
local application of St. collodion, powder (antib.) + just left.
If eye infolved - Dr. Thomas to see - to advise treatment - drops albucin, P. etc. + P.

HERPES SIMPLEX assoc. ic pneumonia - skin disease - virus.

D.D.A.

1923 - to control the use of habit-forming drugs.

1. Cocaine
2. Opium and preparations eg. Morphia,
   Omnopon.
   Liquet. Opium.
   Nepenthe.
3. Indian hemp - Cannabis Indica. (marihuana)
4. Pethedine) synthetics.
   Physeptone)

POISONS ACT.

1933 - drugs dangerous to life if taken in large enough quantities.

Sulpha
antihistamines
atropines
barbiturates.

Drug must be in writing by Doctor - amt. to be given.

SMALLPOX (Variola)

Rare, but outbreaks may occur

S.YS. incubation period 10-14 days

Variola Major - sudden onset of headache,
pains in the loins
Rigor - becomes very ill.
T° ↑ - 104°
May be a fleeting rash, but true smallpox rash appears third day
Mortality 25-50%.

Variola minor: alastrim. milder - may be confused i/c chickenpox

Tr. nil specific - treat G.G.N.C.
sedatives + analgesics P.A.N.
T° - tepid sponging.
Rash - pot. permang. or dilute carbolic acid solutions.
Mouth toilet imp.
X-P + Sulphas during pustular stage.

LIVER DISEASES

Function of Liver stores glycogen, protein & fats, breaks amino-acids to urea + to kidneys via blood.
stores vitamins A B D E K, manufactures prothrombin, heparin, fibrinogen.
stores iron, Vit. B_{12} - haemopoitin. Destruction of toxins.

Hepatitis. - Infective (viral)
acute necrosis (acute yellow atrophy)
Weil's Disease (Spirochaetosis)
Cirrhosis of Liver.
Ca

Infective Hepatitis
Incubation period: 20-100 days, spread by excreta - contaminates water, food, etc.
S. + S. onset gradual - malaise, anorexia, nausea (esp. fat.) sometimes vomiting
mild pyrexia 99°-101°F
jaundice - first noticed in sclera of eye, then spreads over skin.
dark urine - due to bile pigments
stools clay coloured, due to absence of bile pigments.
May be mild or severe fulminating attack, possibly fatal.
Tr. isolation - R.I.B. until last trace of jaundice disappeared - to rest liver.
Diet - light diet tolerated only at first - no fat - extra fluids, glucose vitamins.
as appetite improves as he likes - no fat tolerated better.
Anti-histamine drugs for severe itching of the skin, also calamine
C.G.V.C. - strict isolation nursing.
Stools and urine disinfected before disposing - carbolic 1:20 for 2 hours.
Bright, cheerful room important.
Complications: majority recover if Tr. complete
Acute necrosis may occur - usually fatal.
Sub-acute necrosis - causes permanent liver damage

Acute Necrosis (yellow atrophy)
Acute degeneration of liver. Liver becomes yellow + atrophied.
Aetiol. fulminating infective hepatitis.
Weil's disease.
Toxaemia of pregnancy.
certain poisons - eg. arsenic and poisonous fungi.

LIVER DISEASES Acute Necrosis (cont.)

S.+S. vomiting, delirium, convulsions,
dehydration.
severe jaundice.
stupor and coma.

Tr. Ryles' tube to control vomiting
I.V. M/S + Dextrose
Absolute rest.
G.C.N.C.
Mortality rate is high if survive perm. liver damage + ill health.

Weil's Disease
~~rare~~ disease - spirochaetes - transmitted in rats.
S.+S. malaise, anorexia, vomiting.
jaundice, pyrexia,
haemorrhages into mouth + skin - petechiae
diagnosis confirmed by blood examination.
Tr. R.I.D.
fluids ++
nourishing diet.
Aureomycin + penicillin.
G.C.N.C.

Cirrhosis of Liver:
Cytotoxic degeneration of liver - commonest cause is alcoholism, unknown causes also.
Fibrous degeneration of the liver cells grad. occurs.
S.+S. early stages - dyspepsia, nausea, vomiting.
back pressure on Portal vein - haematemesis (varicosity of lower oesoph. veins)
haemorrhoids (mesenteric vein)
ascites.
loss of weight
dilated blood vessels on face.
jaundice (late stage)

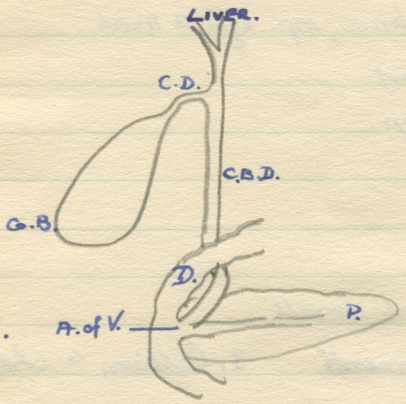
LIVER DISEASES.

CIRRHOSIS.

Tr. may be cured in early stages by diet - no alcohol, reg. of living
no spices (absence of nourishment causes)
nourishing diet, extra vitamins.
late stages - palliative treatment only. - nourishing diet.
treat complications as arise - Ab. P. for ascites.
G.G.N.C.

Carcinoma: secondary to primary focus elsewhere, partic. abdominal.
S.+S. Liver becomes hard and nodular.
ascites, jaundice.
Tr. palliative - to symptoms.
G.G.N.C. Analgesics for pain.
Nourishing diet, extra vitamins.

DISEASES OF G.B.



G.B. — bile.
After fatty meal - G.B. contracts & emptis bile to
duodenum to emulsify fats.
Bile - water, bile salts+ pigments = bilirubin, biliverdin, urobilin
Bile salts re-secreted in intestine - if no bile salts
present in intestine - no Vit. K secreted into blood.

Cholecystitis inflam. of G.B. - acute & chronic: comp. Empyema of G.B.
Gall stones.
Ca of G.B.

Acute Cholecystitis

Causes: assoc. % gallstones.
infection caused by Bacillus coli usually (other org.'s)
S.+S. severe pain - R.C.H. + muscles involved - epigastrium, rigidity of m.
tenderness of of R.C.H.
vomiting, pyrexia, leucocytosis.
jaundice unless inflam. spreads to C.B.D.

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DISEASES OF G.B.

Ac. cholecystitis Tr. R.I.B.
warmth (plasline) locally
fat. free diet.
fluids ++ — glucose.
protein and vitamins.
antibiotic - streptomycin + Terramycin.
analgesics for pain - Pethedine 100mg. may be necessary.
complication - empyema - ie rupture of G.B. a danger.
- intermittent pyrexia, ie rigors, in addition to above symp.
- marked leucocytosis.
Tr. ops. + drainage.

Chronic cholecystitis: nearly always assoc. ic gallstones, or repeated acute attacks, due to presence of fibrous tissue at neck of G.B.
S.+S. mild - p: c/o nausea, flatulence, esp. after a meal.
attacks of pain may also occur.
diag. confirmed by cholecystogram.
Tr. cholecystectomy.

Gallstones: may be one large or several small.
1. cholesterol, 2. bile pigments 3. Calcium + cholesterol
Fair, fat, fertile, forty, females.
caused by stasis emptying G.B.
infection of G.B.
increased cholesterol in blood.
sedentary occupations.
S.+S. occasionally no S.+S., but may be extruded into cystic duct.
attacks of cholecystitis - acute or chronic.
or biliary colic (due to gallstone in cystic duct or C.B.D
- severe agonising pain in R. hypochr. Reg. - often referred to tip of scapula.
intermittent pain because of peristalsis.
vomiting, sweating, weak rapid pulse, shallow respirations.
If stone in C.B.D - jaundice develops in few hours.
Tr. R.I.B. warmth - analgesic (Pethedine - antispasmodics)
fat free diet, fluids ++ glucose

DISEASES OF G.B.

GALLSTONES.

Stone may gradually be pushed to duodenum, or stone secured in duct and removed only by operation - choledochotomy. (-ectomy if stones in G.B.).
Tr. for gallstones - cholecystectomy.

Carcinoma of Gall Bladder: Rare. Symptoms caused are those of chronic cholecystitis.
Diag. confirmed by cholecystogram.
Tr. remove it.

Indications for Cholecystectomy:
1. Repeated attacks of acute cholecystitis.
2. Empyema of gall-bladder.
3. Rupture of gall-bladder.
4. Chronic cholecystitis
5. Gallstones.
6. Ca. G.B.

Spec. prep. of p. for cholecystectomy: Where poss. performed in absence of ac. infection. ~~Pt~~ P's gen. condition investigated - Hb, blood grouped & X-matched.
Chest X-Ray.
Injection of Vit. K. preps's - Synkavit, Mapilon, some days before.
Extra glucose in diet and low fat intake.
Shown breathing exercises.
R.P.A.O. - special care - if C.B.D. explored during op., a T-tube is inserted and open and drained into a bottle at bedside.
also drain tube to G.B. bed-shortened daily, removed on 3rd day.
T-tube left in situ until surgeon orders removal (least 10 days, longer if like)
Bile drained measured & entered in F.B.C. (daily)
Sometimes ~~Hpaque~~ dye injected down T-tube & X-Rayed to show if O.K.
Diet low fat diet - until p. can tolerate it - works later.
fluids++, glucose.
Vitamin K continued while any drainage of bile through T-tube.
Extra vitamins & diet.
Leg movements & exercise encouraged.
S.O.O.B. 3rd-4th day, if gen. cond. satisf.

DISEASES OF G.B.

S. JAUNDICE. Jaundice - sign - due to presence of bile pigments in blood - discolouration of skin.
caused by diseases of liver - 1. Infective Hepatitis
2. Acute Necrosis
3. Weil's Disease
4. Cirrhosis of liver
5. Carcinoma.

Obstructive Jaundice - stone in C.B.D.
carcinoma of C.B.D.
inflammation of C.B.D.
Ca head of pancreas.

Haemolytic Jaundice: destruction of erythrocytes too rapid, liver cannot cope.
(a) Acholuric Jaundice (familial), (b) incompatable blood in transfusions (haemolysis)
(c) Erythro-blastosis foetalis. (Rh. factor antibodies)

Acholuric Jaundice: in families - red blood cells too easily destroyed in spleen.
Anaemia + jaundice - breakdown of too much Hb floods circulation with yellow bilirubin.
Tr. splenectomy.

BRONCHIAL ASTHMA. Allergic condition = abnormal reaction to substances entering body.
Inhalants - dusts, pollens, dandruff from animal furs, horse dandruff, feathers, some foods
Strong psychological factor, with family history of allergy - eczema.
S. + S. attacks of dyspnoea - difficulty in expiration.
attacks occur mostly at night - sit up in bed with feeling of suffocation.
difficulty of expiration due to spasms of bronchioles.
lungs distended with air.
chest movements restricted.
~~chest~~ respirations wheezy
lips and finger-tips cyanosed.
Pulse O.K.
patient anxious and distressed.
Pt. coughing at height of attack.
sputum increases + becomes frothy as attack progresses
P. exhausted + relieved when over.
if attack persists, despite treatment, for hours - Status asthmaticus. (can die result of this)

BRONCHIAL ASTHMA.

In. attack. at onset - ephedrine gr. ½-1
neo-epinine 10-20 mgm. - may prevent full development of attack.
severe attack - adrenalin 5-10 m. slowly intradermally may relieve attack.
Adrenalin & neo-epinine inhalations, also. Severe attack will not respond.
∴ larger doses Adrenalin up to 60 m. & Aminophylline - I.V. - .256 or poss. Rectal Suppository.
Latter for Status Asthmaticus.

Oxygen tent for cyanosis, or nasally, B.L.B. mask.
Sedative after severe attack (not Morphine - addiction - resp. - depressant)
- Paraldahyde I.M. or Sodi. Phenobarb gr. iii I.M.

In children: investigation of home & school life, occasionally change of school or improvement of home conditions may improve condition.

In adults: investig. of home, work & working conditions, food, father pillows and gums, health - septic foci - teeth, tonsils, removed. Financial, domestic problems may require attention (Almoner Welfare Officer help, psychologist

Desensitication: spec. skin tests - well-known proteins scratched into skin, and patient's reactions observed. If react abnormally it may be poss. to desensitise by introducing grad. increasing doses of that partic. substance. / Gen. health should be improved (no dusty atmosphere) and given antispasmodics - Ephedrine, Phenobarb & Pot. Iod. mixture given.

ANAEMIA

deficiency of Hb, erythrocytes, but usually both.
5m / c.m. Blood normal, manufactured in bone marrow.
Factors nec. | iron for formation of Hb.
| B_{12} - liver factor. - for formation of R.B.C. in bone marrow.
Healthy bone marrow.
also Folic Acid, copper.

Non-nucleated bi-concave disc. mass of haemoglobin (iron + protein) carries O_2 lungs to tissues
lives 100 days in circulation - iron pigment to portal vein, iron stored, pigment in bile.
Immature R.B.C. in bone marrow is nucleated; if Liver factor is missing in the body, some of the immature R.B.C. escape into circulation. If iron is deficient the Hb content of the cell is low, & O_2 carrying power reduced. If the bone marrow depressed or degenerated the number of R.B.C's reduced, and if marrow continues to degenerate - fatal anaemia results.
When the cells contain maximum amt. of Hb. - 100% (5 m. / cu.) colour index - 1 of cells.

ANAEMIA.

Colour Index $= \frac{Hb\ 100\%}{R.B.C.\ 100\%} = I.C.I.$

$\frac{40}{60}$ ($\frac{3,000,000}{etc}$ = .6 % 60% Hb.

$\frac{50\%}{40\%}$ = 1.2 % macrocytic anaemia. (pernicious an.)

$\frac{50}{50}$ (haemorrhage) = 1 C.I.

Iron Deficiency Anaemia.

Seen in middle aged women who have had large families, and where diet low in iron content (red meat + green veg.!) May also be due to failure of intestine to absorb iron. Infants may get it if fed on milk alone for too long. (after 6 weeks - give iron containing foods)

S. + S. pallor.
lassitude - malaise.
dyspnoea, esp. on exertion.
oedema of ankles.
hair lacks lustre + going grey, if not
nails brittle + spoon-shaped (Koilonychia)
dysphagia - smooth, sore tongue.

Diag. confirmed by - blood examination low Hb %
microcytes (small, red b. cells) ∴ in no.
gastric juice shows low HCl. content.
colour index low. $\frac{Hb\ 40\%}{RBC\ 60\%}$ = .6 C.I.

Tr. iron given orally as ferri sulphate tablets or by injection
nourishing diet - vitamins + Rd meat + vegetables.
if p. very ill - R.I.B. - weeks + until progressive improvement.
blood picture periodically as guide to progress.

Pernicious Anaemia: usually older people but sometimes in younger
Also known as Addison's Disease of a Macrocytic Anaemia.
Due to Liver Factor - Vit. B_{12} in liver.

S + S. increasing pallor
" lassitude.
pallow, lemon-tinged complexion.
>ing dyspnoea.
sore throat and tongue. gastro-intestinal disturb - vomiting + diarrhoea

PERN. AN.

S.Ts. Cont' oedema of ankles.
affec. of spinal cord - pins + needles of hands + feet.
sub-acute combined degeneration of spinal cord as disease progresses - numbness of hands and feet, and ataxic gait. Possibly paraplegia.

Blood picture: marked reduction in no. of R.B.C.
large no. cells abnormal, some of which are nucleated, and large no. larger (macrocytic) and abnormal in shape. Each cell packed with Hb. Hb 40% / 30 = 1.3 C.I.

C.I. raised because of production of R.B.C. greater than Hb.

Achlorhydria cells which produce HCl also produce intrinsic factor, which is nec. for extrinsic factor, or Vit. B_{12}

Tr. Liver factor to patient - Vit. B_{12} - injection - Cytamen - in micrograms. mg. = 1,000 G. microgram = 1,000 mg. 50-100 micrograms of Cytamen given twice per week by, then weekly or fortnightly as improves. Maintainence dose rest of life.
Iron also given in early stages of treatment and nourishing diet taken.
If condition serious at onset - blood transfusion may be necessary. - packed blood cells given.

Complication sub-acute combined degeneration of spinal cord. - arrested progress following administration of B_{12} liver factor.
Also used - extract of liver - Anahaemin. 1-2 c.c.'s I.M.

A macrocytic anaemia may occur during pregnancy, but not pernicious. Successfully treated with folic acid. (no degen. of cord)

Coeliac Disease: failure intestine to absorb fat, some vitamins & iron. gluten-free flours.
Sprue (idiopathic steatorrhoea) failure to fats, irons. Diarrhoea common.
Tr. if anaemia severe - iron by injection.

Anaemias due to Disorders of Bone Marrow.

In some infections - depression of bone marrow occurs. eg. Rh. Fever, rheumatoid arthritis. When condition cured - bone marrow recovers + P. given extra iron. Some drugs may cause it - Sulphonamides.

ANAEMIA.

Degeneration of bone marrow may occur due to prolonged exposure of bone marrow to radio-active exposure.
Some drugs also cause degen. of bone marrow - eg. Chloramphenicol if given over long period. Aplastic Anaemia, where no. of R.B.C. reduced & if bone marrow regenerates, p. dies.
Blood transfusions prolong patient's life.

Anaemias due to blood loss.
Extravascular - haemorrhage.
Haemolytic - destruction of R.B.C.'s in circulation.

Haemorrhage may be acute blood loss (large amt. over short period) also causes shock; or may be chronic (over long periods) - fibroids, and ulcers, also haemorrhoids.
Tr. depends on conditions
Ac. Haemorrhage - arrest it & replace blood.
Chronic haems. - cause remov eg. Myomectomy, etc. Transfusion may be necessary pre-op. if anaemia is severe.

Blood can escape into tissues due to diseases of vessel walls. eg. Scurvy - causes fragility of walls - bleeding into mucous tissues & joints. Given Ascorbic Acid.
Purpura: may be due to severe infections weakening B.V.'s eg. septicaemia; or Henoch's allergic purpura or lack of blood platelets - blood into tissues & bruise easily - Thrombo-cytopenic purpura - treat cause where possible.
Haemolytic anaemias - erythroblastosis foetalis.

DISEASES OF THE KIDNEYS

Functions: To excrete waste products of metabolism: urea (urea) water.
Normal urea 20-40 mg /100 cc. blood. ∴ .02-.04% — 2% urea in urine
Kidney concentrate urea from blood.

Acute Nephritis:
Most common in children - follows strept. infection (haem. strept. - Rh. ?)
Nephritis develops 2-3 weeks after sore throat, etc.

S.+S. haematuria.
oliguria - dark, smoky color, or visible haematuria.
gen. signs toxaemia - malaise, anorexia, headache.
backache.
pyrexia. - 100°-103°F
> pulse
B.P. slightly raised.
vomiting.
oedema, esp. round eyes, and of face.
pallor.

O/E. blood urea raised.
low Hb.%

Prognosis good - majority recover completely with adequate treatment.
2% may develop fulminating type - convulsions, anuria, die in few days.
3-4% develop chronic nephritis.

Tr. R.I.B. - kept quiet (activity > metabolism, ∴ urea)
G.O.N.O.
spec. tr. diet - fluids restricted to amt. nec. to replace loss through resp. etc.
(30-35 ozs in 24 hours) + equivalent passed as urine.
water, fresh fruit juice (orange) glucose & fat added (toffees)
3-4 ozs/day.
no protein until marked increase in urinary output (diuresis)
which usually occurs in 7-8 days. Milk then added to diet - (protein in it) bread, butter, vegetables & jam & honey.
End of 2nd week - extra protein - fish, chicken, extra milk & as visible haematuria - disappears, diet grad. increased. For many weeks Lab. tests show R.B.C.'s in urine. Salt free diet while oedema present.
Diuretics should not be given, ∴ no tea or coffee until improvement.
Chart - F.B.C. - strict. Daily urine test. (alb. & blood) & as kidneys recover, alb. grad. disappears

Diseases of Kidney.

Acute Nephritis (cont.): R.I.B. until recovery - 3-4 weeks, & gradually exercises at least 4-6 weeks convalescence advised & protect from chills, if poss. Any septic foci (eg. tonsils) should be removed. If still some throat infection x-P given as part of treatment.

Chronic Nephritis:

Early stages - sub-acute Nephritis

S.+S. albuminuria ∴ reduction in plasma proteins. (- globulin. plasma protein 7.8% - alb. 5%)

oedema - slight or massive ascites & pleural infusion.

when protein content < 3% - oedema occurs.

output of urine normal or increased. Blood urea normal.

Tr. R.I.B. while oedema

high protein diet. (to replace protein lost) eggs, meat, egg flips, Protacet. No Salt.

If salt-free diet - no salt in cooking

if low salt - no salt after cooking.

Fluids restricted.

Mild diuretics, i.e. Pot. Cit. may be given - depends on Doc. & state of kidney.

When oedema subsides p. improve - latent stage - mild S+S. p. feels well - only sign alb. in urine. P. allowed to work, well-balanced diet & protein + years later renal failure develops, & uraemia occurs.

- urea >'d

B.P. raised. } ∴ may develop heart failure.
Arteriosclerosis. }

impairment of vision - retinitis

output of urine normal, but urea concentration impaired & urea retained, headaches.

P. thin faced & miserable.

P. may die from cerebral haemorrhage (art. sd & ↑ B.P.)
heart failure (B.P.)
uraemia.

During chronic stage - low protein, extra vitamins & iron & p. advised to lead a quiet life.

casts always in urine during chronic stage (epithelium)

CHR. NEPH.

Uraemia: kidney fails to excrete urea & retained in body.

Causes - chronic renal failure - chr. nephr. + hydronephrosis (bi-lat.) enlarged prostate.
acute renal failure. - assoc. ± anuria.

Due to chr. nephritis - uraemia.

Sts. P. gradually becomes drowsy - headache, twitching of muscles (convulsions.
Cheyne-Stokes' respirations.
vomiting.
delirium.
stupor and coma.

Diagnosis by blood exam - for urea (300-500 mg./100cc.)

Tr. none - treat symptoms.
R.I.B. & G.G.N.C. (mouth, pressure areas, Sponging, change position)
plenty of fluids, as long as kidney excreting.
nourishing diet - no protein.
sedatives for delirium - restlessness.
vomiting persistant - Ryles' tube & fluids I.V.

Acute Renal Failure (Anuria)

Occurs as result of 1. acute nephritis
2. incompatable blood in transfusions.
3. Sulphonamide crystals - no enough fluid given.
4. poisons - mercury, Carbolic.
5. severe shock.
6. dehydration.
7. severe crushing injuries where damage to muscles (note ± R.T.A's)

Signs & S. 1. Anuria.
Grad. increase of blood urea.
Signs of uraemia develop.
With adequate tr. majority recover.

Tr. R.I.B - complete rest. - Rest kidney by restrict fluids 1-1½ ○ fluid 24 hours. &
400 drams glucose & 100 cc. peanut oil (fat) Resin - ACACIA (Hammersmith Cocktail) Bull's Regime.
Via Ryles' tube over 24 hours.
Careful nursing. As soon as urine passed - equivalent added to intake.
If cond. due to sulpha crystals ureteric catheters passed and pelvis of kidneys irrigated with an alkaline solution.

DISEASES OF KIDNEY

Acute Renal Failure.

Prevented by - correct blood transfusion.
adequate IV. dehydration.
fluids & sulphas.
IV. shock + raising blood pressure (I.V.)
often cannot be prevented.

Renal Efficiency Tests.

1. Blood urea.
2. Urine concentration tests - S.G. no fluids for 16 hrs. + S.G. taken - SG. high (low 1026)
3. Urine dilution test - 20 fluid in ½ hour. 4 hrs. later - SG. taken - (should be low < 1010)

Urine Conc. Test. - discard first spec.
give 15 grams urea - 3-4 oz water + flavor & orange juice
hourly spec. collected + sent to Path. for urea tests.
at least 2 spec. should contain over 2% urea.

4. Urea clearance Test. no fluids & breakfast.
first spec. discarded. 15 Gr. urea.
hourly intervals - 3 spec. collected.
after 2nd spec. 5 cc.'s blood for blood urea (Sodii Oxylate tube)
sent to Path.

Some Pathologists allow p. to have glass water after each spec. urine obtained.

5. Dye - excretion tests - indigo-carmine injected into vein + excretion of dye ~~viewed~~ through ureters viewed by cystoscope.
Infected kidney - delay in excretion of dye, esp. in cases of Tb. kidney.

6. X-Ray Examination
Renal calculi - straight X-Ray (calculi)
Ca
Hydronephrosis
Tb. (when given I.M. give Renalgan & allergy)
Uroselectan B. for opaque I.V.P. injected I.V. and 5 m. later kidney opaque to X-Ray + films taken 5-15-20-25 m. intervals.
Retrograde Pylogram dye injected through ureter (cystoscope + ureteric catheter) Sodi. Iodide used. To pelvis of kidney.

Prep. of P. At least 24 hrs. no vegetables included in diet. Aperient night before and encouraged to walk about for ½ hour before. Sometimes Pituissin 1/2 cc. beforehand no gas in intest.

DISEASES OF KIDNEY.

SURGICAL CONDITIONS.

Renal Calculi: Crystals may form in tubules or pelvis, and if any infection or delay in excreting urine – crystals form stones. 3 types

1. Uxalate calculi: small, with sharp projections on surface.
2. Phosphate calculus: large, soft stone – white, and may fill calyces.
3. Urate calculi: small, like gravel

All may have calcium mixed with them.

S.+S. may not be any for a while,
then pain, worse on movement.
haematuria.
attacks of pyelitis

Renal Colic: spasms if stone passes into ureter.
sudden attack of intermittent pain from loin (K. region) through affected side of abdomen, to bladder and urethra. Vomiting sometimes, and collapse – pale, clammy skin, rapid pulse.

Tr. R.I.B.
Iv. for shock.
I.M. Pethidine 100 mg. or Morph. + Atropine (antisp.)

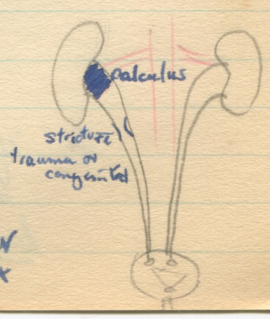
Diag. confirmed by X-Ray – calculi opaque. or I.V.P.

Tr. large amounts fluids.
extra vitamins A & D.
surgery – 1. pyelolithotomy.
2. nephrolithotomy.
3. nephrectomy if any kidney damage.

Complications: 1. Renal colic
2. Hydronephrosis.
3. pyonephrosis.

Hydronephrosis: Degenerated, fibrous sac containing water. Due to obstruction of flow of urine from kidney.

Unilateral 1. calculus.
2. abnormality of renal b.v.'s constricting pelvis
3. stricture of ureter
4. tumour compressing ureter.



Bilat: in bladder or urethra (causes) prostate, calculus, pelvic tumour
Ca ♀

Hydronephrosis (cont.)

S. + S. pain over kidney region.
possibly haematuria.
O/E palpable mass in kidney region
Pylogram confirms diagnosis.
Tr. Nephrectomy, unless cond tr. early, and part of kidney can be saved.
Complic: S 1. pyonephrosis. - toxaemia
2. rupture
3. haemorrhage

Pyonephrosis.

Aetiol. 1. infected hydronephrosis.
2. severe pyelitis.
3. tb. of kidney.
S. + S. pyrexia, rigors, severe toxaemia.
pain over kidney region.
Diagnosis confirmed by X-Ray.
Tr. Nephrectomy.

Tb. of Kidney:

Secondary to primary focus elsewhere in the body. First kidney involved then ureter and bladder.
S. + S. frequency of micturition (small amts. frequently)
pain or dull ache in kidny region
haematuria.
loss of weight
O/E urine contains pus, blood and tubercle bacillus may be isolated.
- 24 hour specimen necessary.
pyllogram - dye excretion test (indigo-carmine)
examination of ureteric orifices by cystoscope - affected side swollen or constricted.
ureteric catheter specimens of both kidneys.
Tr. if one kidney only - nephrectomy, and removal of ureter. Strept., I.N.H. + P.A.S. and sanatorium treatment - fresh air, diet, for several months.
both kidneys - R.I.B. good nourishing diet, fresh air, Strept. P.A.S., INH. years or longer to clear. if does if not - uraemia.

DISEASES OF KIDNEY

Carcinoma:

Gradual destruction of kidney, secondary deposits in lungs or liver, then bone.

Sys. haematuria - intermittent.
no pain, early stages.
if clot of blood passes to ureter - renal colic
Late: loss of weight, dull aching pain, palpable mass
Diagnosis confirmed with pylogram.

Tr. Nephrectomy, with abdominal incision, as glands fascia, fat removed.
Deep X-Ray therapy afterwards.
If inoperable - X-Ray therapy - possibly Radium may be used.

Cystic Kidney

Often congenital. Non-malignant cysts in kidney increase, often no symptoms.
Tr. nephrectomy. May be found during routine examination.

Embryoma.

Malignant tumour in young children, fatal. Usually both infected.

Trauma to the Kidney.

Violent blows to K. Region., crushing injuries, fractures of lower ribs.

S.+S. p. shocked.
signs of internal haemorrhage - (increase in severity of shock - sighing respiration, weak, rapid pulse, low B.P. etc.)
haematuria - catheterise if necessary.

Tr. shock treated - quiet, reassurance, protect from cold.
closely observe for signs of bleeding - increase in severity of symptoms.
All urine spec.'s saved in spec. glasses to compare colour visible.
Blood grouped & X- matched.
Nephrectomy if no improvement in gen. condition (B.P. remains low)
Occasionally repair of lacerated kidney if poss.

Reasons for Nephrectomy.

Pre-op. care for Nephrectomy.

Efficiency of other kidney tested.
Blood grouped + X-matched + blood made available for transf. during ops. and after.
diet - ordinary fluids +
urine examined for organisms. - any infection cleared up before operation.
gen. prep. - shaving,
prep. of stairs.
anaesthetic consent form.
pre-med.

Post-operative care:

Returns to Ward, often with blood transfusion in progress. Placed in warm bed, lying ~~on~~ affected side, so ~~bleeding~~ will drain thru drainage tube. When consc. - propd. placed in upright position, inclined towards affected side. Freq. obsers. 's of dressing for signs of haemorrhage. B.P. & P. Post. op. analgesic given as ordered if P. restless + complaining of pain. Find out orders for I.V. - more blood? or to be discontinued.

When free from nausea - oral fluids, light then full diets.

Accurate recording of fluid intake and output kept - important.

Wound. Drainage tube usually left in until no further drainage - 5-6 days, but shortened daily. Daily D/D.

S.O.O.B. 3rd day if gen. cond. good.

Breathing exercises + leg movements encouraged from onset.

Post. ops. complications. 1. Haemorrhage.
2. Anuria (2nd Kidney reflex)
3. Flatulence.
4. Vomiting.
5. Femoral thrombosis, br. pneum., pul. collapse + embolism.

DISEASES OF THE KIDNEY

Pyelitis:

Inflam. of pelvis of kidney - may be acute or chronic.

Acute Pyelitis: Ascending from bladder, via blood or lymphatics. Commonly assoc. w/c pregnancy.

S.+S. onset sudden - rigors, temp. 104-105°F. (102° between rigors)
pain over affected kidney, radiating down ureter to bladder.
frequency of micturition.
scalding and difficulty of micturition

O/E urine contains pus, albumin & organism, usually B. coli.

Tr. R.I.B.
fluids ++
Sulphonamides or Streptomycin; Potassium citrate 1% (alkali: Pot. Bic. 1%)
If ineffective: Streptomycin given.

Chronic Pyelitis: May occur following ~~acute~~ acute attack, may be renal calculi, or some delay in excretion from kidney.

S.+S. dull ache.
frequency of micturition
organism isolated in urine - B. coli + B. proteus.

Tr. Streptomycin may effect cure.
fluids ++
any obstruction in kidney should be removed.
Possibly Mandelic Acid.

Cystitis

Inflam. of bladder, may be acute (B. coli) or chronic, nearly always caused by B. coli via urethra.

S.+S. pain in lower abdomen.
frequency + scalding of micturition.
Pyrexia.
gen. malaise + anorexia.

O/E urine shows pus + causative organism.

Tr. fluids ++
Potassium citrate
Sulphonamides
R.I.B. during acute stage. Baths, spec. & Paths. at end-stage.

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DISEASES OF BLADDER.

Cystitis: Chronic: elderly gentlemen enlarged prostates. Due to retention of urine in bladder. Also due to stricture of urethra, uterine displacements, pelvic tumours + bladder tumours - Ca or papilloma.

S+S. frequency of micturition
o/e urine — pus + causative organism / B. Proteus.

Tr. remove cause.
fluids ++
Antibiotics or Sulphonamides.
Bladder lavage.

Papilloma.

Benign tumour of epith. + capillary blood vessels.

S.+S. haematuria, no pain.
o/e cystoscope - papilloma can be seen.

Tr. diathermy - several treatments may be necessary.

Carcinoma.

S+S. Haematuria
pain
Retention if near bladder neck.

Diagnosis cystoscopy + biopsy.

Tr. Radium.
Radio-active pellets gold.
~~Resection~~ Excision with transplantation of ureters into bowel.
Resection.

Calculus

S+S. Pain
retention (if in urethra)
haematuria.

Diag. confirmed by cystoscope.

Tr. crushing + debris washed out.

URETHRA.

Injury - cath. & splint it, or surgery. Always danger of stricture after repair.

Infection (Gonorrhoea) - stricture when healed.
Smear taken and causative organism isolated. - X-P.

Stricture scarring following infection
S.+s. difficulty of micturition
acute retention may occur.
Tr. dilatation = passing sounds and bougies.

Caruncle: (f.) growth on surface of lining of urethra - round and red.
S.+S. haematuria.
fulgination or diathermy.

Enlarged Prostate Gland.
Enlargement may be fibrous or carcinoma.
S.+s. difficulty of micturition.
"interrupted stream"
may lead to acute retention.
Comp's chronic cystitis
Pyelitis
uraemia - by impairment of kidney function.
Tr. Removal - prostatectomy.
T.U.R.

Pre-op. care: always elderly men.
Gen. health investigated - chest, chronic coughs, breathing exercises. Septic foci (teeth) should be removed. Investigation of cardio-vascular system - e.g. C.C.F. Blood - Hb., grouped and X-typed.
Urine - bl. urea, pyelogram, & bacteriological exam. of urine.
Post-op. care: Blood transfusion usually in progress. Observed for signs of Shock & haemorrhage. Foley's cath. in situ & continuous irrigation carried out to sodium nitrate 1-5000 (or Silver Nitrate 1-5000) to prevent clotting. S.N. prevents haemorrhage. When conc. - extra pillows & up. Post-op. analgesics (Morph. 1/6) Fluids encouraged ++. Cont. irrig. until return clear (2-3 days) and when pos. - sat out of bed 3rd day to prevent venous thrombosis & chest complications.

URETHRA. Enlarged Prostate : Post-op. care.

Spec. charts : Accurate fluid balance chart.

Catheter may be removed 3-4 days & encouraged to void normally. Catheterised if difficulty.

Corrugated rubber drain removed 3rd day, sutures out 9-10 days.

Post-op. complic.'s : 1. shock.

2. haemorrhage (re-actionary)

3. clotting in bladder : obstruction to flow & drainage from kidneys. May be poss. to suck out with a syringe, or cystotomy.

4. infection.

5. gen. compl.- pul. collapse, br. pneum., femoral thrombosis and pulmonary embolism, paralytic ileus, abd. distention, flatulence, vomiting. acute heart failure.

6. uraemia. (see Ron's notes)

CAUSES OF RETENTION IN BLADDER.

1. obstruction - mechanical to outlet ie. enlarged prostate,
   stricture of urethra
   calculus.
   pelvic tumour (f- Ca Cx, ut. displaced/pregnancy)
   prolapse.
2. paralysis of sphincter (hemiplegia, paraplegia)
3. post-operative - spasm of sphincter.
4. psychological.

NURSING MEASURES FOR RELEIF OF:

1. post-op. - warm bedpan, drinks, taps on, swing legs out of bed (if poss) change position. Stand out of bed (appx) on chair
   Carbochol - 1/10 cc. to dilate sphincter. (Doc.) Pot. Cit: IC warm water.
   If all else fails - catheterise.
2. Ac. ret. from enlarged prostate often relieved by put in warm baths + Doc. may order Morph.
3. If due to mech. obstruction - cause removed.
4. Paralysis of sphincter - self-ret. cath. for few days - incontinence usually follows retention.

Suppression of Urine: Anuria.

1. shock - lowered B.P. + dehydration.
2. acute nephritis.
3. incompatable blood at transfusion.
4. sulphonamides.
5. poisons - mercury.
6. crushing injuries - substance from crushed muscles.
7. calculi in both kidneys.

Causes of haematuria.

Kidney: 1. injury
2. carcinoma
3. calculus
4. acute nephritis
5. tuberculosis.
6. severe pyelitis

Ureter: 1. calculi
2. carcinoma.
3. injury.

Bladder: 1. papilloma.
2. carcinoma.
3. injury
4. calculus.

Urethra: 1. infection.
2. injury
3. caruncle.
4. enlarged prostate gland.

Certain blood diseases, purpura.
Sulpha's. anti-coagulant therapy - overdose.

Malaria.

Investigations to determine cause:

1. History of injury? - signs of bruising, Etc.
2. Medical history and gen. appearance (eg. headache, BP, puffy face + oedema - Ac. Neph.)
3. Exam of blood - clotting time.
4. Pain (eg. Ca, Stones in kidney)
5. Difficulty of micturition? - bladder obstruction.
6. Urinary tract - X-Ray kidneys - I.V.P. or retrograde.
   cystoscopy - papillomata, carcinoma.
7. Exam. of urine for organisms.

Causes of Albuminuria:

1. Diseases of kidney - ac. + ch. nephritis; pyelitis.
2. C.C.F.
3. Toxaemia of pregnancy
4. In apparently normal young people at end of the day - norm. spec. free.
5. Damage to kidney from drugs (Sulpha's)
6. Incompat: blood.

Causes of pus in urine.
1. pyelitis, cystitis urethritis
2 Tb. kidney.

UNCONSCIOUSNESS:
A apoplexy (interference ↓ bl. supply in brain) alcohol. → tumours (cerebral)
E epilepsy + other fits - infantile convulsions, fainting. eclampsia.
I injury (to head) insulin (diabetes)
O opium + other narcotics - barbiturates, or poisons.
U uraemia.
Hysteria + shock.

Bed - long mac under, no pillows, pad head of bed.

Observations of unconscious patient

Depth of unconsciousness

Color of face (pale, flushed ~~cyan.~~ A. or thrombosis, cyanosed)

respirations - slow, sighing - diabetic, rapid, stertorous, apoplexia ~~cerebr.~~ compr.
Cheyne-Stokes' - uraemia, + late stage compression ↑c. tumour.
slow - opium, omnopon, barb.'s.
shallow + rapid, fainting, shock. Smell - alcohol, acetone. ammonia - uraemia. further investigation.

pulse - weak + rapid - op. poisoning, uraemia, injury ↑ concussion.
full + bounding - apoplexy, compression, head injuries

colour. ↑

pupils - equal - pin-point - opium poisoning, heroin.
unequal - cerb. compression - apoplexy.
head injury.
cerebral tumour.
react - sluggishly, etc.

convulsions, muscle twitching - infantile convulsions, eclampsia.
H. injuries, insulin overdose, eclampsia.
- note where start and if only one side.

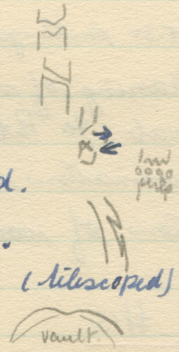
urine - cath. spec. nec. sugar + ketones - hyperglycaemia.

FRACTURES.

Break in continuity of a bone.

Causes: direct violence. - #at site of blow
indirect violence. - falling on hand - # shoulder or radius.
muscle contractions. - patella, by strong contraction of quadriceps, ribs by coughing
pathological by disease. - Ca, sarcoma, gumma, cystic degeneration of bone, Paget's disease in elderly pane. Perthe's.

Types simple - no injury to surrounding structure.
complicated - injury to nerves, blood vessels, organs.
compound - broken ends of bones through skin from site of #



Injury to bone - transverse
oblique
spiral
comminuted.
greenstick.
impacted (telescoped)
depressed

S. + S. pain at site of injury
swelling
bruising.
loss of function.
deformity (femur - shortened + foot outwards)
moving of limb - crepitus (don't palp. - causes pain)
shock - depends on size of bones and any complications.

First aid: arrest any haemorrhage.
treat for shock - reassure, protect from cold.
send for Doctor.
move from further danger after immobilising limb.
arrange for transport to Hospital.

Medical tr. Analgesics for pain - Morphine.
If any wound or lacerations - A.T.S. + anti-gas gangrene serum.
X-Ray imps.
Reduction of fracture under G.A. (consent form)
Fixation - splinting, P.O.P., traction - skeletal. internal fixation
Skin pin or plating.
Rehabilitation - physiotherapy.

{Shock.
X-Ray.
Reduction
Fixation
Rehabilitation

FRACTURES. Nursing care of limb in traction.

Traction must be maintained - keep weights clear of flo. & even.
Foot supported (drop foot poss).
Pressure areas - freq. massage and protection.
Good nourishing diet, extra ~~diet~~ calcium and vitamin C.
Breathing exercises & of unaffected limb.
Rehabilitation. exercise of affected limb - ankle, etc. for femur.

N.C. of compound fracture.

Danger of infection. Lv. depends on 1. degree of contamination of wound
2. time between accident and treatment.

Gen. rules - A.T.S. + anti-gas gangrene serum
cleaning of wound, excision of dead tissue under G.A.
swab to Path. + X-R in meantime.

If contamination slight & treated early - wound sutured + limb reduced & fixed - ~~traction~~
If gross contamination of wound plaster is not applied, but traction instead.

Complications of #'s.

1. Shock.
2. haemorrhage.
3. nerve injury - eg. supra-condylar
4. infection (compound #)
5. embolism - fat:
6. — non-union. - ends too far apart.
mal-union -
gross - deformity.
7. Volkmann's Ischaemia contracture spasms of b.v.'s, muscles become fibrous, & contracture occurs.

With #'s near ulna - observe radial pulse during early stages.

8. Myositis Ossificans: deposits of bones in muscles.
9. Br. pneum. in elders., pressure sores.

FRACTURES.

COLLES':

# of radius - gen. principles of Tr. - eg. shock, etc. X-Ray, reduction P.O.P. hand to elbow. Ulsero's in plaster - signs for escheimilies for signs of impairment of blood supply - pale, cold, blue, painful.

Advice to patient - to report if signs of swelling, pain, numbness.
finger and arm exercises encouraged from beginning.

POTTS' ~~#~~

1st degree Fib, ~~+ Tib~~.
2nd degree Fib + Tib.
3rd degree Fib. + Tib. + backwards displacement of foot.

Tr. reduction under G.A.
P.O.P. + walking irons.
if swelling - to hosp. + new plaster when swelling subsides. Walking iron and encouraged to walk about.

#d dislocation of Spine.

Danger of injury to spiral cord. Displacement of vertebrae. Result of injury to cord - paraplegia if low down - if up - dies suddenly (hanging effect)

~~#~~ Sts. severe shock + inability to move legs.

Tr. - First Aid - tr. shock.
Rolled onto stretcher - if poss, transport in prone position.
Hosp. further tr. for shock.
P. put in hyperextension frame ⌒ same or pop plaster (after shock over)

Plaster, bed, cast or jacket.
Bed. # boards under mattress.
divided mattress useful when nursing paraplegia. Etc.

PARAPLEGIA:

Paralysis of lower part of body, including both legs, due to lesion of the spinal cord. Due to 1. injury - #'d dislocation of spine.
2. (b) penetrating wound - bullet, shrapnel.
(c) displacement of vertebrae by disease (Th.)
2. (a) tumours of cord - benign or malignant.
(b) tumours of spine - compression.
3. diseases of the cord - disseminated sclerosis (brain + cord)
sub-acute combined degen. cord (pernicious anaemia
syringomyelia.

Paraplegia - results - paralysis of both legs + bladder - retention then incontinence (rectum.

management principles

Patient nursed in a well protected bed - if poss. on rubber mattress - no sag in the middle - to prevent pressure sores. If from ft or ↑b poss. to recover, ∴ paralysed limbs placed in good anatomical position - slightly flexed at knee + feet supported, heels protected - rubber pads under, or pads at Achilles. Bed cradles to support bedclothes.

Pressure areas massaged 2 hourly night and day. Position changed 2 hourly night + day. Care of bladder - retention ↑c overflow, ∴ careful observation of bladder imps. Self-retaining catheter may be nec. Strict aseptic precaution taken as urinary infection serious complication. Bed changed often as necessary.

Care of bowels: incontinence, impacted faeces, small enema on alternate days or every day at same time to help control bowel action.

Chest: - pneumonia, breathing exercises + change position prevent ↓ pneum.

Nourishing diet.

Bright, cheerful, well-ventilated surroundings.

As p. recovers from acute stages occupational therapy - prevent boredom and begin rehabilitation.

If paraplegia permanent - tr. symptoms + keep remedy. If general health good - poss. return to modified work + re-education nec. for a different occupation. Motor chairs, etc - spec. transport.

In permanent paraplegics - control of bladder without catheter

Complic's: pressure sores (trophic sores)
urinary infection
bronchs - pneumonia. - p. may die from these complications.

17 PELVIS - bursting injuries

Complic's injuries internally - urethra, bladder, B.V.'s.

Tr. immobilisation - depends on site.
fracture boards
Thorough investigation to exclude injuries to urethra - repair nec.
C.C.N.C.

BURNS & SCALDS.

dry & moist heat - causes.

Burns. - Superficial & deep.

1st degree - redness of epithelium

2nd " - epidermis destroyed & nerve-endings exposed.

3rd " - sub-cutaneous tissue involved.

Surface area involved depends severity, rather than depth. Greater surface area, greater degree of shock - most burns deaths caused by it. Burns of trunk more severe than limbs. Elders & children most shock than young adults.

First aid: roll on ground or blanket to extinguish flames.
cover burnt area with clean material (shirt) reassure & bed.
give sweet drinks and send for medical aid.
stay with person.
don't overheat, don't take clothing off or cut blisters.
Transport to hosp.

Medical tr. Analgesic for pain.
I.V. fluid & plasma or serum. (lost through tissues)
may get secondary shock (prevented by Morph. for pain + serum)
When B.P. to normal, etc., local tr. to burns. - cleaned under G.A. if nec.
Exposure of burnt surface to air - serum coagulates to form crust.
Some surgeons spray surface with powder - Penicillin or mixed Mag. Oxide.
Others P. by injection to prevent infection.
If complete skin destruction - skin graft as soon as poss. — when free from pathogenic organisms.

General care - prone if back burnt, etc.
care of pressure by bedclothes.
Analgesics nec. for pain.
Anaemia (secondary) may develop - blood transf. may be necessary.
good nourishing diet.
Exercise of breathing & joints.
spec. care of buttocks if burnt. danger of contam. by urine or faeces

Complications: 1. shock (may be fatal)
2. infection.
3. scarring (keloid if scarring thick, may cause contraction & deformity)
4. br. pneum., toxaemia aseptic - due to absorption of chemicals from burnt tissue

BURNS & SCALDS. Other methods of local treatment.

1. Tulle gras + Penicillin, dressings.
2. Lectavlon jelly.
3. Antibiotics – Terramycin or Rondarc to aid absorption.
4. Saline packs + baths.

When dressings of burns removed, should be done in theatre aseptically to avoid infection of the wound.

MENINGETIS. Inflammation of meninges – 3 membranes covering brain + cord.

Aetiol. 1. Meningococcus – spec. org. (cerebro-spinal meningitis)
2. staphylococcus.
3. streptococcus.
4. pneumococcus.
5. tubercle-bacillus.
6. viruses.

Meningococcal: infectious – may occur in epidemics (during war – soldiers in barracks)
Droplet infection from U.R.T. Incubation period short 2–7 days, onset sudden.

S+S. severe headache, backache, rigors, hyperpyrexia. – 1st few hours.
stiffness of neck, photophobia – meninges.
petechial rash on trunk (blood-red spots)
as worst – opisthotonos.
irritability – intolerable.
restlessness + delirium.
Kernig's sign +ve.

Diag. confirmed by L.P. – C.S.F. pressure raised.
may be clear – days later turbid & pus.
in Path – pus + { polymorphonuclear leucocytes, meningococcus diplococcus – gram –ve.

Majority recover ie adequate tr. but occasionally fulminating type develops + despite tr. die in hours or days.

Spec. drug. Sulphonamides + Penicillin.

Complications: hydrocephalus in children.
mental deficiency – changes of personality.
blindness.
majority recover without any complications.

MENINGITIS.

Meningitis due to other infections - staphs, strept., etc.

Onset not so dramatic as Meningococcal - symptoms same, no rash, irritability, photophobia, L.P. diag.t causative organism - spec. tr. - appropriate antibiotic.

Tuberculous Meningitis.

Secondary to primary focus elsewhere. More common under 4th years.
P.H. patient has been exposed to open case of active Tb. in household - may occur before active case discovered.

Onset gradual - general debility - does not play, anorexia, irritability, loss of weight, abdominal pain, vomiting. As condition develops - severe headache and stiffness of neck, pyrexia, then rigidity of neck, photophobia, +ve Kernig's, stupor and coma. Sometimes paralysis of limb. Gross loss of weight - emaciated.

Diag. confirmed by examination of C.S.F. ↑d pressure and tubercle bacillus. proteins+ sugars- ↑d lymphocytes.

Spec. tr. Streptomycin i.m. or intrathecally.
Also P.A.S., and Isoniazid.
Often give Cortisone - aids effects of drugs.

Nursing care and management of Meningitis.

Nursed in a quiet room, well ventilated, and light shaded to prevent glare. Comfortable mattress, well protected. Isolation necessary in meningococcal infection. Nursed in recumbent or semi-recumbent position, bedclothes light but warm. Hands should be warm before moving and taking firm grip of pt. - as irritating. Care of head and neck to prevent flexion, which would cause severe pain.

Care of pressure areas - massage, frequent attention and cleaning of mouth. Swabbing of eyes - as in comatose state with eyes open.
Daily sponge, tepid sponging for hyperpyrexia
Observation of bladder for signs of retention, also bowels.
Diet encouraged - liberal nourishing diet, free fluids, but artificial may be necessary - Ryles' tube. Q.Q.H. TPR chart. Fluid balance and treatment chart.
Spec. drug. for organism.
Analgesics for severe headache, sedatives noct.

MENINGITIS. Th. meningitis R.I.B. many months, convalescence slow, but as soon as recovered from acute serious stages, occupational therapy + physiotherapy. Gradually allowed up and long convalescence necessary - 6-8 weeks - for all types.

ABORTION expulsion of foetus or term. of preg. before viable - 28 weeks of pregnancy.

Commonest causes:

Maternal	Foetal.
Endocrine disorder. +	F.D.I.U.
Disease - Nephritis acute infection. (common) +	abnormal foetus:
Misplaced uterus.	injury to foetus.
injury.	
Criminal abortions.	
use of drugs.	
Shock.	

Threatened: possible to save.

Sys. pain.
blood loss. p.v. - os closed.

In. R.I.B., re-assured.
observed for signs of inevitable - clots, etc.
Sedative - Morphia - Progesterone.
all discharges saved for inspection.
excess haem. reported.
no string aperients or enemas given.
R.I.B. one week after bleeding has stopped.

Inevitable: complete or incomplete
all products of conception expelled.

Sys. painful contractions and expulsion of f., pl. + membranes.
incomplete: part of products of c. retained = cause severe haemorrhage.

In. R.I.B. + observation.
sedative + sometimes Ergometrine.
when abort occurs - foetus + products saved for inspection.
observed for signs of haemorrhage.
if incomplete haem. may be so severe - haem. may be rec. so blood typed + ~~Dest~~ matched. Caes may be necessary

ABORTION.

Infection may also occur - Septic Abortion.
N. ill - intermittent pyrexia, rigors.
pelvic peritonitis, septicaemia.
Tr. antibiotics - swab of discharge to Path.
blood transfusions for haemorrhage.

Missed Abortion:
Foetal Death in Utero and retained - Carneous Mole (degenerated foetus)
Sys. pregnancy not progressing - preg. symptoms grad. disappear.
pass. brownish vaginal discharge.
pregnancy tests negative - Hogben test - S. African toad: frog begins to lay eggs. Spawn
Aschein-Zondek test (10 days) mice?
Friedman's test - rabbit.
Tr. if left - eventually expel contents.
contents removed - D. & C.

ECTOPIC PREGNANCY: Fallopian tube ruptures, may cause peritonitis.
Rare result - foetus develops in peritoneum - delivered by Caesarian section.
Rupture Sys. sudden onset of severe abdominal pain (localised) tenderness
(Tubal Abortion) collapse & shock. - due to internal haem.
abdominal distension - referred pain to shoulder tip.
↓ B.P. weak pulse.
P.H. of 6 weeks amenorrhoea.
Some hours later - bleeding P.V.
Tr. urgent - immediate operation to tie off ruptured blood vessels evacuating blood from peritoneal cavity, and ruptured tube excised.
Transfusion of blood.
P. usually makes good recovery.

VAG. DISCHARGES. May be due to 1. erosion of cervix in adult.
2. vaginitis. - in any age. in child (vulvo-vaginitis) - Gonno, B. coli, staphy. strept.
in adult - Trichomonas vaginalis, yeast fungus - monilia albicans. gonorrhoea.
post-menopausal - senile vaginitis, associated w. prolapse.
badly-fitting pessary.

VAG. DISCHARGES.

3. Dis. of ut. - Carcinoma.
Endometritis

Investigation of pelvic organs.
P.V. exam.
Examination of discharge in Laboratory.

Erosion of ♀ - red & inflamed. & sometimes everted. - Diathermy.

Vaginitis - child - isolated until Gonorrhoea excluded. - swab to Path. - sensitivity test.
sometimes hormone therapy given to thicken lining of vagina.

Trichomona Vaginalis - yellowish frothy discharge
lining of vagina red & inflamed.
Diagnosis confirmed by microscopic examination
Will only survive in an alkaline medium, ∴ lactic acid douche,
insertion of medicated acid - arsenic & picric acid - maybe tr. for months.
Women advised to spring-clean house & disinfect bed-linen & personal clothes.
If treated in hospital - should have own bedpans & disinfect linen before sending to laundry.

Yeast Vaginitis - thick - white discharge.
intense irritation.
lining of v. with thick white patches / mania albicans
Tr. Paint with Gention Violet or Glycerine & Borax - few applications of are effective.

Gonorrhoea: purulent discharge - pus.
Diagnosis in Lab.
Tr. strict isolation + ✕P.

Senile Vaginitis. Usually hormone therapy - Oestrogen.
Douching if discharge profuse
Grad. clears up.

Ca ♀ of uterus: surgery
Radium for cervix

Pessary: take it out.

Endometritis: hysterectomy safest, as may become malignant later.
for post menopausal.