



GP Handbook v8.2

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ABDOMINAL PAIN

Common Causes

- Non-specific abdominal pain (NSAP)
- Irritable bowel syndrome (IBS)
- Gastroenteritis (GE)

History & Physical Examination

- NEVER FORGET TO CHART THE LMP IN FEMALE PATIENTS OF REPRODUCTIVE AGE
- Always palpate the abdomen in supine position
- Remember to check: bowel sounds and supraclavicular lymph nodes
- Admit all patients with acute surgical signs

Investigations

- Amylase is raised (up to 4 times the normal level) in acute pancreatitis. Other causes of increased amylase include mumps, renal failure, ectopic pregnancy, certain tumours, a penetrating ulcer, certain complications of diabetes, and advanced pancreatic cancer.
- Amylase levels may be low in severe liver disease, pancreatic insufficiency, pre-eclampsia, following burns, and in thyroid disorders.
- Gas under the diaphragm is best seen on a CXR.
- Do a pregnancy test (blood or urine) in all cases of secondary amenorrhoea.

Gynaecological Causes

- Ectopic pregnancy
- Dysmenorrhea
- Endometriosis
- Pelvic inflammatory disease
- Ovarian cysts
- Consider referral or admission in acute abdomen complicating pregnancy

Sample Admission Orders

- NPO
- BP/P/Temp qid
- IV fluid: Normosol-M in D5 2.5L/day
- CBP, ESR, LFT, RFT, amylase, spot sugar
- CXR, AXR (E&S)
- U/S whole abdomen
- Urine routine
- Stool routine
- Rx: Toradol 30mg iv q6h, Buscopan 20mg iv q6h, Nexium 40mg iv q24h

ABSCESS (SUPERFICIAL)

General

- All abscesses require adequate drainage under local/general anaesthesia.
- Superficial abscesses are usually suitable for open drainage.
- Antibiotics alone have little to offer as tissue penetration is usually poor.
- Antibiotic cream has NO PLACE in treating superficial abscesses.
- Prolonged antibiotic treatment can result in an “antibioma” – a chronic inflammatory mass.

Open Drainage

- Superficial abscesses can usually be drained through a cruciate incision.
- Position of incision may allow dependent drainage.
- Pus should be sent for microbiology (culture and sensitivity) if possible.
- Loculi should be destructed with fingers or curettes.
- Necrotic tissues should be excised.
- Packing is sometimes required to close any dead space, and to allow healing from the bottom of the wound.

Post-operative Management

- Daily dressing (with antiseptic solution or normal saline) and re-packing
- Antibiotics
- Analgesics

BENIGN BREAST DISORDERS

Mastalgia, breast cysts, and nondescript lumpiness are common. The combination is frequently described under the catchall term “fibrocystic disease”.

It is best to perform breast examination one week after menstruation.

Mastalgia

Only 7% of patients with breast cancer report breast pain; mastalgia is therefore usually a reassuring sign indicating a benign underlying pathology, although this cannot replace a careful and proper breast assessment.

Exclude the presence of any lump / abscess / mastitis first.

Most cases are due to hormonal changes, and remit spontaneously after months or sometimes years.

Drug treatment

Patients with mild symptoms can be treated with simple analgesics. Those with more severe symptoms should reduce saturated fat intake to help increasing the oestrogen affinity for oestrogen receptors, and try one of the following medications. Because of the long-term adverse effects, their use should be limited to a short course in patients with persistent or severe symptoms.

- Oral contraceptive pills
- Bromocriptine 2.5 mg bd days 10-26 (prolactin level is irrelevant)
- Danazol 100-200 mg bd for 7 days before menstruation

Breast Lumps

All solitary breast lumps should be removed surgically or sampled with Mammotome (which gives the breast lump a histological diagnosis). Fine needle aspiration under ultrasound guide provides the clinician with a cytological assessment on the lesion.

Ultrasound breasts in pre-menopausal women (with denser breasts) and mammogram in patients over the age of 50 can supplement clinical examination.

Over a 5 year period, 50% of fibroadenomas will get bigger, 25% will remain stable, and 25% will get smaller. The risk of malignant transformation is approximately 0.1%.

Nipple Discharge

- Nipple discharge is not necessarily abnormal.
- Cancer is the cause in < 10% patients.
- Gross appearance of the discharge is of little help in diagnosing breast cancer.
- The commonest cause of a bloody discharge is intraductal papilloma.
- Galactorrhoea in a woman who has not just given birth should prompt an endocrine evaluation.
- Hyperprolactinaemia with secondary amenorrhea: tests should be performed to

exclude a pituitary adenoma.

Gynaecomastia

Enlargement of the male breast during puberty is normal and transient.

Aetiology

- Drug-induced: Oestrogens, digitalis, isoniazid, spironolactone, calcium channel blockers, ketoconazole, theophylline, cimetidine, metronidazole, methadone, antineoplastic drugs, and marijuana.
- Endocrine disorders: Ultrasound testis can detect oestrogen-secreting testicular tumours, and CT or MRI abdomen can detect oestrogen-secreting adrenal tumours

Treatment

In most cases, no specific treatment is needed because gynaecomastia remits or disappears after the drug is withdrawn or the underlying disorder treated. Surgical removal of the excess breast tissue (eg suction lipectomy alone or with cosmetic surgery) is rarely indicated.

Mammotome

Mammotome is a breast biopsy device that enables physicians to obtain the correct amount of breast tissue for a definitive diagnosis without surgery. This allows for breast cancer diagnosis at its earliest, most treatable stage. Available at St Teresa's Hospital, the system makes early detection of breast cancer faster, easier and more precise. Patients can feel at ease during the procedure because a Mammotome biopsy requires only local anaesthetic and can be performed on an out-patient basis.

Under ultrasound guidance, the Mammotome probe is situated within the abnormal area of the breast. Once in position, a vacuum system plus a rotating device collects a small tissue sample with one single insertion through a small incision. Mammotome was shown to be as accurate as traditional open surgical biopsy in diagnosing certain breast cancers. For breast lumps < 2cm in diameter, Mammotome may remove the lesion completely, making any open surgery unnecessary.

Breast Screening

Breast cancer has the highest incidence among all female cancers in Hong Kong since 1994. The number of cases has risen markedly in the last 20 years. The incidence of breast cancer rises rapidly and reaches its first peak at the 40-50 age group; it then continues to rise to its second peak at the 70-80 age group.

- Screening mammography is recommended at 40 year old onward.
- Breast self examination is a part of breast awareness promotion, although no reduction in mortality can be demonstrated on mass teaching of it.
- Clinical breast examination should be included in any routine body check up.
- Ultrasound is most useful in evaluating symptomatic dense breasts, non-palpable densities found on mammograms that suggest cysts, and equivocal physical findings when the mammogram is normal. It also helps to guide the fine needle aspiration procedure, especially for deep and small lesions.
- MRI is useful in examination of breasts with silicone prosthesis. The true sensitivity and specificity however remains uncertain.
- Most early breast cancers have normal CA 15.3 level. The level is elevated when the tumour burden is high or when there is metastasis.

BENIGN PROSTATOMEGLY

Incidence

- Affects 50% men older than 60 years
- Affects 90% of men older than 90 years

Symptoms

- Obstructive: poor stream, hesitancy, dribbling and retention
- Irritative: frequency, nocturia, urgency and urge incontinence
- Haematuria

Investigations

- Urodynamic study can confirm bladder outflow tract obstruction in case of inconclusive history and physical examination
- Trans-abdominal with trans-rectal U/S prostate +/- biopsy
- RFT
- U/S kidneys and urinary bladder to exclude hydronephrosis and measure post-micturition volume
- Serum PSA to excluded malignancy

Treatment

Aim

- Relieve symptoms and improve quality of life
- Relieve bladder outflow obstruction
- Treat complications resulted from bladder outflow obstruction

Medications

- α -adrenergic antagonists eg Hytrin 5-10mg qd: especially in concomitant hypertension (beware of first dose syncope), or
- 5 α - reductase inhibitors eg Proscar 5mg qd: usually well tolerated, effective within a few weeks, for long-term use

BURNS

Depth of Burns

Partial thickness

First degree burns: superficial burns characterized by reactive erythema, blistering and heal without scarring. It usually heals in 5-10 days

Secondary degree burns: deep dermal burns. It usually heals in 15-30 days

Full thickness

Third degree: full thickness involvement. No reactive erythema and no skin sensation.

Rule of Nine

The body surface area (BSA) involved can be estimated from the rule of nine:

Area	%BSA
Head	9
Each upper limb	9
Each lower limb	18
Front of trunk	18
Back of trunk	18
Perineum	1

The palm of hand approximates to 1% BSA.

Management

- Dress the wound with an antiseptic or just normal saline daily.
- Debride any whitish slough.
- Aspirate large bullae.
- Apply Intertulle.
- Tetanus prophylaxis.
- Antibiotic treatment (local or systemic): still controversial. There is some evidence that using silver sulphadiazine cream or oral antibiotics may cause infection by resistant strains of bacteria.

Refer the following to hospital

- > 10% BSA in child
- > 15% BSA in adult
- Inhalation burns
- Electrical or chemical burns
- Special areas - eyes, face, hands

CIRCUMCISION

Indications

Non-medical

Cultural, religious, and hygienic reasons

Medical

- Phimosis
- Paraphimosis,
- Balanitis: infection of the prepuce
- Posthitis: infection of the glans penis

Contraindications

These include prematurity, anomalies of the penis (eg chordee, or curvature of the penis), hypospadias, epispadias, concealed or buried penis, micropenis, webbed penis, and ambiguous genitalia. Bleeding diatheses are relative contraindications for circumcision.

Post-Operative Care

After the operation the penis is usually swollen and looks very bruised. These symptoms will gradually disappear in a week or two. Infants who undergo circumcision may look irritable for a few hours afterwards (crying, feeding problems, and poor sleep).

Underwear

If the patient normally wears boxers he may find that they give insufficient support immediately post-operatively. He may wish to consider some form of loose-fitting briefs that will hold his penis in position and thus reduce the frictional stimulation.

Cup shielding

A paper cup can be used as a shield to surround the penis after operation. The paper cup can be turned into an open-ended paper cone to protect from contact against clothing.

Dressings

May be removed 24 to 48 hours after surgery if there is no bleeding or oozing. At this point, no further dressing is necessary, and he may take his bath or shower as usual. Chloramphenicol eye gel LA qid may be used in cases with high risk of infection.

Stitches

Although absorbable stitches are usually used they may need to be removed after 2 weeks if not already dissolved.

Time off school or work

A week (or even two) off work is desirable if the patient needs heavy lifting or if his job keeps him seated and unable to move around freely for hours.

Sports

Patients should avoid rigorous exercises, contact sports, cycling and swimming until the circumcision wound fully heals.

HAEMORRHOIDS

Haemorrhoids (aka piles) are enlarged and engorged blood vessels in or around the anus. They are very common, and affect 50% of population over the age of 50 years. They are said to be more common in countries where the diet has traditionally been more processed and low in fibre.

Aetiology

The main causes are those which contribute to an increased intra-abdominal pressure.

- Chronic constipation
- Pregnancy
- Obesity
- Heavy lifting jobs
- Chronic cough
- Inflammatory bowel disease

Symptoms

- Painless bright red rectal bleeding (stained tissue papers or drip into the toilet)
- Prolapsing perianal lump
- Acute pain due to thrombosis
- Faecal soiling or pruritus ani

Classification

Haemorrhoids are often classified as internal or external. Internal haemorrhoids arise above the dentate line and can be sub-classified as:

First degree

Haemorrhoids within the anus, and detectable with proctoscopy

Second degree

Prolapsed haemorrhoids which reduce spontaneously

Third degree

Prolapsed haemorrhoids which require manual replacement

Fourth degree

Permanently prolapsed haemorrhoids

Examination

General examination

Nutritional state, the presence of pallor, lymph nodes, abdominal masses and chronic chest problems

Anorectal examination

Classical positions: 3, 7 and 11 o'clock (terminal branches of superior rectal artery)

- Inspection: excoriation of perianal skin, fistula openings, ulcers, fissure and external

haemorrhoids

- Ask the patient to strain down to see any prolapse of haemorrhoids
- Digital examination: masses such as polyps or tumours, and colour of the stool
- Proctoscopy: direct visualization of haemorrhoids, bleeding points and masses

Colonoscopy

- if the patient is over the age of 50 and the blood is not clearly coming from the wall of the anal canal (altered blood, or blood mixed with stool)
- where there is a change in bowel habit and mucus in the stool
- when altered blood or mucus is seen on sigmoidoscopy

Colonoscopy or barium enema?

In general colonoscopy is preferred over barium enema because in colonoscopy,

- the patient feels less pain and discomfort (because of intravenous sedation)
- polypectomy and mucosal biopsy can be concomitantly performed
- visualization of the bowel lumen is better

CT colonoscopy

This new minimally invasive test provides 3-dimensional images that can depict polyps and other lesions as clearly as when they are directly seen by optical colonoscopy.

Benefits:-

- It is minimally invasive and has a lower risk of perforating the colon than conventional colonoscopy.
- It is an alternative for patients who have clinical factors that increase the risk of complications from colonoscopy, such as anticoagulant treatment or cardiopulmonary decompensation.
- If conventional colonoscopy cannot reach the full length of the colon – which occurs up to 10 percent of the time – CT colonography can be performed on the same day because the colon has already been cleansed.
- In 5% of patients, CT colonography shows abnormalities outside the colon which would otherwise be missed because colonoscopy only looks at the interior surfaces.
- It is less costly than colonoscopy.

Limitations

- CT scanning is, in general, not recommended for pregnant women.
- A person who is very obese may not fit into the opening of a conventional CT unit.
- CT colonoscopy is strictly a diagnostic procedure. If any significant lesions are found, they will have to be removed by conventional colonoscopy.

Treatment

Even after the most extensive treatments haemorrhoids may still recur.

First degree

- Often they will settle down over a few days without treatment.
- Cream or suppositories (eg Ultraproct) may help soothing itching and pain, and decreasing swelling and bleeding.

Second degree

- Treat as in first degree haemorrhoids.
- Rubber band ligation (RBL): higher successful rate but lower complication rate than phenol injection. Do not attempt RBL if the lesion is close (< 1cm apart) to the dentate line.

Third and fourth degree

Haemorrhoidectomy is usually performed in hospital under general anaesthesia either as an open procedure or using a stapling technique. Although the latter is more costly, it has many benefits over traditional haemorrhoidectomy:

- reduced operating time
- less postoperative pain
- easier post-operative wound care
- shortened hospital stay
- earlier return to normal activity

INGROWN TOENAILS

Ingrown toenail occurs, most commonly on the big toe, when a section of the nail curves into the flesh of the toe and becomes embedded in the soft tissue. Sometimes callused or red granulation tissue ("proud flesh") grows over the embedded edge. Infection frequently occurs, causing paronychia.

Possible Aetiological Factors

- Poorly fitting shoes
- Poor foot care
- Inappropriate nail cutting

Management

Conservative management (early case)

- Frequent Follow up
- Regular soaking and washing of feet
- Careful drying after washing
- Well fitting shoes
- Education into cutting nails transversely
- Possible use of pledges of cotton wool under nail to encourage growing out
- Recurrence is common

Surgery

- Wedge excision of the involved side of the nail under LA
- Recurrence is not unusual if the above aetiological factors are still present

Prevention

- Cut nails straight across without tapering the corners.
- Avoid wearing shoes and socks that are too tight.
- Keep feet clean to prevent the ingrown nail from becoming infected.

THYROID SWELLINGS

The important task when evaluating a thyroid swelling is to determine whether it is benign or malignant; and the initial examination is to determine whether there is a diffuse swelling or a solitary nodule.

Indications for active management of a benign thyroid swelling include a swelling that is:

- associated with thyroid hormone imbalance
- causing compression symptoms
- unsightly from the patient's point of view

Diffuse Swellings

The majority of diffuse thyroid swellings are due to either a multinodular goiter or Graves' disease. Other less common causes include thyroiditis and malignancies.

Multinodular goiter

The thyroid gland has an inherent propensity to form nodules with age. Multinodular goiter (MNG) represents an enhancement of this tendency sometimes aggravated by environmental factors such as iodine deficiency, diet and lithium treatment. The diagnosis can usually be made on clinical grounds alone or with ultrasonography. MNG often presents as a long-standing or slowly enlarging thyroid swelling. Surface nodules may be palpable.

Hyperthyroidism associated with MNG is usually due to autonomous nodules. Unlike thyrotoxicosis due to Graves' disease, where the level of stimulating auto-antibodies can spontaneously decrease, excessive thyroxine production by autonomous nodules does not normally go into spontaneous remission. It is inappropriate to prescribe anti-thyroid drugs for an extended period of time as the thyrotoxicosis will recur after cessation of the medication. Anti-thyroid drugs can further promote the growth of the thyroid gland due to elevated TSH levels resulted from suppression of thyroxine production. Treatment options include total thyroidectomy and radioactive iodine.

Graves' disease

This is the most common form of thyrotoxicosis and is a female-predominant autoimmune disease. The underlying pathophysiological mechanism is the generation of auto-antibodies against TSH receptors on thyrocytes. Apart from signs and symptoms of thyrotoxicosis, patients may develop a diffuse goiter, sometimes with a bruit, and have characteristic infiltrative ophthalmopathy and pre-tibial myxoedema. The diagnosis is usually made on clinical grounds and blood tests.

Thyroiditis

Thyroiditis encompasses a group of inflammatory disorders of the thyroid gland including Hashimoto's thyroiditis and subacute thyroiditis.

Hashimoto's thyroiditis is an autoimmune disease which causes progressive thyroid cell damage. It usually presents as a painless, diffuse, firm and lumpy goiter in young or middle aged women. It is characterized by a high level of autoantibodies against thyroid peroxidase, previously called microsomal antigen. The diagnosis can be confirmed by fine-needle aspiration (FNA) cytology. Patients with this condition are treated with thyroid hormone replacement. Surgery is reserved for large compressive goiters.

Subacute thyroiditis is a common cause of a painful thyroid gland. Women are more frequently affected than men, with a peak incidence in the 4th and 5th decades. A viral aetiology is implicated as it often follows an upper respiratory tract infection or has a prodrome of muscle aches and pains,

fever and malaise. The thyroid gland is tender on palpation. ESR is markedly elevated. Patients with this condition may undergo a period of thyrotoxicosis followed by a euthyroid and hypothyroid state as a result of ongoing thyrocyte damage. Fortunately, it is usually a self-limiting disease. Treatment is symptomatic with analgesics and sometimes beta-blockers during the thyrotoxic phase.

Anaplastic thyroid carcinoma

Anaplastic thyroid carcinoma is one of the most lethal solid tumours. With rare exceptions, it is rapidly fatal. It occurs more commonly in an elderly person who has a long-standing goiter. It presents as a rapid increase in the size of a pre-existing goiter and may be associated with pain and symptoms of surrounding tissue invasion such as hoarseness. The mainstay of treatment is radiotherapy with or without chemotherapy.

Lymphoma

This is uncommon and is usually of the non-Hodgkin's type. It commonly occurs in older women who have pre-existing hypothyroidism or Hashimoto's thyroiditis. The presentation can mimic anaplastic thyroid carcinoma. The diagnosis is made with FNA cytology or an incisional biopsy.

Solitary Nodules

5% of the general population have a palpable solitary thyroid nodule.

90% of thyroid nodules are benign; conservative management is indicated if malignancy is excluded.

The risk of malignancy of a dominant nodule in a MNG is similar to that of a truly solitary nodule.

In approaching a thyroid nodule, a clinician will need to answer 3 questions

- Is it malignant?
- Does it have pressure effect on the adjacent structures?
- Is it toxic?

History

- Rapid painless growth suggest malignancy.
- Sudden painful growth suggests haemorrhages into degenerating colloid nodules.
- Increased incidence of papillary thyroid cancer is noted in patients with increased radiation exposure.
- Malignancy is more common in children and the elderly.
- Evidence of fixation of nodal involvement suggests malignancy.
- Most patient will be clinically and biochemically euthyroid.

Indications for surgery

- Proven or suspected malignancy
- All cytologically diagnosed follicular neoplasm
- Hyperthyroidism refractory to medical treatment
- Obstructive symptoms: hoarseness, swallowing problem, dyspnoea
- Cystic nodules which recur after aspiration
- Cosmetic reasons

Investigations

Blood tests

- Free T4, Free T3, TSH*
- Thyroid antibodies: anti-thyroglobulin and anti-microsomal

* Since TSH concentrations are distributed logarithmically in the population, minor changes are unlikely to be clinically important.

Imaging

- U/S thyroid (+/- FNA)
- Thyroid scan

Fine needle aspiration (FNA) cytology

- Should be the first line investigation of the solitary thyroid nodule, performs under U/S guidance
- Accuracy >95% in experienced hands
- False negative rate <5%
- Can distinguish between benign and malignant tumours except in follicular tumours, in which case surgical excision is usually required

Technetium thyroid scan

- Not indicated for routine assessment of thyroid nodules
- Functional assessment of thyroid
- Cannot differentiate benign and malignant nodules
- Cold nodule: 10-15% chance of cancer
- Hot nodule: always benign
- Useful in recurrent thyroid swellings and retrosternal goitre
- Also useful in differentiating between a cold nodule in a hyperactive thyroid, and a hot nodule in a hypoactive thyroid

Treatment of Solitary Nodules

Euthyroid benign nodule

Simple cysts can be aspirated and the content sent for cytological examination to confirm the benign nature of the cyst. Up to half of all such cysts disappear permanently after one or more aspirations. Those that recur are usually larger, more than 4 cm, and should be considered for surgery.

Patients with a solid nodule with clinical features and investigations indicating a benign nature can be managed conservatively with follow-up. They can be re-investigated if progressive enlargement, new symptoms or thyroid hormonal dysfunction occur. A second FNA cytology can also be done after a period of 6-12 months to further reduce the chance of a false negative.

Toxic benign nodule

A toxic nodule will usually not be malignant and is effectively managed with either radioactive iodine or surgical excision. Since radioactive iodine treatment is simple and does not involve the risks of surgery, it is preferred by many clinicians and patients. Radioactive iodine is contraindicated during pregnancy and breast feeding.

Malignant nodule

The majority of malignant thyroid nodules will be either papillary or follicular thyroid carcinoma, collectively known as differentiated thyroid carcinomas. Medullary thyroid cancer, lymphoma and anaplastic carcinomas are rare.

Many surgeons would agree that lobectomy alone, with or without an isthmusectomy, may be appropriate treatment for patients known to be at low risk (eg female who is < 45 years old) with early favourable disease (eg a tumour <1 cm in size without extracapsular invasion). For other cases, the consensus on treatment approaches is less well-established. The overall 10-year survival rate for middle aged adults with differentiated thyroid carcinoma is 80-90%.

SCARS

Our skin is constantly shedding old cells and creating new ones, enabling it to repair itself if damaged. A scar is an essential part of this healing process following an injury to the epidermis or the dermis. Damage to the epidermis is healed by rebuilding the tissue, and scarring is slight. When we damage the dermis rebuilding is more complicated, and usually results in a noticeable scar.

After wound healing, the scar continues to alter as new collagen is formed and the blood vessels return to normal. This is the reason why most scars will fade and improve in appearance over the two years following an injury. However, there will always be some visible evidence of the injury and hair follicles and sweat glands do not grow back.

Contractures

- Result if scars shorten
- Particularly seen in scars malaligned with Langer's lines
- Can reduce joint mobility
- Treatment: surgical scar revision +/- Z-plasty or skin graft

Keloids

- A keloid scar is a dark-coloured, thick, puckered, itchy cluster of scar tissue that grows beyond the edges of a wound.
- It occurs when the body continues to produce collagen after a wound has healed.
- Keloids are often seen over the sternum, earlobes and shoulders.
- They commonly affect people with darker complexion (eg Asian, African or Middle-Eastern people).
- A person's tendency to develop keloids lessens with age.
- The most troublesome aspect of keloid scars is their tendency to recur, sometimes requiring repeated treatment.

Treatment

- Intra-lesional steroid (eg Triamcinolone) injections: useful but require repeated injections to sustain symptomatic control
- Compression dressings with elastic compression garments
- Silicone gel (eg Cica-care) therapy
- Surgical scar revision
- Laser therapy
- Low dose, superficial radiotherapy

Hypertrophic Scars

- Hypertrophic scars are thick and raised and often darker than surrounding skin.
- They differ from keloids in that they are confined to the original area of damage.
- Its formation is not a part of normal wound healing and can develop over time.
- Hypertrophic scars are more common in people with a genetic predisposition to scarring, lighter complexions, and deep wounds (especially second degree burns).
- The most common locations include chest, back, shoulders, earlobes, the lower face and, in general, any pressure- or movement-dependent areas of your body.

- Treatment options are very similar to those for keloids.

URINARY CALCULI

The life time risk of developing a ureteric calculus is about 5%. Urinary stones occur most commonly in men aged between 30 - 60 years. 90% of urinary calculi are idiopathic; 10% are due to hyperparathyroidism, vitamin D excess, and primary hyperoxaluria. After treatment, the recurrence rate at 1 year is 15%, 5 years 40% and 10 years at 50%. 90% of the urinary stones are radio-opaque.

Management

- Initial conservative treatment with oral fluids and adequate analgesia (NSAID & opiates)
- Blood for RFTs and calcium
- MSU for urinalysis and culture/sensitivity tests
- KUB and U/S as initial screening
- IVU to confirm diagnosis and to detect any ureteric obstruction
- Functional assessment may be indicated

Treatment

- Expectant treatment if stone is small, asymptomatic and non-obstructing
- Nowadays regardless of sizes and positions practically all stones may first be treated with extracorporeal shock wave lithotripsy (ESWL)
- Nephrectomy for non-functioning kidney to prevent infection
- Ureteroscopy (USC) +/- lithotripsy may be indicated in lower ureteric stones refractory to ESWL.
- If total obstruction occurs in the presence of infected urine urgent decompression can be achieved with percutaneous nephrostomy

Staghorn stone

- ESWL: may require multiple treatments; a double-J catheter is usually inserted cystoscopically to prevent stone fragments from obstructing the ureter
- Percutaneous nephrolithotomy (PCNL)
- Nephrectomy for non-functioning kidney to prevent infection

VARICOSE VEINS

Varicose veins affect 20-25% of adult females and 10-15% of adult males.

Risk Factors

- Pregnancy
- Pelvic pathology/tumour
- OC pills
- Increasing age
- Obesity
- Prolonged standing and sitting
- Smoking
- Familial
- Conditions that cause persistent increase in intra-abdominal pressure

Symptoms

- Pain or heaviness of leg, feet and ankle
- Oedema
- Localized skin changes/ discoloration
- Itching of skin near the affected vein
- Venous ulcer: classically on the medial side of the leg

Indications for Treatment

- Cosmetic reasons
- Venous ulceration
- Recurrent superficial thrombophlebitis
- Bleeding ruptured varices

Treatments

- Conservative: Elastic stockings, leg raising, lifestyle modifications
- Injection sclerotherapy
- Surgical treatment

Surgery

A lot of patients want to have varicose vein surgery for cosmetic reasons or due to anxiety that their disease may progress to chronic venous insufficiency and ulceration. It should be emphasized that varicose vein surgery is not curative, and early surgery in uncomplicated veins will not prevent development of future varicosities.

If indicated surgery is generally directed at the underlying abnormality, in the form of saphenofemoral or saphenopopliteal disconnection, and in the case of long saphenous varices,

stripping of the long saphenous vein with multiple avulsions.

Colour duplex scanning

Ideally, all patients with varicose veins should undergo duplex scanning, so that optimal surgery could be planned and performed. However, currently there is no clear evidence that such a policy reduces the rate of recurrence. In the presence of limited resources, colour duplex scanning is indicated in:

- Recurrent varicose veins
- History of superficial thrombophlebitis
- History of deep venous thrombosis
- Varicose eczema
- Haemosiderin staining
- Lipodermatosclerosis
- Venous ulceration

WOUND MANAGEMENT

Aim

- Prevent and combat infection
- Minimize scarring
- Offer symptomatic treatment

Puncture Wounds & Bites

- Examine for associated injury to tissues including nerves and vessels
- Look for any foreign bodies; x-ray may help
- Give analgesics as required
- Prescribe antibiotics (add an antibiotic to cover anaerobes in bite wounds)
- Insist on giving tetanus injections (ATT given at Day 0, 4-6 weeks & 6 months later) unless the patient is immune and the injury is non-tetanus prone
- Advise rabies prophylaxis in bite wounds where appropriate

Abrasions

- Clean +/- debride the wound
- Apply Intertulle
- Give antibiotic prophylaxis as indicated
- Dress the wound until it becomes dry

Surgical Wounds

- For a clean surgical wound, dressing should be kept intact for 2-3 days (after complete epithelialization to minimize wound infection).
- The stitches can usually be removed according to the following schedule:

Region	Days
Face	3 - 5
Scalp	5 - 7
Abdomen	8 - 10
Limbs	10 - 14