

Overview

Exposures to poisons or drug overdoses account for 5–10% of emergency department visits, and greater than 5% of admissions to intensive care units. More than 50% of these patients are children less than six years of age.

Causes

1) Common

- a) Cleaning substances (detergents, soap, shampoo)
- b) Cough and cold remedies
- c) Cosmetics

2) Potentially lethal

- a) Alcohol/Antifreeze
- b) Analgesics (paracetamol, aspirin, nonsteroidal anti-inflammatory drugs (NSAIDs), opiates)
- c) Psychotropics (neuroleptics, antidepressants, hypnotics, anxiolytics, lithium)
- d) Carbon monoxide
- e) Street drugs
- f) Cardiovascular drugs

Key Objectives

- Perform supportive care, decontamination or prevention of further absorption, give antidote where indicated, and enhance elimination of the poison.
- Determine whether poisoning has occurred, the substance involved, how severe the exposure was, how toxic it is likely to become, and the causticity of substance.
- Discuss special considerations in the management of poisoning with aspirin, paracetamol, tricyclic antidepressants, and methanol.

General/Specific Objectives

- Through efficient and focused data gathering:
 - Determine the drug or poison causing the problem, using patient's vital signs, mental status, pupil size, appearance, smell, etc. as potential clues in addition to history from patient, paramedics, police, clinician, pharmacist, friends and relatives (if intentional, history is frequently unreliable).
- Interpret the critical clinical and laboratory findings which were crucial in the processes of exclusion, differentiation, and diagnosis:
 - Select and interpret drug screen based on clinical information.
 - Select laboratory and diagnostic imaging investigation for toxic effects in addition to diagnosis.
 - Calculate anion and osmolar gap; explain and interpret findings.
- Conduct an effective plan of management for a poisoned patient:
 - Perform supportive care before or at the same time as data gathering and investigation, such as ensuring airway adequacy, haemodynamic stability and intravenous access, cardiac monitoring and electrocardiogram (ECG), pulse oximetry, etc.
 - Outline initial management in a patient with poisoning with altered consciousness.
 - Discuss advantages and disadvantages of various strategies for prevention of poison absorption (also termed decontamination) in a patient who is less than one hour after intake of poison.
 - Discuss strategies for enhancing the elimination from the body of various poisons.

080 Polycythaemia / Elevated Haemoglobin

Overview

The reason for evaluating patients with elevated haemoglobin levels (male greater than 185 g/L, female greater than 165 g/L) is first to ascertain the presence or absence of polycythaemia vera, and subsequently to differentiate between the various causes of secondary erythrocytosis.

Causes

1) Polycythaemia vera – low or normal erythropoietin

2) Secondary erythrocytosis – elevated erythropoietin

a) Hypoxaemia

- Pulmonary (sleep-apnoea, chronic obstructive pulmonary disease (COPD), pulmonary hypertension)
- Eisenmenger syndrome

b) Abnormal haemoglobin function

- c) Erythropoietin – secreting tumour (hepatocellular, renal cell, ovarian)
- d) Other (polycystic kidney, post-transplant, hydronephrosis, androgens)

3) Relative polycythaemia (decreased plasma volume: e.g. burns, diarrhoea)

4) Inapparent polycythaemia (increased plasma volume: e.g. renal failure)

Key Objective

- Discuss whether the determination of red cell mass is necessary for the diagnosis of polycythaemia or whether measurements of haemoglobin levels convey the same information.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Determine whether the patient has any other polycythaemia-related features.
 - Differentiate between causes of secondary erythrocytosis in patients without polycythaemia-related features.

- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - List indications for bone marrow biopsy.
 - Contrast the interpretation of low or normal erythropoietin levels to elevated levels in a patient with polycythaemia.
 - Contrast arterial oxygen saturation in primary and secondary polycythaemia.
- Conduct an effective plan of management for a patient with polycythaemia:
 - Select patients in need of further investigation and referral for specialised care.

081A Antepartum Care

Overview

The purpose of antepartum care is to help achieve as good a maternal and infant outcome as possible.

Aspects for Consideration in Antepartum Care

- 1) Pre-conception (counsel, if possible, about pregnancy and perform baseline investigations which may require action prior to pregnancy – rubella immunity, full blood examination (FBE), Papanicolaou (Pap) smear). Advise about folic acid ingestion**
- 2) Initial presentation**
- 3) First trimester / Second trimester / Third trimester**
- 4) Pre-labour (counsel for preparation of labour, and when to present to hospital)**

Key Objectives

- Determine whether the patient is pregnant and the most likely date of conception for the purpose of estimating the date of confinement; develop an appropriate relationship and rapport with prenatal patients.
- List physical findings associated with a normal first trimester pregnancy, including vital signs, skin changes, breast changes, and uterine changes.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Elicit factors which might alter the expected date of conception, or might influence the course of the pregnancy (e.g. maternal age); determine uterine size in terms of weeks of gestation.
 - In the first trimester, determine whether pregnancy is progressing satisfactorily (normal pregnancy symptoms), or complications are present (hyperemesis, miscarriage, ectopic).
 - In the second trimester, determine whether pre-term labour may be present, any bleeding, or urinary symptoms, and determine maternal blood pressure (BP) and fetal heart rate.
 - In the third trimester, determine the presence of fetal movements or their decrease, and measure BP, maternal weight gain, and determine fetal lie and presentation.
 - Diagnose onset of labour.

- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - Discuss current recommendations for ultrasound screening in normal pregnancy, in second trimester, and list first trimester complications for which ultrasound is indicated.
 - Discuss recommendations for routine testing at the first antenatal visit (if not done pre-pregnancy) screening for Group B streptococcus, diabetes, bacterial vaginosis, and maternal serum screening in second trimester, proteinuria and glycosuria in third trimester.
 - List investigations for a patient with Rh-negative blood type and list indications for anti-D globulin; list indications for amniocentesis.
- Conduct an effective plan of management for a patient who is pregnant:
 - Outline nutrition management in normal pregnancy including recommendations for iron and folic acid.
 - List potential complications associated with smoking, alcohol in pregnancy (maternal and neonatal).
 - Counsel patient on medications which are safe and unsafe during pregnancy, physical and sexual activity, travel, vaccines and breastfeeding.
 - Outline management of urinary tract infections (UTIs) in pregnancy, nausea and vomiting, and constipation.
 - Outline initial management of a woman with symphyseal fundal height measurement significantly larger or smaller than expected.
 - Outline initial management of BP elevation, of bleeding in first, second, or third trimester.
 - Outline initial management if fetal movements decline.
 - Outline initial management of post-date pregnancy.
 - Outline initial management of diabetes in pregnancy.
 - Counsel patients regarding breastfeeding.
 - Counsel patients regarding maternal serum screening.
 - Outline the components of the Bishop score, and the relevance of the score in clinical practice.
 - Select patients in need of specialised care because of maternal or fetal problems.

081B Intrapartum/Postpartum Care

Overview

Intrapartum and postpartum care means the care of the mother and fetus during labour and the six-week period following birth during which the reproductive tract returns to its normal nonpregnant state. Of pregnant women, 85% will undergo spontaneous labour between 37 and 42 weeks of gestation. Labour is the process by which products of conception are delivered from the uterus by progressive cervical effacement and dilatation in the presence of regular uterine contractions.

Aspects for Consideration in Intrapartum/Postpartum Care

1) Normal labour

2) Abnormal labour

3) Fetal surveillance

4) Postpartum care

a) Normal puerperium

b) Abnormal puerperium

- Fever
- Pain
- Haemorrhage

Key Objective

- Determine whether the patient is in labour, rupture of membranes is present, and determine her risk score.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Determine the fetal presentation, lie, position, station, and presence of engagement.
 - Determine whether labour is in the latent or active phase, and state the approximate duration of each, as well as the duration of the second stage of labour, expected rate of cervical dilatation.
 - Determine whether physical findings are present which necessitate increased levels of maternal or fetal monitoring.
 - List maternal and fetal signs to be monitored; discuss indications and frequency for pelvic examination in the first and second stages of labour.
 - Diagnose prolonged, protracted, or arrested stages of labour, and factors in mother's history predisposing to them.

- Diagnose cause of abnormal labour in terms of uterine contraction, fetus, and passage.
- Determine whether the course of the puerperium is normal or abnormal physically and emotionally.
- Differentiate between causes of postpartum fever. Include genital tract infection, episiotomy or wound infection, urinary tract infection (UTI), breast infection, breast engorgement, intercurrent or viral infection, deep venous thrombosis (DVT) and/or pulmonary embolus.
- Determine cause of postpartum haemorrhage (uterine, cervical, vaginal, perineal, disseminated intra-vascular coagulation (DIC)).
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - Order routine tests for a woman presenting to the labour and delivery ward.
 - List indications for fetal and uterine contractions monitoring and discuss significance of meconium in amniotic fluid.
 - Postpartum, in an Rh-negative woman, order maternal and neonatal blood to determine need for Rh immunoglobulin.
- Conduct an effective plan of management for a patient in labour and postpartum:
 - Counsel patient in labour about need for examination, reasons for examination, and permission to go ahead.
 - Describe mechanism of delivery for a fetus; define shoulder dystocia and list risk factors for this complication.
 - Describe signs of placental separation and normal duration of third stage of labour; describe the options for management of the third stage of labour; list components of Apgar score.
 - Discuss techniques for pain relief in labour; list indications for and complication of episiotomy; list the indications for and the complications of epidural analgesia/anaesthesia.
 - List risk factors for Group B streptococcal disease in the neonate and discuss use of prophylactic penicillin in labour.
 - List indications and contraindications of active management of third stage of labour with intravenous (IV) or intramuscular (IM) oxytocics.
 - Outline initial management of primary and secondary postpartum haemorrhage.
 - List methods to augment labour; list indications/complications of Caesarean section, forceps, or vacuum extraction.
 - Outline management of puerperal pain, dyspareunia, bladder and bowel dysfunction and depression.
 - Outline management of fever postpartum.
 - Select patients in need of specialised care.

081C Haemorrhage

(See #117 Vaginal Bleeding, Excessive in Amount or Irregular in Timing)

081D Obstetrical Complications

Overview

Virtually any maternal medical or surgical condition can complicate the course of a pregnancy and/or be affected by pregnancy. In addition, conditions arising in pregnancy can have adverse effects on the mother and/or the fetus (e.g. babies born prematurely account for greater than 50% of perinatal morbidity and mortality; an estimated 5% of women will describe bleeding of some extent during pregnancy, and in some patients, the bleeding will endanger the mother's survival).

Causes

1) Pre-existing maternal conditions

- a) Hypertension
(see #054B Pregnancy-Associated Hypertension)
- b) Diabetes
- c) Cardiac disease
- d) Chronic renal disease
- e) Thrombosis
- f) Systemic lupus erythematosus (SLE)

2) Maternal conditions arising in pregnancy

- a) Pregnancy-induced hypertension
(see #054B Pregnancy-Associated Hypertension)
- b) Gestational diabetes
- c) Gestational thrombocytopenia
- d) Thrombosis
- e) Viral infections ('TORCH' (Toxoplasmosis, Other, Rubella, Cytomegalovirus, Herpes simplex virus), rubella, varicella, HIV)

3) Fetal conditions arising in pregnancy

- a) Large for gestational age (twins)
- b) Small for gestational age
- c) Structural abnormality of fetus
- d) Alloimmune disease (Rh isoimmunisation)

4) Complications inherent to pregnancy

a) Antepartum haemorrhage

(see #117 Vaginal Bleeding, Excessive in Amount or Irregular in Timing)

b) Preterm labour

c) Preterm premature rupture of membranes

d) Polyhydramnios/Oligohydramnios

Key Objective

- Determine the risk factors that increase chances of complication during the pregnancy at the initial visit for prenatal care.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Elicit history of pre-existing maternal medical conditions, history of maternal or fetal problems in previous pregnancies, or any other complication inherent to pregnancy.
 - Elicit family history, history of nutrition, alcohol, smoking, obesity, drug use including recreational drugs, maternal age, viral infections, previous fetal structural or immune abnormalities, bleeding, leakage of fluid.
 - Perform physical examination of mother, uterine height, amount of amniotic fluid, and other fetal parameters.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - Select and order ultrasound and list ultrasound parameters of the biophysical profile (amniotic fluid, fetal movement, fetal tone, fetal breathing).
 - List indications for amniocentesis.
 - List investigations for specific maternal conditions including maternal blood type and antibody screen.
- Conduct an effective plan of management for a patient with obstetrical complications:
 - Outline preventive / 'improving outcome of pregnancy' programme (e.g. smoking cessation, folic acid, betamethasone to mother when preterm delivery imminent, screen for gestational diabetes, Rh immunoglobulin to Rh-negative women).
 - Outline immediate management of preterm labour and premature rupture of membranes; diabetes.
 - Select patients in need of specialised care.

Overview

Ideally, the prevention of an unwanted pregnancy should be directed at education of patients, male and female, preferably before first sexual contact. Counselling patients about which method to use, how, and when is a must for anyone involved in healthcare. Counselling should also address prevention of sexually transmitted diseases (STDs).

Causes

1) Non-permanent

- a) Hormonal contraception (oral, injectable, morning after pill)
- b) Barrier methods (diaphragm, cap, condom)
- c) Intra-uterine devices
- d) Other (abstinence, breastfeeding, withdrawal, rhythm method, ovulation method)

2) Permanent contraception

- a) Sterilisation (male, female)

3) Termination

Key Objectives

- Determine whether there are any absolute or relative contraindications to the use of hormonal contraceptives.
- If permanent contraception is being contemplated, determine the level of determination and commitment to proceed, level of understanding of options, and surgical or medical risks.
- If faced with an unplanned pregnancy, discuss the alternatives for management.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Elicit obstetric and gynaecologic history and determine risk factors for hormonal use.
 - Perform pelvic examination and exclude the presence of pregnancy if appropriate.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - Order appropriate cultures, Papanicolaou (Pap) smear, and pregnancy test if indicated.

- Order ultrasound to determine gestational age in a pregnant woman, and recognise the accuracy is best the earlier the ultrasound examination is done.
- Conduct an effective plan of management for a patient requesting contraception, pregnancy prevention or termination:
 - Outline methods of contraception, risks of failure, complications, and drug interactions.
 - Counsel patient about side-effects, adjustments if pill is missed, or need to add barrier techniques.
 - Counsel patient on benefit of barrier contraception in conjunction with hormonal contraception in reducing HIV transmission and STDs.
 - Counsel patient about failure rates of sterilisation, the importance of family being perceived complete, and complications of various approaches.
 - Counsel patient about the complications of pregnancy termination including potential guilt/emotional concerns, the effect of subsequent fertility and subsequent pregnancy outcome.
 - Select patients in need of specialised care.
 - Present contraceptive and termination alternatives while respecting the individual's own moral, ethical and religious beliefs.
 - Understand the legal position in regard to pregnancy termination, at varying gestations, in Australia.

Overview

The impact of premature birth is best summarised by the fact that although less than 10% of babies are born prematurely (less than 37 weeks gestation), these births account for greater than 50% of all perinatal morbidity and mortality. Most morbidity and mortality is due to delivery at less than 28 weeks gestation. Overall, the outcome, although guarded, can be rewarding given optimal circumstances and care.

Causes

Premature delivery can occur after spontaneous labour or when labour is induced prematurely because of maternal, placental or fetal problems. In many instances the cause of the spontaneous premature labour is unknown.

1) Fetal

- a) Multiple gestation
- b) Erythroblastosis and nonimmune hydrops
- c) Congenital anomalies

2) Placental

- a) Placenta praevia
- b) Placental abruption

3) Uterine

- a) Incompetent cervix
- b) Excessive enlargement (hydramnios)
- c) Distortion (leiomyomas, septate)

4) Maternal

- a) Preeclampsia
- b) Premature rupture of membranes
- c) Smoking, substance abuse
- d) Chronic medical illnesses
- e) Infections (urinary, cervical, amniotic) – Group B streptococcus, herpes, 'TORCH' (Toxoplasmosis, Other, Rubella, Cytomegalovirus, Herpes simplex virus), etc.

5) Iatrogenic (indicated induction of labour)

Key Objectives

- Contrast low birth weight (intra-uterine growth restriction) and prematurity.
- Identify risk factors for probable prematurity and initiate immediate and appropriate care of a premature baby.

General/Specific Objectives

- Through efficient, focused data gathering:
 - List the immediate and long term health problems faced by premature infants.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation and diagnosis:
 - Investigate the maternal and fetal factors which may precipitate a premature birth.
- Conduct an effective plan of management for a premature baby:
 - Resuscitate and manage the health problems encountered by premature infants.
 - Outline the nutritional requirements of premature infants.
 - Select patients in need of referral and/or specialised care for premature infants.
 - Plan the care of a premature baby, born at 28 weeks of gestation, whilst awaiting transfer to a tertiary care facility 200 km away.
 - Care of a baby with respiratory distress syndrome in the newborn period.
 - Counsel parents about immediate and long term health problems encountered by premature infants.
 - Co-ordinate healthcare facilities for the short and long term care of premature infants.
- Conduct an effective plan of management for a patient in premature labour at varying gestations:
 - Use of drugs to inhibit uterine contractions.
 - Use of corticosteroid and other drugs to improve pulmonary maturity.
 - Mode of delivery.

(See also #115B Urinary Incontinence, Elderly)

Overview

Patients with pelvic relaxation present in many different and often subtle ways. In order to identify patients who would benefit from therapy, the clinician should be familiar with the types of pelvic relaxation and the approach to the patient with symptoms suggestive of this problem.

Causes

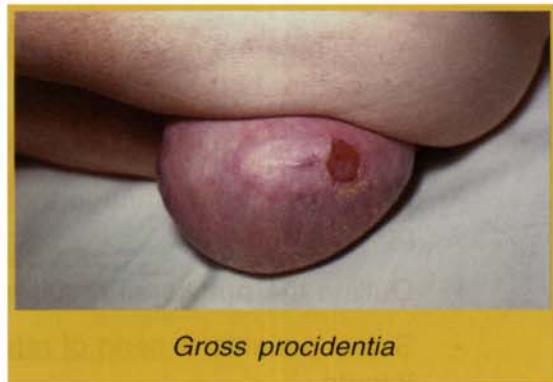
1) Uterine prolapse

2) Vaginal vault prolapse

3) Cystocele

4) Rectocele

5) Enterocoele



Gross procidentia

Key Objective

- Describe the progression of genital prolapse from grade one to procidentia, including the impact of chronic straining and hormone replacement therapy (HRT); explain to the patient the development and progression of urinary tract or gastrointestinal symptoms.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Determine the severity of symptoms, effect on activity, predisposing factors (particularly after the menopause), and risk factors for surgery.
 - Differentiate between different types of pelvic relaxation according to associated difficulties (e.g. voiding, stress incontinence, defaecating).
 - Determine structure which is prolapsing on physical examination.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - State that there are no specific tests for the assessment of prolapse.
- Conduct an effective plan of management for a patient with pelvic relaxation or prolapse:
 - Counsel the patient on benefit and risks of no intervention, conservative measures including pelvic floor exercises and other physiotherapy, and surgery.
 - Select patients requiring referral for specialised care.

Overview

Proteinuria is identified by positive dipstick on urinalysis during routine screening for insurance and other examinations, when examining patients with symptoms related to the urinary tract, or when following the progress of patients with secondary causes. Persistent proteinuria implies abnormal glomerular function and always requires further investigation.

Causes

1) Transient proteinuria

2) Orthostatic proteinuria

3) Persistent proteinuria

- a) Overflow
- b) Tubulointerstitial
- c) Glomerular (including nephrotic syndrome)

- Primary
 - Minimal change disease
 - Focal segmental glomerulosclerosis (FSGS)
 - Membranous glomerulonephropathy
- Secondary
 - Diabetes mellitus
 - Secondary FSGS
 - Collagen diseases

Key Objective

- Differentiate between benign causes of proteinuria and proteinuria resulting from transient or permanent glomerular damage requiring specialist assessment.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Exclude transient and orthostatic proteinuria; reassure patients about benign nature of conditions.
 - Differentiate between overflow and tubulointerstitial proteinuria, and glomerular proteinuria.
 - Diagnose common primary or secondary glomerular diseases.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis.

- Conduct an effective plan of management for a proteinuric patient:
 - State referral indications for a patient with proteinuria.
 - Formulate the most appropriate management to prevent or delay progression to chronic renal failure in patients with primary glomerular diseases.
 - Formulate the most appropriate management to prevent or delay diabetic nephropathy in patients with Type I or Type II diabetes mellitus.
 - Interpret and contrast the prognostic significance and possible clinical sequelae of light and heavy proteinuria.

Overview

Pruritus accompanies many skin disorders. In the allergic group pruritus is the predominant symptom. In the absence of a primary skin lesion pruritus can be indicative of systemic disease or psychological or emotional disorder.

Causes

1) Skin Lesions

a) Primary skin disease

- Skin blisters (papular/vesicular)
 - Dermatitis herpetiformis
 - Bullous pemphigoid
- Skin rash (papulosquamous)
 - Mycosis fungoides
 - Psoriasis
 - Lichen planus

b) Parasitosis (scabies, pediculosis)

c) Allergy (atopic dermatitis/eczema, urticaria, allergic dermatitis)

d) Arthropod bites

e) Factitious dermatitis

2) No skin lesions

a) Senile pruritus

b) Drugs/Foods

c) Obstructive biliary disease

d) Uraemia / Renal failure

e) Haematological

- Polycythaemia vera / Microcytic anaemia
- Leukaemia
- Lymphoma

f) Carcinoma / Carcinoid syndrome

g) Endocrine (diabetes, thyroid disease)

3) Psychiatric, psychological and emotional disorders



Key Objectives

- Identify the skin disorder causing pruritus.
- In the absence of primary skin lesions identify the underlying cause of the pruritus.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Categorise primary skin lesions associated with pruritus.
 - In the absence of skin lesions, select investigations to diagnose systemic disorders.
- Conduct an effective plan of management for a patient with pruritus:
 - Outline local and other therapy for pruritus.
 - Treat underlying systemic disease if identified.
 - Select patients in need of specialised care.

086A Pruritus Ani

Overview

Anal pruritus can be associated with defective local hygiene, generalised skin conditions, or local anal conditions. Pruritus vulvae may coexist.

Causes

- 1) Defaecatory habits, poor or excessive hygiene**
- 2) Localised anorectal conditions (skin tags, anal condylomas/warts, fistulae, haemorrhoids, threadworms)**
- 3) Generalised skin or systemic disorders**

Key Objective

- Conduct a detailed history and local examination to identify likely causes.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Identify likely general causal factors (diabetes mellitus, general skin disorders).
 - Perform full anorectal examination for local causes.
 - Detect yeasts, fungi, parasites from stool examination, skin scraping, microscopy.
- Outline a management plan based on appropriate local hygiene.

Overview

Psychosis refers to a group of severe mental disorders characterised by morbid, false beliefs (delusions), disturbances in sensory perception (hallucinations), disorganised speech patterns (thought disorder) and grossly disorganized or catatonic behaviour. There may be impaired or absent insight into the pathological nature of symptoms, affective flattening, apathy and lack of drive, and cognitive and conceptual impairments. Schizophrenia is both the most common and the classic psychotic disorder, but psychotic symptoms in isolation can occur in a range of other syndromes. There are about 200,000 people with schizophrenia in Australia. The illness typically begins in adolescence or early adult life and is associated with prolonged disability, stigma, under-employment and discrimination. Depending on the severity, schizophrenia may significantly affect the patient's social, occupational and interpersonal functioning.

Causes

- 1) Schizophrenia (and subtypes)**
- 2) Schizophreniform disorder (duration of illness less than six months)**
- 3) Schizoaffective disorders (concurrent mood disorder and psychosis)**
- 4) Delusional disorder (grandiose, persecutory, erotomanic, jealous, somatic)**
- 5) Brief psychotic disorder (duration less than four weeks)**
- 6) Psychotic disorder due to a general medical condition**
- 7) Substance-induced psychotic disorder – intoxication or withdrawal from**
 - a) Alcohol
 - b) Amphetamines
 - c) Cannabis
 - d) Cocaine
 - e) Hallucinogens
 - f) Inhalants
 - g) Opioids
 - h) Psychotropics
- 8) Shared psychotic disorder**

NOT religious MATERIAL

**If you read this you will
learn what made me:**

- So funny (say all those jokes).
 - Act so cool.
 - Think about girls, girls, girls so much.
 - Drive with absolutely NO FEAR.
 - Pay so much attention to my appearance.
 - Say and do so many stupid, irrational and dangerous things.
- Etc...

Psychotic disorder

Key Objective

- Differentiate patients with psychotic symptoms who have insight and are aware of their symptoms, from those who have no insight and are of concern to others.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Establish a collaborative relationship with the patient.
 - Determine the extent of the psychotic symptoms, including the history of onset, progression and duration and any associated mood symptoms.
 - Determine any relationship between the psychotic symptoms and medical illness, alcohol and non-prescribed drugs or medication.
 - Assess personality and social strengths and current level of functioning.
 - Perform a mental status examination including risk of harm to self and others.
 - Perform baseline screening investigations and physical examination.
 - Refer for appropriate educational/social/vocational assessments.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis.
- Establish an effective plan of management for a patient with psychosis:
 - Outline modern management principles, including atypical antipsychotics, psychological and psychosocial therapies and the role of hospitalisation.
 - Tactfully counsel and educate patients and carers/family about the nature and natural history of the psychosis.
 - Provide ongoing support to carers and family and advocacy for patients and advise on support groups.
 - Select patients in need of specialised referral or rehabilitation.

Overview

Pupils should be black, round, equal and reactive to light and accommodation. The pupils dilate in dark surroundings and constrict in bright light, the size depending on a balance between parasympathetic and sympathetic innervation. Pupil size is influenced by local mydriatics or the effects of drugs. Any non-black area in the pupil implies media opacification in the anterior chamber, lens or vitreous. Abnormal pupillary reactivity and size after trauma may be important clues to intracranial pathology in the setting of head injuries; and pupillary abnormalities may be associated with a variety of neurological disorders.

Causes

1) Local disorder of iris

2) Inequality of pupil size (anisocoria)

- a) Impaired pupil constriction (third nerve palsy, tonic pupil, mydriatics)
- b) Impaired pupil dilatation (Horner syndrome)
 - First order (hypothalamus, brain stem, spinal cord lesions)
 - Second order / Preganglionic lesions
 - Third order / Postganglionic lesions

3) Impairment of pupil constriction (without anisocoria)

- a) Unilateral (optic nerve or retinal lesion)
- b) Bilateral (diabetes, syphilis, midbrain lesion, hydrocephalus, factitious)



Key Objectives

- Determine whether there has been previous ocular inflammation, trauma, loss of vision, or eye pain in order to begin ruling out local disorders.
- Understand and interpret changes in pupillary appearance, size and reactivity.
- Select patients in need of urgent referral.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Differentiate clinically between the various mechanisms of pupil abnormalities.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - Select patients in need of referral for further investigation.
- Conduct an effective plan of management for a patient with pupil abnormalities:
 - Select patients in need of referral for management.

089A Chronic Musculofascial Pain

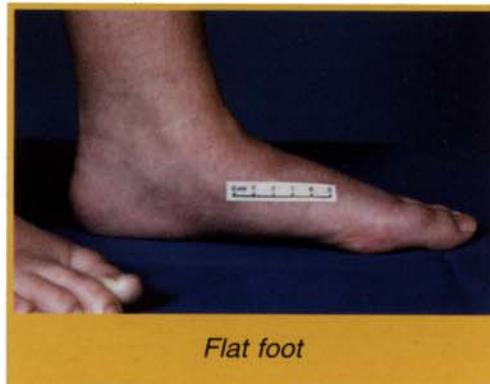
Overview

'Fibromyalgia' (fibrositis, myofascial pain syndrome) is a very common but poorly defined condition of unknown aetiology associated with chronic pain affecting muscles and soft tissues such as tendons and ligaments. Symptoms include diffuse muscle pains and aches, stiffness, fatigue, sleep disturbance and focal points of tenderness without other abnormalities on physical examination, laboratory, or radiological studies. Concomitant anxiety and depression are common. The condition is more common in women.

Polymyalgia rheumatica is a rheumatic condition that is frequently linked to giant cell (temporal) arteritis. Polymyalgia rheumatica is a relatively common disorder, with a prevalence of about 700 out of 100,000 persons over 50 years of age. Synovitis is considered to be the cause of the discomfort. The erythrocyte sedimentation rate (ESR) is markedly raised in most patients.

Causes

- 1) 'Fibromyalgia'
- 2) Polymyalgia rheumatica
- 3) Polymyositis/Dermatomyositis



- 4) Shoulder pain (rotator cuff injury, capsulitis, bursitis, tendinitis)**
- 5) Hand/Wrist pain (carpal tunnel, fracture/dislocation, tendinitis)**
- 6) Foot pain (flat feet, hallux valgus, metatarsalgia, neuroma, fasciitis, stress fracture, tendinitis, apophysitis)**
- 7) Knee pain (meniscal injury, cruciate/collateral ligament injury, patellofemoral disease)**
- 8) Nerve entrapments / Neuropathies**

Key Objectives

- Differentiate between articular and non-articular pain.
- Differentiate between 'fibromyalgia' and polymyalgia rheumatica.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Diagnose 'fibromyalgia', especially in women, from history and associated features, especially tender point examination of selected anatomic locations.
 - Diagnose polymyalgia rheumatica in patients 50 years or older with bilateral morning stiffness and aching (more than 30 minutes) for at least one month in neck or torso, shoulders or proximal arms and hips or proximal thighs, and an elevated ESR.
 - Differentiate local from referred pain, acute from chronic, muscle from nerve pain, etc.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - State that laboratory tests in patients with 'fibromyalgia' are normal, and in polymyalgia rheumatica only the sedimentation rate is usually elevated.
 - List indications for electromyelography (EMG).
- Conduct an effective plan of management for a patient with regional pain:
 - Outline management of 'fibromyalgia' including exercise, education, medication, and supportive psychosocial measures.
 - Describe complications of corticosteroids and nonsteroid anti-inflammatory agents.
 - List indication and contraindications in management of non-articular conditions of: rest, physiotherapy, anti-inflammatory medication, local corticosteroid injection, and surgery.
 - Select patients in need of specialised care.

089B Low Back Pain**Overview**

Low back pain is an extremely common complaint. Most people experience at least one episode of acute low back strain at some period. Short-lived back pain of mechanical origin is not associated with a clearly definable aetiology. Most low back pain is of benign aetiology, with spontaneous recovery over the course of days or weeks. Imaging and other investigations are unnecessary and unlikely to be helpful. Concerning features, indicating the need for further investigation, include an insidious onset, a neurologic deficit, unremitting severe pain, evidence of systemic illness and a relevant medical history. Associated loss of bladder or bowel control indicates a potential surgical emergency. Low back pain remains a major cause of lost work time. In many patients with persisting and chronic back pain a precise pathological diagnosis is not possible. Chronic occupationally-related and litigation-linked low back pain may be associated with unconscious or conscious exaggeration of symptoms in the absence of demonstrative organic disease and with the presence of non-objective physical signs indicating abnormal illness behaviour.

Causes**1) Acute musculoligamentous lumbo-sacral strain – self resolving****2) Chronic, persistent or recurrent low back pain****a) Mechanical**

- Age-related and degenerative spondylosis
 - Disc disease and prolapse, osteoarthritis of facet joints
 - Spondylolysis, spondylolisthesis, spinal canal stenosis
- Metabolic (osteoporosis)
- Neoplasms (myeloma, metastasis)
- Spinal infections (tuberculosis (TB), osteomyelitis)
- Inflammatory (seronegative spondyloarthropathy)
 - Ankylosing spondylitis
 - Reiter syndrome / Reactive arthritis
 - Enteropathic arthritis
 - Psoriatic arthritis

b) Referred pain (renal, pancreatic, vascular aneurysm, retroperitoneal blood, gynaecologic, etc.)**Key Objectives**

- Perform an appropriately focused and accurate examination of back and spine.
- Recognise the rare serious causes of low back pain by being alert to warning flags in history and examination.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Determine whether inciting event exists, pain location, radiation, and effect of back or leg motion.
 - Perform examination of the back and proximate anatomic areas that could lead to back pain.
 - Identify patients with neurologic defect.
 - Determine whether there is loss of sphincter tone or urinary retention, and state that the presence of such signs represent a surgical emergency.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - Outline management of acute back pain without neurologic or other abnormality on examination.
 - Outline clinical features and management plans in a patient with low back pain with nerve root impingement.
 - Select patients in need of specialised care.



Ankylosing spondylitis

089C Neck Pain

Overview

Attacks of transient acute neck pain and stiffness are very common, the incidence increasing with age. Prolonged neck pain and stiffness are important sequelae to whiplash-associated motor vehicle collisions. Specific nerve root deficiencies are rarely found. Continuing chronic disabilities and impairments are often associated with compensation claims and secondary psychological problems.

Causes

1) Intrinsic disease

- a) Muscle spasm (awkward posture, certain occupations – assemblyline workers, violinists)
- b) Disc degeneration/herniation (with neural impingement, C6–C7 most commonly)
- c) Osteoarthritis / Cervical spondylosis
- d) Tumours
- e) Other (whiplash, myofascial pain syndromes, diffuse idiopathic skeletal hyperostosis, congenital spinal stenosis)

2) Systemic disease (rheumatoid arthritis (RA), ankylosing spondylitis, polymyalgia rheumatica, bone metastases)

3) Referred (from shoulder, angina pectoris, meningitis, diaphragm, or teeth and jaw pathology)

Key Objectives

- Determine whether the pain is caused by conditions that are intrinsic to the cervical spine or its musculature, by systemic conditions or by referred pain from elsewhere.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Elicit a history including age, occupation, trauma, radiation of pain (if not correlated with neuro-anatomic pathways, consider myofascial pain or 'fibromyalgia').
 - Determine whether pain is nerve root, and which root, or whether the condition is central disc herniation with bilateral long tract signs.
 - Determine muscle and sensory function, tendon reflexes, neck mobility, trigger points.

- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - State that imaging (computed tomography (CT), magnetic resonance imaging (MRI)) may demonstrate significant lesions in asymptomatic patients.
 - Select diagnostic imaging when indicated.
 - List indications for electromyelography (EMG).
- Conduct an effective plan of management for a patient with cervical pain:
 - Outline conservative medical management for degenerative disc disease (posture modification, cervical collar, physical therapy, local pain relief, drugs, trigger point injections, etc.).
 - Select patients in need of specialised care.

089D Facial Pain**Overview**

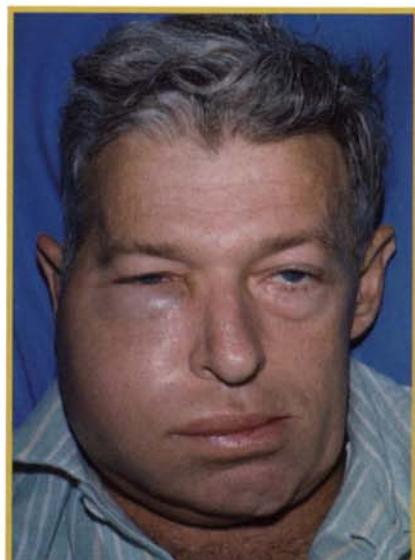
Facial pain can be separate from or can overlap with headache. Pain in the face itself has a miscellany of causes from local disorders. Referred pain from intracranial, cardiac and other causes needs to be excluded; the keys to accurate diagnosis are a careful history and physical examination aimed at recognising urgent causes and those requiring additional investigation.

Causes

- 1) Dental pain (caries, third molar impaction, root abscess, etc.)**
- 2) Sinuses (maxillary, frontal and ethmoid sinusitis)**
- 3) Eye problems (glaucoma, iritis)**
- 4) Temporomandibular joint (TMJ) dysfunction**
- 5) Nasopharyngeal and oesophageal causes (inflammations, foreign body, neoplasms)**
- 6) Migraine variants (facial migraine, cluster headaches)**
- 7) Salivary gland disorders (sialitis, stone, neoplasm)**
- 8) Trigeminal neuralgia ('tic douloureux')**
- 9) Referred pain from extrafacial (intracranial, cardiac) causes**

Key Objectives

- Differentiate causes by careful history-taking and examination.
- Recognise referred pain from extrafacial causes.

*Parotitis*

089E Shoulder Pain

(See also #071A Pain in the Upper Extremities)

Overview

Shoulder pain is commonly associated with painful limitation of arm movement, which aids identification of pain due to intrinsic shoulder disease from that referred from neck, diaphragm and mediastinum. Osteoarthritis of the glenohumeral joint is uncommon and in most instances the pain is due to rotator cuff problems, bursitis and acromioclavicular arthritis. The mobility of the joints associated with shoulder movements renders them liable to dislocation and recurrent dislocation, especially from sporting injuries.

Causes

- 1) Rotator cuff lesions / Subacromial bursitis**
- 2) Adhesive capsulitis ('frozen shoulder')**
- 3) Bicipital tendinitis/tear**
- 4) Acromioclavicular arthritis**
- 5) Referred pain**
 - a) Ischaemic cardiac disease / Pericarditis
 - b) Cervical spondylosis
 - c) Gallbladder / Diaphragm
 - d) Pancoast tumour

Key Objectives

- Diagnose most likely cause from history and examination.
- Exclude extrinsic causes of shoulder pain.
- Recognise requirements for investigation and specialised care.

089F Hand/Wrist/Elbow Pain**Overview**

Pain in the upper limb involving hand, wrist or elbow is a common symptom, usually definable by careful history and examination into well-defined causes, and responding well to treatment. A smaller subgroup of predominantly functional illness linked with repetitive strain, of poorly defined aetiology and often associated with work-related compensation claims, is more difficult to treat.

Causes**1) Nerve entrapment/impingement syndromes**

- a) Carpal tunnel (median nerve at wrist)
- b) Ulnar neuritis (cubitus valgus, Guyon canal, 'ulnar hammer' syndrome)
- c) Cervical spondylosis / Disc prolapse with nerve root radiculopathy
- d) Thoracic outlet syndrome with nerve root radiculopathy

2) Stenosing tenosynovitis

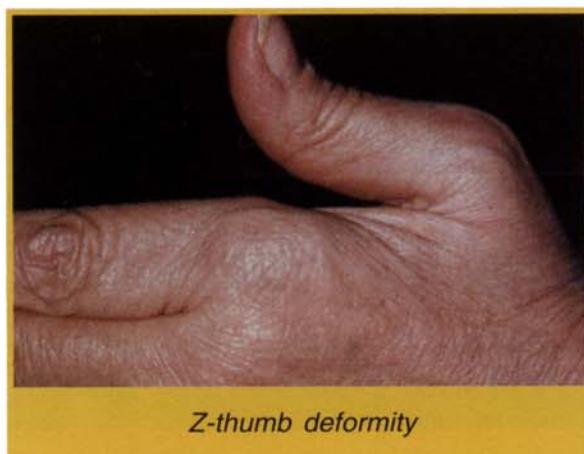
- a) de Quervain tenosynovitis
- b) Trigger finger

**3) Musculotendinous strain injuries**

- a) Lateral and medial epicondylitis ('tennis elbow', 'golfer elbow')

4) Degenerative

- a) Rheumatoid arthritis (RA) (wrist/hands/fingers)
- b) Osteoarthritis (hands/thumb/fingers)



5) Vascular

- a) Raynaud syndrome, scleroderma
- b) Venous thrombosis (axillary vein thrombosis / effort thrombosis)
- c) Arterial thromboembolism (cervical rib, thoracic outlet syndrome, distal vascular effects)
- d) Lymphoedema



6) Referred pain (cardiac, lung apex)

7) Reflex sympathetic dystrophy (chronic regional pain syndrome, Sudeck atrophy)

Key Objectives

- Diagnose most likely cause from history and examination.
- Recognise requirements for investigation and specialised care.

089G Hip Pain

(See also #059 Joint Pain, Mono-Articular (Acute, Chronic) and #061 Limp / Pain in Lower Extremity in Children)

Overview

Causes of pain in the hip tend to be age related. In childhood, a variety of potentially severe disorders can benefit from early diagnosis and treatment. In adults osteoarthritis is the most common cause of hip pain. Pain in the region of the hip can also be referred from the lumbar spine and sacro-iliac joints. Ischaemic claudicant muscle pain secondary to aorto-iliac occlusion can be confused with joint pain.

Causes in Children

- 1) Developmental dysplasia of hip (DDH, CDH)
- 2) Juvenile osteochondritis of femoral head (Legg-Calvé-Perthes disease)
- 3) Septic arthritis
- 4) Transient synovitis ('irritable hip')
- 5) Slipped femoral head epiphysis

Causes in Adults

- 1) Osteoarthritis of hip
- 2) Osteonecrosis of femoral head (steroids, decompression sickness, previous dislocation)
- 3) Musculofascial strain/bursitis ('snapping hip', trochanteric bursitis)
- 4) Referred pain from other extra-articular causes
 - a) Lumbar disc prolapse
 - b) Cutaneous nerve entrapment (meralgia paraesthetica)
 - c) Ischaemic aorto-iliac vascular disease



Osteoarthritis of hip



Avascular necrosis femoral heads

Key Objectives

- Diagnose most likely cause from history and examination.
- Recognise requirements for investigation and specialised care.

089H Knee Pain

Overview

The knee is the most complex and extensive of all body joints, and is the area of most active bone growth in childhood. The knee and adjacent long bones are the most common sites for osteomyelitis and primary bone tumours in childhood. The knee is particularly vulnerable to injuries in contact sports such as football; and depends for its stability on strong ligaments and the surrounding muscles, particularly quadriceps femoris. Surrounding bursae are prone to inflammatory complications. Osteoarthritis presents with painful stiffness, the incidence increasing with advancing age.

Causes

- 1) Osteoarthritis / Rheumatoid arthritis (RA)**
- 2) Traumatic derangements**
 - a) Meniscal, and crucial/collateral ligamentous damage
 - b) Traumatic chondromalacia of patella or condyle
 - c) Traumatic osteochondritis dissecans / osteonecrosis
 - d) Traumatic musculoligamentous strains (extensor apparatus injuries, Osgood-Schlatter apophysitis)
- 3) Bursitis (prepatellar, pretibial, anserine, semimembranosus, Baker cyst)**
- 4) Vascular disease – popliteal aneurysm**
- 5) Referred pain (hip)**

Key Objectives

- Diagnose most likely cause from history and examination.
- Recognise requirements for investigation and specialised care (including arthroscopy).

089I Foot and Ankle Pain

Overview

Apart from ischaemic pain and proximal neuropathies, which are important to exclude, most causes of chronic foot pain are due to local abnormalities. Chronic foot strain is exacerbated by obesity and improper footwear.

Footcare in diabetics to prevent ulcerative neuropathic, ischaemic, and infective complications has a high priority in preventive primary care practice.

Causes

1) Forefoot pain (metatarsalgia)

- a) Anterior flat foot, hallux valgus, bursitis ('bunion')
- b) Claw toe / Hammer toe / Over-riding toe
- c) Plantar digital neuritis/neuroma ('Morton metatarsalgia')
- d) Stress fracture ('march fracture'), metatarsal necks
- e) Plantar warts/callosities
- f) Ischaemic and neuropathic pain (diabetes, atheroma)

2) Heel and ankle pain

- a) Plantar fasciitis
- b) Achilles tendinitis/bursitis/tear
- c) Peroneal tendinitis/dislocation
- d) Tarsal tunnel syndrome
- e) Traumatic osteochondritis/osteonecrosis
 - Calcaneum (Sever)
 - Navicular (Köhler)
 - Metatarsal (Freiberg)

Key Objectives

- Diagnose most likely causes from history and examination.
- Recognise cases needing investigation and specialised care.

089J Spinal Compression / Osteoporosis

Overview

Spinal compression is one manifestation of osteoporosis, the prevalence of which increases with age. As the proportion of our population in old-age rises, osteoporosis becomes an important cause of painful fractures, deformity, loss of mobility and independence, and even death.

Causes

1) Type I (oestrogen/testosterone deficiency or menopause – ratio male:female = one:six)

2) Type II (age related – ratio male:female = one:two)

3) Disuse

- a) Lack of weight-bearing activity (inactivity, prolonged bed rest)
- b) Paralysis / Paresis / Weightlessness in space

4) Diet

- a) Malnutrition / Anorexia nervosa (inadequate calcium / vitamin C,D / protein)
- b) Alcoholism / Smoking

5) Chronic disease

- a) Rheumatoid arthritis (RA)
- b) Drugs (increased cortisol, heparin, methotrexate)
- c) Genetic (peak bone mass, osteogenesis imperfecta)
- d) Metabolic acidosis
- e) Neoplasms (myeloma/lymphoma)

6) Endocrine causes

- a) Hyperparathyroidism (HPT) / Hyperthyroidism
- b) Hypercortisolism

Key Objectives

- Define osteoporosis as a metabolic bone disease with decreased density (mass/unit volume; bone is abnormally porous and thin). The reduced bone mass weakens the mechanical strength of the bone, thus making it much more likely to break, often with little or no trauma.
- Outline how osteoporosis and its complications can be prevented or minimised.

General/Specific Objectives

- Through efficient, focused data gathering:
 - In a patient with spinal compression or other fractures, determine extent of trauma causing break or whether the fracture occurred at rest or routine activity.
 - Determine the presence of spinal deformity (kyphosis), loss of height, and abdominal protrusion.
 - Differentiate osteoporosis from osteomalacia (defective bone mineralisation)
 - Check for risk factors of osteoporosis.
- Interpret critical clinical and laboratory findings that were key in the processes of exclusion, differentiation, and diagnosis:
 - Select patients requiring investigation for less common causes of bone loss.
 - Select patients in need of bone density assessment to prevent or minimise osteoporosis.
- Conduct an effective plan of management for a patient with osteoporosis and/or spinal fracture:
 - Outline management of pain relief in vertebral compression fractures as well as supportive measures and mobilisation.
 - Outline prevention and treatment of osteoporosis including nutrition, calcium and vitamin D supplementation, drug (oestrogen, biphosphonates) therapy, and activity.

089K Cancer Pain

(See also #030 Dying Patient)

Overview

The most common cancers causing death in Australia are lung, bowel, breast, prostate, lymphoma and pancreas. Chronic pain is a major symptom in many or most patients with advanced cancer. Doctors dealing with such patients must appreciate the principles of global palliative care combined with adequate pain control and prevention. Broad-spectrum analgesic management using an 'analgesic ladder' approach to maximise analgesic effect is required.

Use of adjuvant analgesics, psychotropic medications, laxatives when using opioid analgesics, and anti-emetics form part of this approach. All cancer patients requiring analgesics need close and compassionate supervision to achieve maximum comfort with minimal adverse effects.

Causes

Pain can be associated with most cancers; the most common associations in Australia are with lung, bowel, breast, prostate, lymphoma and pancreas.



Bony metastasis –
lung cancer



Spinal metastasis –
renal cancer

Agents used for pain relief in cancer patients

1) Non-opioids (paracetamol, nonsteroidal anti-inflammatory drugs (NSAIDs))

2) Weak opioids (codeine, etc.)

3) Strong opioids (morphine)

4) Adjuvant (non-conventional) analgesics

- a) Steroids
- b) Antidepressants
- c) Anticonvulsants
- d) Muscle relaxants
- e) Nerve transmission blockade (transcutaneous electrical nerve stimulation (TENS), acupuncture, epidural injection, implantable devices)

Key Objective

- Maintenance of maximum pain control with the lowest attainable adverse effects.

090 Renal Failure, Acute (Anuria/Oliguria / Acute Renal Failure (ARF))

Overview

A sudden and rapid rise in serum creatinine is a common finding. A competent clinician is required to have an organised approach to this problem. Prompt diagnosis and treatment of extrarenal causes can prevent progression to established acute renal failure (ARF).

Causes

1) Pre-renal causes of oliguria/azotaemia

- a) Hypovolaemia (haemorrhage, volume loss, third space loss)
- b) Distributional shock (sepsis)
- c) Cardiac causes of hypotension (myocardial infarction (MI))
- d) Obstructive causes of hypotension (pulmonary embolus)

2) Renal causes of oliguria/azotaemia

- a) Glomerular (crescentic glomerulonephritis, haemolytic uraemic syndrome (HUS), etc.)
- b) Tubular (acute tubular necrosis (ATN))
- c) Tubulo-interstitial
 - Acute interstitial nephritis (drugs, toxins)
 - Cast nephropathy
- d) Vascular (e.g. malignant hypertension, renovascular disease)

3) Post-renal causes of oliguria/azotaemia (prostate obstruction, cervical cancer, stone, etc.)

4) Drugs

Key Objectives

- Contrast the clinical findings of acute and of chronic renal failure, and determine whether the serum creatinine rise is primarily acute or chronic, or an acute problem superimposed on a chronic one.
- Identify treatable extrarenal causes and correct these.

General/Specific Objectives

- Through efficient, focused, data gathering:
 - After determining that the rise in serum creatinine is caused by an acute problem (or acute superimposed on chronic), differentiate pre-renal, from renal, and post-renal ARF.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - Select appropriate laboratory and diagnostic imaging investigations.
 - Compare results, and discuss which of the three types of ARF is most likely.
- Conduct an effective plan of management for a patient with ARF:
 - In patients suspected of having post-renal failure, select the insertion of a patent urethral catheter as an initial investigative as well as therapeutic measure; institute early ultrasound of upper urinary tract if anuria/oliguria confirmed.
 - Outline initial management of fluid and dietary restrictions in a patient with ARF.
 - Select initial intervention(s) in the management of complications of ARF.
 - Select patients in need of specialised care.
 - Outline indications for renal and peritoneal dialysis.
 - Outline principles of haemodialysis and haemofiltration.

Overview

Although specialists in nephrology will care for patients with chronic renal failure, generalist clinicians will care for other common medical problems that afflict these patients. Clinicians must realise that patients with chronic renal failure have unique risks and that common therapies may be harmful because kidneys are frequently the main routes for excretion of many drugs.

Causes

1) Pre-renal causes

- a) Renal vascular disease (occlusion)
- b) Cholesterol emboli

2) Renal causes

- a) Glomerular diseases, primary (focal segmental glomerulosclerosis (FSGS), immunoglobulin A (IgA) nephropathy)
- b) Glomerular diseases, secondary (diabetic nephropathy, hypertensive nephropathy, systemic lupus erythematosus (SLE))
- c) Chronic interstitial nephritis
- d) Polycystic kidney disease

3) Post-renal causes (obstructive nephropathy)



Papilloedema – chronic renal failure

Key Objective

- Determine which patients with elevated serum creatinine levels have chronic rather than acute renal failure (ARF), and communicate as early as possible to such patients that progression to chronic renal failure may be avoided or delayed with conservative management. Select such patients for referral.

General/Specific Objectives

- Through efficient, focused, data gathering:
 - Diagnose chronic renal failure, its underlying aetiology, and associated complications.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis.
- Conduct an effective plan of management for a patient with chronic renal failure:
 - Outline secondary prevention management for chronic renal failure.
 - List indications and contraindications for dialysis in chronic renal failure.
 - Counsel and educate patients about secondary and tertiary prevention strategies.
 - Counsel and educate patients about choosing to start chronic dialysis / preparation for renal transplantation.
 - Outline principles of management for patients with irreversible renal failure.
 - Select patients in need of specialised care.

Overview

Rhinorrhoea and sore throat occurring together indicate a viral upper respiratory tract infection (URTI) such as the ‘common cold’, transmitted by infected saliva or nasal secretions. Sore throat alone may be caused by bacterial pathogens particularly Group A streptococci, when specific therapy is indicated. Rhinorrhoea alone is not infective and may be seasonal (hay fever or allergic rhinitis) or chronic (vasomotor rhinitis).

Causes

- 1) Infections (viral, bacterial, mycoplasma, Chlamydia, candidiasis)**
- 2) Noninfectious chronic rhinitis and allergic rhinitis**
- 3) Obstruction (foreign body in nasal passage, polyps, deviated septum)**
- 4) Neoplasm**

Key Objectives

- Discuss that making a clinical diagnosis of streptococcal tonsillo-pharyngitis is difficult, but excluding the diagnosis is easier in the presence of rhinorrhoea, cough, hoarseness, and normal temperature. Such patients usually have a viral URTI and do not require diagnostic tests or treatment.
- Discuss the benefit of antibiotic treatment in Group A streptococcal pharyngitis with respect to prevention of acute rheumatic fever and acute glomerulonephritis.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Determine whether testing for Group A streptococci is indicated.
 - Determine if an allergy or more unusual cause for rhinorrhoea is present.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - Select throat culture of the posterior pharynx in patients suspected of having streptococcal infection, or rapid antigen detection test.

- Conduct an effective plan of management for a patient with rhinorrhoea and/or sore throat:
 - Outline the management of contacts of patients with proven streptococcal infections.
 - Outline management in a patient with streptococcal, non-streptococcal URTI or other causes for symptoms.
 - Select patients in need of specialised care.

Overview

A swelling confined to the scrotum must be differentiated from an inguinoscrotal swelling in continuity (virtually diagnostic of an indirect inguinal hernia). Most true scrotal swellings are benign, often requiring only reassurance. Tumours of the testis are uncommon (only one to two percent of malignant tumours in men), but represent a very important tumour in young men (20–40 years). Advances in management have markedly improved survival rates.

Causes

1) Inguinoscrotal swelling (indirect inguinal hernia)

2) True scrotal swelling

a) Cystic (transilluminable)

- Hydrocele (primary, secondary)
- Epididymal cyst (spermatocele)

b) Venous (soft, compressible)

- Varicocele (almost invariably left-sided, lessens on recumbency)

c) Solid (firm, non-transilluminable)

- Testicular malignancy
 - Seminoma
 - Teratoma
 - Mixed
 - Lymphoma
 - Other
- Epididymitis
- Chronic bacterial (tuberculosis (TB))
- Granulomatous orchitis / Testicular abscess



Varicocele

Key Objectives

- Differentiate true scrotal swellings from inguinoscrotal swellings (check for reducibility of inguinoscrotal indirect inguinal hernia).
- Differentiate benign scrotal masses from those suspicious of testicular tumour.
- Differentiate *solid* true scrotal swelling (testicular tumour until disproved) from:
 - Benign cystic swelling (trans-illuminates):
 - * Hydrocele – surrounds testis.
 - * Epididymal cyst – above and behind testis.
 - Varicocele (soft squishy ‘bag of worms’ feel, lessens on recumbency).
- Differentiate secondary hydrocele hiding tumour, from primary hydrocele (younger age, use of ultrasound and tumour markers as diagnostic aids) in suspicious presentations.

General/Specific Objectives

- Through efficient, focused data gathering:
- Distinguish between **suspicious** and **non-suspicious** lumps.
 - **Non-suspicious** – primary hydroceles in older patients, epididymal cysts also mainly in older patients.
 - **Suspicious** – all solid masses of testis and epididymis.
- Differentiate from primarily painful lesions (see #094 Scrotal Pain (Acute)).
- Recognise importance of avoiding scrotal needling/aspiration of suspicious lumps.
- Selection of suspicious lumps needing scrotal ultrasound; abdominal, pelvic and chest computed tomography (CT) scanning; and search for tumour markers.
- Elicit history of undescended testicle, infertility, previous testicular tumour, breast enlargement/tenderness.
 - Perform abdominal examination including inguinal areas, and an examination of the male genitalia (erect and supine), including rectal examination to assess the prostate and seminal vesicles in suspicious lumps.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - Select patients for CT scanning of chest, abdomen, and pelvis.
- Conduct an effective plan of management for a patient with a scrotal mass:
 - Outline management options for masses which are not testicular tumours.
 - Select patients in need of specialised care.

Overview

Most scrotal swellings are painless. Acutely painful swellings mandate early diagnosis and treatment. Occasionally pain precedes or is independent of a scrotal mass.



Torsion-prone testis with horizontal lie

Causes

1) Torsion

- a) Torsion of testis
- b) Torsion of testicular appendage

2) Inflammation

- a) Acute epididymitis, orchitis, trauma

3) Tumours

- a) Acute haemorrhage into testicular tumour

4) Conditions arising outside scrotum

- a) Acute strangulation of inguinoscrotal hernia
- b) Referred pain – renal ‘colic’

Key Objective

- Acute scrotal pain accompanied by a tender testis is a surgical emergency caused by testicular torsion. The diagnosis is either confirmed or excluded by urgent operation ('Look and see' rather than 'Wait and see').

General/Specific Objectives

- Through efficient, focused data gathering:
 - Distinguish testicular torsion from acute epididymitis by:
 - * Operative findings (operation mandatory if any doubt exists).
 - * Rapidity of onset (minutes versus hours).
 - * Age group (children or young adults versus older patients).
 - * Absence of urinary symptoms.
 - * Ultrasound, nuclear scan (occasionally helpful with equivocal presentations, must not delay urgent surgery).
 - Elicit history of dysuria, sexual contacts; examine genitalia, prostate and abdomen.
 - Distinguish true scrotal masses from inguinoscrotal masses.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - Define indications and contraindications for nuclear medicine blood flow or Doppler ultrasound studies.
- Develop an algorithm outlining a plan of management for a patient with scrotal pain:
 - Outline natural history of testicular torsion and predisposing factors, and time limits of ischaemia tolerated before infarction.
 - Outline management of epididymitis.

Overview

Seizures are an important differential diagnosis of syncope. A seizure is a transient neurological dysfunction, with symptoms and signs resulting from excessive, abnormal electrical discharge of cortical neurons. Clinical manifestations include disturbances of consciousness, emotion, sensations, motor functions and behaviour. Epilepsy is a chronic condition characterised by recurrent seizures, comprising a heterogeneous group of disorders with multiple causes and manifestations. Most patients with epilepsy have more than one type of seizure. A precise diagnosis of epilepsy requires the integration of all clinical data including seizure type; electroencephalographic and imaging findings; age of onset; aetiology; family history; precipitating factors and pathophysiology.

The International League Against Epilepsy Classification

1) Partial (focal, local) seizures

a) Simple partial seizures (consciousness not impaired)

- With motor symptoms
- With somatosensory or special sensory symptoms
- With autonomic symptoms
- With psychic symptoms

b) Complex, partial seizures (with impaired consciousness)

- Beginning as simple partial, with or without automatisms, and progressing to impairment of consciousness
- With no other features
- With features as in simple partial seizures
- With automatisms

c) With impairment of consciousness at onset

- With no other features
- With features as in simple partial seizures
- With automatisms

d) Partial seizures evolving to secondarily generalised seizures

- Simple partial seizures evolving to generalised seizures
- Complex partial seizures evolving to generalised seizures
- Simple complex seizures evolving to complex partial seizures to generalised seizures

2) Generalised seizures (convulsive or nonconvulsive)

a) Absence seizures; either typical or atypical

b) Myoclonic seizures

c) Clonic seizures

d) Tonic seizures

- e) Tonic-clonic seizures
- f) Atonic seizures

3) Unclassified epileptic seizures including neonatal seizures, rhythmic eye movements, chewing and swimming movements

Causes of Seizures

- 1) Partial seizures (focal seizures)**
- 2) Partial seizures complex (temporal lobe or psychomotor)**
- 3) Generalised tonic-clonic (grand mal) seizure**
 - a) Idiopathic (20%)
 - b) Trauma
 - c) Infectious
 - d) Vascular / Hypertension (malignant, eclampsia)
 - e) Neoplasia
 - f) Degenerative
 - g) Metabolic
 - Electrolyte abnormalities
 - Alcohol or drug withdrawal
 - Renal or liver failure
- 4) Absence (petit mal) seizure**
- 5) Pseudoseizures**
- 6) Status epilepticus**

Key Objective

- Differentiate syncope from disturbances of cerebral function caused by a seizure.

General/Specific Objectives

- Through efficient, focused, data gathering:
 - Differentiate between a true seizure and pseudoseizure.
 - Differentiate between partial seizures and generalised seizures.
 - Determine which seizures may be secondary to co-existing medical problems.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - Contrast findings in patients with focal seizures, complex partial seizures, generalised seizures, and petit mal seizures.
 - Compare findings in syncope with cerebral seizures.
- Conduct an effective plan of management for a patient with seizures:
 - Formulate a plan of management for a patient with status epilepticus.
 - Contrast the plan of management of petit mal seizures with grand mal and partial seizures.
 - Select patients in need of specialised care and/or referral to other healthcare professionals.
 - Outline educational and/or supportive counselling for patients with seizure disorders including concerns for psychosocial impact, considerations for employment, and driving.

096A Sexual Maturation, Normal

Overview

The normal process of sexual maturation, with some acceptable variations, requires the integration of normal central nervous system (CNS) (hypothalamus, pituitary), gonadal, and adrenal function along with a critical body mass and nutrition level. Clinicians familiar with the normal process are in a better position to discern abnormal sexual maturation.

Causes

Processes required for normal growth and maturation in males and females:

Normal sexual maturation results primarily from the integration between the various components of the endocrine system and the gonads.

Key Objective

- Differentiate acceptable variations which occur in male and female progress to puberty and sexual maturation, from abnormal sexual maturation.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Elicit pertinent data regarding birth, infantile growth, and development and its impact upon puberty.
 - Assess the normal sequencing of pubertal development through Tanner stages 1 to 5 for both males and females.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation and diagnosis:
 - Outline the use of growth charts and Tanner staging in the assessment of children.
 - Outline initial evaluation of variations from the expected patterns of sexual maturation.
- Conduct an effective plan of management for a patient with normal or accepted variations of sexual maturation:
 - Counsel adolescents and their parents about the normal progression to sexual maturation.

096B Sexual Maturation, Abnormal

(See also #063A Amenorrhoea (also Oligomenorrhoea))

Overview

Sexual development is important to adolescent perception of self-image and well-being. Many factors may disrupt the normal progression to sexual maturation.

Causes

1) Delayed puberty (failure of Stage II: male by 14 years, female by 13 years; or menarche within five years of breast budding)

a) Growth failure / Delayed puberty overlap

- Multiple endocrine disorders
- Variants of normal/constitutional
- Systemic diseases

b) Central causes

- Congenital (hypothalamic/pituitary – low gonadotropins or low gonadotropin-releasing hormone (GnRH))
 - Syndromes (Prader-Willi, Laurence-Moon-Biedl)
 - Malformations (midline development defects)
 - Isolated deficiency of gonadotropins / panhypopituitarism
- Acquired
 - Infection / Trauma / Tumours (craniopharyngioma, pituitary adenoma)
 - Malnutrition / Chronic systemic disease

c) Primary gonadal disorders

- Congenital
 - Chromosomal (Turner syndrome, Klinefelter syndrome)
 - Gonadal differentiation / Biosynthetic defects
- Acquired
 - Infection (oophoritis, orchitis)
 - Trauma, torsion



Delayed puberty

- Neoplasms / Neoplasia therapy (irradiation, cytotoxic drugs) / Surgery

d) Interruption / Lack of completion

- Testicular feminisation
- Müllerian duct abnormalities (absent/hypoplastic uterus/vagina)

2) Precocious puberty (female before 8 years; male before 10 years)

a) Central

- Constitutional (gonadotropin dependent / gonadotropin independent)
- Central nervous system (CNS) (neoplasms, post-inflammatory, neurofibromatosis, hydrocephalus)
- Hypothyroidism, McCune-Albright syndrome

3) Pseudoprecocious puberty (incomplete)

4) Other

Key Objective

- Counsel patients and their families about the need for immediate or delayed screening, referral or careful followup.

General/Specific Objectives

- Through efficient, focused, data gathering:
 - Differentiate between the principal causes of abnormal sexual development.
 - Identify features of delayed and precocious puberty; differentiate delayed puberty versus growth failure.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - Evaluate patients with suspected abnormal sexual development with a minimum of investigations.
- Conduct an effective plan of management for a patient with abnormal sexual maturation:
 - Outline initial management and counsel both caregivers and patients with abnormal sexual development.

Overview

The social appropriateness of sexuality is culturally determined. The clinician's own sexual attitude needs to be recognised and taken into account in order for the clinician to deal with the patient's concern in a relevant manner. The patient must be set at ease in order to make possible discussion of private and sensitive sexual issues.

Causes

1) Sexual dysfunction in the male or female

- a) Premature ejaculation / Ejaculatory failure
- b) Erectile dysfunction (impotence)
- c) Anorgasmia
- d) Dyspareunia
- e) Inhibition of sexual desire
- f) Vaginismus

2) Sexual paraphilic disorders (exhibitionism, fetishism, voyeurism, transvestism, sadomasochism, paedophilia)

3) Lesbian and gay patients

4) Disabled patients and sexuality

5) Children/Adolescents; sexuality and gender identity

6) Ageing patients and sexuality

7) Gender identity in adults

Key Objectives

- Elicit factors precipitating and maintaining the sexual concern, effort to escape the concern, and relevant medical history to rule out reversible organic conditions.
- Determine the patient's social and physical sexual development and behaviour as well as the patient's sexual orientation and comfort with it.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Differentiate mutual or normal sexuality from dysfunctional sexuality, sexual abuse or assault, and incest.
 - Determine whether there is correlation between experiential desire and physiological response.
 - Perform focused examination including neurologic examination with emphasis on peripheral neuropathy and examination of genitalia.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - Select patients requiring hormone assays.
- Conduct an effective plan of management for a patient who has sexual concerns:
 - Select patients in need of specialised care.



Overview

Shock is an acute and potentially life-threatening clinical emergency with multiple causes leading to broadly similar clinical syndromes associated with failure of vital organ and tissue perfusion. All clinicians must be familiar with principles of recognition, diagnosis and treatment of shock as a life-threatening emergency with plans appropriate to rapid clinical identification and treatment of the most common causes; and selective use of clinical and laboratory investigations to identify those cases refractory to initial management. Hypotension, although common to many types of shock, is one aspect only of the clinical syndrome.

Causes

1) Cardiogenic

- a) Myocardial infarction (MI)
- b) Cardiomyopathy

2) Hypovolaemic

- a) Haemorrhage – overt or concealed blood loss
- b) Plasma loss – burns, peritonitis
- c) Water and electrolyte loss
 - Gastrointestinal losses
 - Interstitial (third space) losses
 - Skin losses (burns, hyperthermia)

3) Obstructive

- a) Pulmonary embolism
- b) Tension pneumothorax
- c) Pericardial tamponade, constrictive pericarditis
- d) Aortic dissection, venacaval obstruction

4) Distributive

- a) Septic
- b) Anaphylaxis
- c) Vasovagal syncope
- d) Spinal injury / Autonomic blockade / Drugs
- e) Endocrine – pituitary, adrenal, thyroid deficiencies

Key Objectives

- Recognition of key features of shock (pallor, hypotension, thready pulse, oliguria) as a life-threatening acute clinical emergency.
- Ability to formulate rapidly diagnostic and management plans and strategies appropriate to the various causative agencies in a practical and logical sequence.

General/Specific Objectives

- Through rapid, efficient, focused data gathering:
 - Recognise and diagnose shock states.
 - Formulate integrated diagnostic and management plans to differentiate and deal with the various causes.
- Identify critical clinical and investigational findings which are key in the process of diagnosis, exclusion, differentiation, and monitoring of response to treatment.
- Use the above to formulate a flow chart covering the effective diagnosis, management and monitoring of a patient with shock.
- Outline the principles and specifics of the management plans of a patient with:
 - Hypovolaemic shock.
 - Cardiogenic shock.
 - Septic shock.
 - 'Refractory' shock.
- Identify patients with shock requiring use of central venous pressure or pulmonary wedged capillary pressure monitoring.

098A Anaphylaxis

Overview

Anaphylaxis causes a significant number of fatalities per year, and occurs in 1 in 5,000 hospital admissions. Children most commonly are allergic to foods.

Causes

1) Drugs

- a) Beta-lactam antibiotics
- b) Nonsteroidal anti-inflammatory drugs (NSAIDs)
- c) Anti-neoplastic medications
- d) Angiotensin-converting enzyme (ACE) inhibitors

2) Hymenoptera (bees, wasps) envenomation

3) Radiographic contrast media

4) Blood products

5) Foods (seafood, milk, nuts)

6) Latex

Key Objectives

- Differentiate anaphylaxis from conditions which are similar such as shock from other causes, other flush syndromes, 'restaurant syndrome', increased endogenous histamine production, acute respiratory failure syndromes, or non-organic syndromes such as panic attacks or Münchausen stridor.
- Initiate therapy by ensuring airway, intubation if necessary, establishing intravenous lines with large bore needles, stop antigen administration, and select pharmacologic agents.

General/Specific Objectives

- Through efficient, focused, data gathering:
 - Perform examination for skin involvement (90% have pruritus, urticaria, angio-oedema, flushing), upper and lower respiratory tract involvement (50%), shock or conduction disturbances (30%), gastrointestinal or nervous system involvement.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis.
- Conduct an effective plan of management for a patient with anaphylaxis:
 - Outline initial management for anaphylaxis.
 - Outline rationale for use of epinephrine, glucagon, antihistamines, steroids, and *beta*-agonists in aerosols for respiratory symptoms.
 - Discuss biphasic anaphylaxis and protracted anaphylaxis.
 - Select patients in need of specialised care.

099 Sudden Infant Death Syndrome (SIDS) (Acute Life-Threatening Event (ALTE))

Overview

Sudden infant death syndrome (SIDS) and/or acute life-threatening event (ALTE) are devastating events for caregivers and healthcare workers alike. It is imperative that the precursors, probable cause and parental concerns are extensively evaluated to prevent recurrence.

Causes

- 1) Idiopathic**
- 2) Prolonged apnoea**
- 3) Response to hypoxia/hypercarbia**
- 4) Upper airway obstruction**
- 5) Abnormal sleep patterns**
- 6) Cardiac arrhythmias**
- 7) Face-down position**

Key Objectives

- Evaluate fully the possible causes of an infant history of ALTE or SIDS.
- Counsel the parents and families of such children.
- Provide management of children who are at risk for ALTE or SIDS.

General/Specific Objectives

- Through efficient, focused, data gathering:
 - Determine whether there is evidence of possible risk factors or causes known to be associated with ALTE or SIDS.
 - Diagnose the infant presenting with ALTE or SIDS.

- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - Evaluate fully, but with compassion and empathy, the possible causes of the infant presenting with ALTE or SIDS.
- Conduct an effective plan of management for a patient with ALTE or SIDS:
 - Perform immediate resuscitative measures.
 - Conduct short/long term bereavement management for parents/family.
 - Select patients in need of referral and/or consultation for infants and families at risk, i.e. bereavement issues, genetic counselling.
 - Select patients who are in need of child protection (if appropriate).

100A Focal Skin Lesions – Benign Lesions

Overview

The majority of focal skin lesions are manifestly benign longstanding lesions of congenital or acquired origin requiring no treatment. An important group of benign lesions are dysplastic and premalignant.

Focal skin lesions can usually be rapidly assessed on clinical grounds into:

- Clearly benign skin lesions.
- ‘Suspicious’ lesions.

Causes of Clearly Benign Focal Skin Lesions

In Children (macules, nodules or papules):

1) Pigmented lesions

- a) Vascular malformation
 - ‘Port wine stain’ (capillary haemangioma)
 - ‘Strawberry naevus’
(cavernous haemangioma)
- b) Benign melanocytic naevi (‘common moles’)
 - Junctional
 - Intradermal
 - Compound
- c) Common freckle (ephelis)
- d) Uncommon lesions
 - ‘Blue naevus’ (Mongolian spot)
 - Juvenile melanoma



Port-wine stain

2) Other Lesions

- a) Viral infective wart – verruca vulgaris
- b) Pyogenic granuloma



Blue naevus

In Adults (macules, nodules or papules):

1) Pigmented lesions

a) Benign melanocytic naevus

- Junctional
- Intradermal
- Compound

b) Seborrhoeic keratosis (seborrhoeic wart)

c) Campbell de Morgan spot (senile haemangioma, cherry angioma)

d) Dermatofibroma (sclerosing haemangioma, histiocytoma)

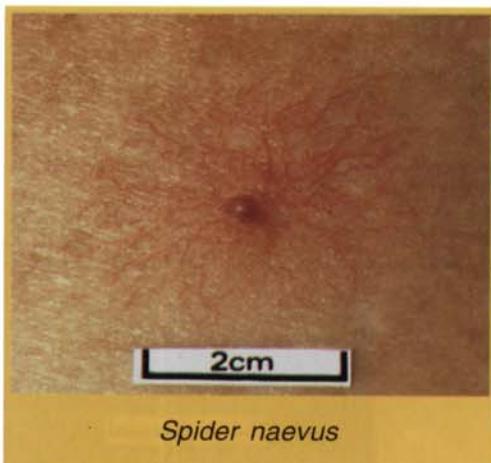
e) Spider naevus

f) Senile freckle (lentigo) – macular

g) Senile purpura – macular



Benign melanocytic naevus



Spider naevus



Seborrhoeic keratoses

2) Non-pigmented lesions

- a) Skin tag (soft fibroma, benign squamous papilloma)
- b) Solar keratosis (hyperkeratosis, senile keratosis – premalignant)
- c) Callosity (callus)
- d) Xanthoma
- e) Viral infective wart – verruca vulgaris



Solar hyperkeratoses

Key Objective

- Identify clearly benign skin lesions on the basis of their clinical features and distinguish between the various types.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Identify clearly benign lesions not requiring treatment and provide appropriate reassurance.
 - Identify premalignant lesions.
 - Discuss risk factors, prevention and treatment of premalignant lesions.
 - Identify lesions requiring treatment and outline management plans.

100B Focal Skin Lesions – ‘Suspicious’ Lesions

Overview

Malignant and premalignant skin lesions are common in Australia with a susceptible population and excessive solar exposure. Malignant melanoma is virtually unknown in children but occurs throughout adult life; its frequency in Australia and in most other countries is increasing. Basal and squamous cell cancers occur in older patients and multiple lesions are common. Preventive measures against excessive solar exposure (e.g. ‘Slip, Slop, Slap’ UV-protection campaign) comprise important public health measures.

Causes of ‘Suspicious’ Focal Skin Lesions

1) Basal cell carcinoma (BCC)

Various morphologic types

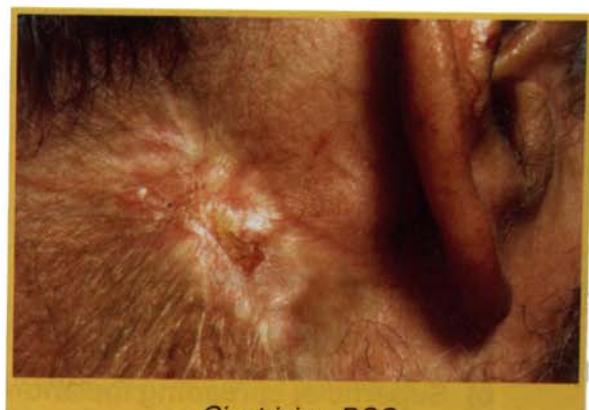
- a) Nodular
- b) Ulcerative
- c) Cystic
- d) Psoriatic
- e) Comedoform
- f) Sclerosing/Cicatrising
- g) Pigmented



Nodular BCC



Ulcerative BCC



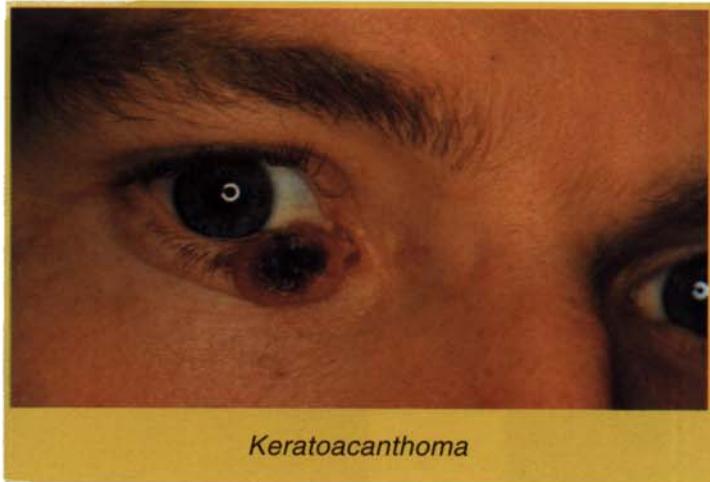
Cicatrising BCC

2) Squamous cell carcinoma (SCC)

- a) SCC-*in-situ* (Bowen disease)
- b) Invasive SCC

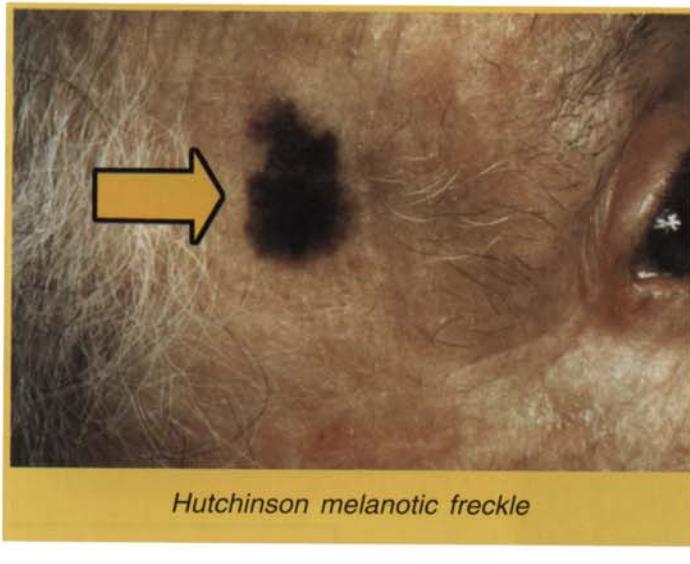


3) Keratoacanthoma (molluscum sebaceum)

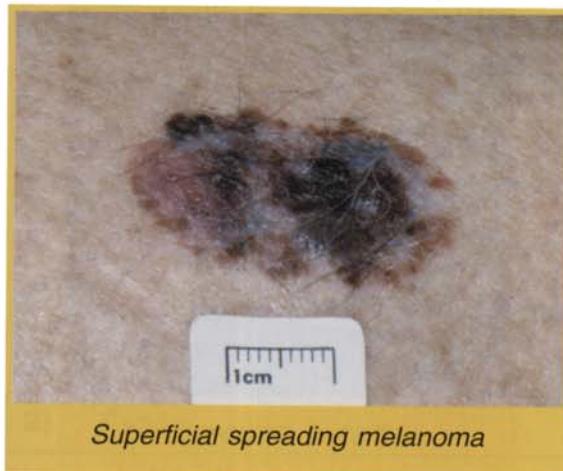


4) Malignant melanoma

- a) Hutchinson melanotic freckle (lentigo maligna)
- b) Superficial spreading melanoma
- c) Nodular melanoma
- d) Amelanotic melanoma



Hutchinson melanotic freckle



Superficial spreading melanoma



Nodular melanoma

5) Other suspicious lesions

- a) Infected/Traumatised benign lesions
- b) Pyogenic granuloma
- c) Kaposi sarcoma (haemangiosarcoma)
- d) Lymphoma of skin (mycosis fungoides)
- e) Dermatofibrosarcoma protuberans
- f) Cancer – metastatic skin deposits, acanthosis nigricans (paraneoplastic skin reaction)
- g) Merkel cell tumour (rare malignancy from sensory dermal cells)



Pyogenic granuloma



Mycosis fungoides of trunk



Kaposi sarcoma

Key Objectives

- Identify suspicious skin lesions and refer appropriately for diagnostic excision.
- Differentiate between different types on basis of history and examination.

General/Specific Objectives

- Discuss natural history and spread of common skin malignancies.
- Discuss management plans by surgery and adjuvant means.
- Discuss indications for and technique of biopsy of suspicious skin lesions.
- Discuss indications for surgical excision of skin lesions (cosmetic, irritative, prophylactic, suspicion of malignancy).
- Discuss pathology of malignant melanoma.
- Discuss types of benign and malignant pigmented lesions and indications for excision.

100C Focal Subcutaneous Lumps

Overview

A subcutaneous lump is a very common clinical problem. Most are of longstanding; the vast majority are benign lesions. Distinction on clinical grounds alone can almost always be made between the four most common lesions: **lipomas, cysts, ganglia and bursae**.

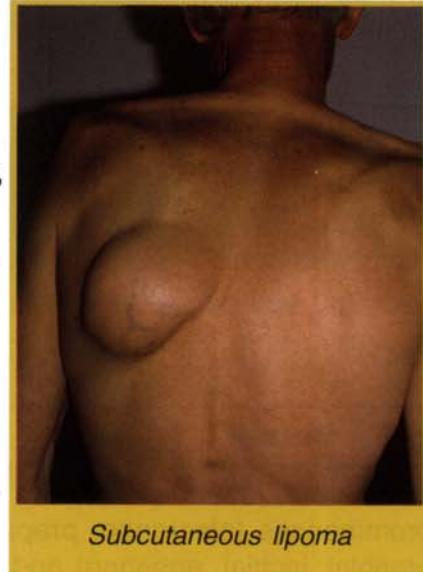
Causes

1) Lipomas

Very common. Present as benign slow-growing, soft, painless lobulated subcutaneous swellings occurring anywhere there is fat.

Variants

- Unusual sites – sub-fascial, intramuscular (IM), breast, bowel (submucosal)
- Multiple painless subcutaneous lipomas of limbs or trunk (sometimes familial)
- Retroperitoneal liposarcoma – locally invasive and malignant



2) Cysts

a) Keratinous ('sebaceous' or 'epidermoid') cysts

Very common. Derived from pilosebaceous follicle – found anywhere there is hair: particularly scalp, scrotum. Rounded, smooth contour and skin attachments (not always with a punctum) distinguish cysts from lipomas.

Variants and complications:

- Infection – Cock's peculiar tumour
 - Accretion – 'seborrhoeic' horn
 - Desiccation and plaque formation – pilomatrixoma (Malherbe calcifying epithelioma)
- b) **Implantation 'dermoid' cyst – traumatic**
- Overlying puncture wound or scar
- c) **Inclusion 'dermoid' cyst – developmental**
- In ventral midline head and neck, and at lateral angles of eyes



3) Ganglia

Common deeper subcutaneous swellings around joints or tendon sheaths of the wrists, fingers and ankles.

Variants:

- Synovial (mucous) cyst of fingers on dorsum of terminal phalanx
- Compound palmar and dorsal ganglia of wrist tendon sheaths



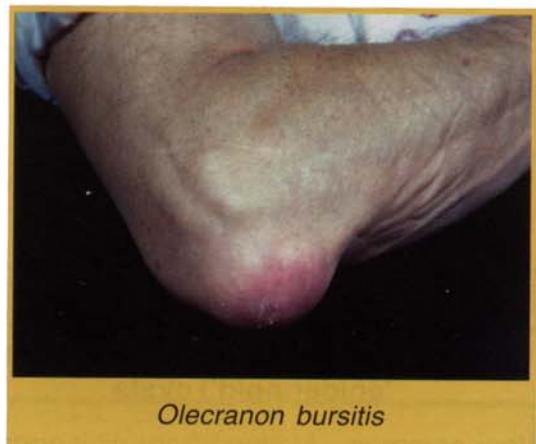
Mucous cyst of finger



Ganglion of foot

4) Bursae

Sited around tendon insertions or over bony prominences (olecranon, prepatellar, pretibial, ischial, anserine) and may communicate with joints (suprapatellar, subacromial). May develop as adventitious **de novo** swellings at any site of abnormal friction (bunion).



Olecranon bursitis

Key Objective

- Differentiate between most common lesions (lipomas, cysts, ganglia and bursae) from history, physical findings and anatomical localisation.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Compare and contrast physical characteristics of lipomas and keratinous cysts.
 - List common bursae presenting with clinical problems.
 - Define which subcutaneous lumps will require diagnostic investigation to clarify diagnosis.
 - Define which subcutaneous lumps will require surgical excision.

100D Red, Hot, Tender, Swollen Skin and Subcutaneous Layers

Overview

Red, hot, tender, swollen skin and subcutaneous tissues suggesting cellulitis and other spreading infections of skin and subcutaneous layers comprise important and common clinical presentations in primary care and in hospital emergency departments and wards. Causative organisms are commonly staphylococcal or streptococcal via a skin breach. Oedematous limbs are at increased risk.

Injured and ischaemic tissues predispose to serious necrotising anaerobic infections of skin and deeper tissues, from a wider range of infecting organisms. These infections are more common after devitalising injuries, in diabetic patients and immune-compromised hosts, and as postoperative complications after abdominal and vascular operations. Severe life-threatening infections such as necrotising fasciitis and clostridial myositis ('gas gangrene') require early radical excisional debridement and drainage as well as antibiotics.

Causes

1) Cellulitis and erysipelas



Web space infection in diabetic foot

2) Necrotising infections of skin and subcutaneous tissues

- a) Fournier gangrene (spreading necrotising panniculitis)
- b) Necrotising fasciitis
- c) Clostridial myonecrosis ('gas gangrene')
- d) Other (Meleney ulcer / synergistio gangrene, pyoderma gangrenosum, anthrax)



Fournier gangrene perineum and scrotum



Necrotising anaerobic fasciitis back



Pyoderma gangrenosum

Key Objectives

- Early recognition of cellulitis/erysipelas and differentiation from other erythematous skin conditions.
- Early recognition of serious necrotising infections.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Identify signs of cellulitis/erysipelas and check for predisposing factors (skin wound/abrasion, chronic venous or lymphatic oedema, arterial insufficiency, underlying osteomyelitis), signs of local spread (ascending lymphangitis, lymphadenopathy) and general effects (fever, tachycardia) (see also #034B Unilateral Limb Oedema (Swollen Limb)).
 - Recognise signs of severe necrotising anaerobic infection (impending skin necrosis, subcutaneous crepitus, generalised toxicity).
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - Discuss methods of identifying causative organisms.
 - Discuss role of imaging in diagnosis.
- Outline management plans for the effective treatment of infections of skin and subcutaneous tissues.
 - Recognise the vital role of excisional surgery and drainage in management of necrotising infection.
 - Discuss choice of antibiotic and routes of administration.
 - Discuss role of adjuvant hyperbaric oxygen treatment

Overview

Comedones are a feature of the very common skin disorder of acne vulgaris. Acne affects many teenagers and is associated with chronic inflammation of blocked pilosebaceous follicles and seborrhoea. Boils (furuncles) are acute staphylococcal abscesses developing in hair follicles. Carbuncles form more extensive sub-cutaneous abscesses, often with inadequate drainage. Both boils and carbuncles are commoner in diabetic patients. Blistering or vesiculobullous disorders include a wide range of conditions and can be considered according to their incidence. The less common causes may require histology and immunofluorescence studies.

Causes

1) Comedones, papules and pustules

- a) **Acne vulgaris** – very common
- b) **Furuncle/Carbuncle**
- c) **Impetigo**
- d) **Scabies, insect bites, etc.**



Acne vulgaris



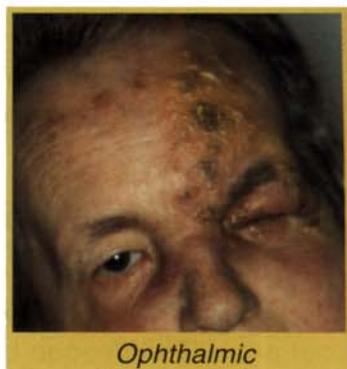
Scabies

2) Vesicles / Vesiculobullous disorders – common

- a) **Herpes simplex**
- b) **Varicella**
- c) **Herpes zoster**
- d) **Contact dermatitis**
 - Plants
 - Industrial agents
 - Other chemicals



Herpes zoster



*Ophthalmic
herpes zoster*

- e) Insect bites
- f) Dyshidrotic eczema (pompholyx)
- g) Burns

3) Vesicles / Vesiculobullous disorders – uncommon

- a) Drug eruptions
- b) Bullous pemphigoid
- c) Bullous erythema multiforme
- d) Dermatitis cutanea tarda

4) Vesicles / Vesiculobullous disorders – rare

- a) Epidermolysis bullosa
- b) Pemphigus
- c) Linear immunoglobulin A (IgA) disease
- d) Cicatricial pemphigoid
- e) Toxic epidermal necrolysis
- f) Bullae of diabetes, renal failure



Epidermolysis bullosa

Key Objective

- Recognise and differentiate common and important skin disorders presenting as comedones, papules, pustules, blisters and vesicles.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Determine areas of involvement, type of patient, and associated findings.
 - Differentiate between types of lesion.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - Select patients in need of further investigation.
- Conduct an effective plan of management for a patient with skin blisters:
 - Outline management for common and important skin conditions.
 - Select patients in need of specialised care.
- Conduct an effective plan of management for a patient with a furuncle or carbuncle.
- Conduct an effective plan of management for a patient with acne vulgaris.

101A Chronic Leg Ulcer

Overview

Chronic leg ulcers can be due to many causes; but the three most common causes are: chronic deep venous insufficiency ('venous ulcer'), arterial ischaemia ('arterial ulcer') and diabetes mellitus ('diabetic ulcer'). The site and appearance of the ulcer will often establish the diagnosis. A host of less common causes exists. Aims in treatment are initially to heal the ulcer and subsequently to prevent recurrence.

Causes

- 1) 'Venous ulcer' – chronic deep venous insufficiency (post-thrombotic syndrome)**



Chronic venous ulcer

- 2) 'Arterial ulcer' – arterial ischaemia (macrovascular/microvascular)**



Ischaemic ulcer

3) 'Diabetic ulcer' – usually of primarily neuropathic origin; ischaemia and infection will often also contribute

4) Less common causes

a) Infective ulcer

- 'Tropical ulcer'
- Mycobacterium ulcerans* ('Bairnsdale ulcer')
- Pyogenic and synergistic infections



Tropical ulcer

b) Vasculitis complicating systemic and immunodeficiency states

- Rheumatoid arthritis (RA), polyarteritis neurosa
- Inflammatory bowel disease (IBD)
- Haemoglobinopathies
- Severe hypertension ('Martorell ulcer')
- Microembolisation from proximal arterial/valvular lesions

c) Malignant ulcer – squamous cell carcinoma (SCC)

- Complicating chronic burn scar ('Marjolin ulcer'), chronic venous ulceration or osteomyelitis
- Kaposi sarcoma (often AIDS-related)
- Melanoma

d) Other neuropathic ulcers

- Alcoholism, peripheral neuropathy, leprosy, syringomyelia, spina bifida

e) Insect bites (e.g. wolf spider)

f) Healing failure of traumatic ulcers

- Skin flap avulsions in elderly
- Sites of intravenous drug use

g) Self-inflicted (factitious) ulceration

Key Objectives

- Appreciate and recognise the characteristic features from each of the most common causes; venous disease, arterial disease and diabetes.
- Formulate diagnostic and management plans related to individual causes.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Recognise symptoms and signs of chronic venous insufficiency associated with chronic venous ulceration with ambulatory superficial venous hypertension: fibrotic induration, oedema, pigmentation and venous eczema, and ankle flares.
 - Recognise local features of ischaemic arterial ulcers.
 - Perform appropriate assessment of arterial supply of limb by examination of circulation and capillary refilling, aided by clinical tests (Buerger, ankle/arm systolic index).
 - Assess for relative contributions of neuropathy, infection, macrovascular and microvascular disease in patients with diabetes.
 - Be alert to other potential causes of chronic leg ulceration and formulate diagnostic, investigational and management plans for patients with leg ulcers due to various causes.
 - Consider self-inflicted (factitious) ulceration in ulcers with atypical appearance, site or response to treatment.

102A Skin Rash / Dermatitis and/or Fever, Urticaria / Angio-Oedema

Overview

Skin rashes are often identified by their location and distribution as well as their morphology.

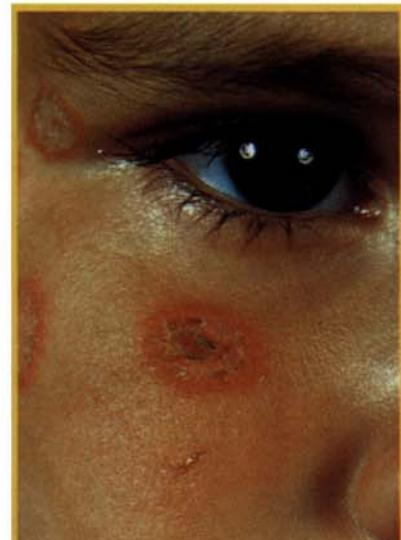
Causes

1) Dry/Scaly rash

- a) Atopic dermatitis
- b) Nummular dermatitis
- c) Pityriasis rosea
- d) Psoriasis
- e) Seborrhoeic dermatitis
- f) *Microsporum canis* infection ('ringworm')



Atopic dermatitis



'Ringworm' of face



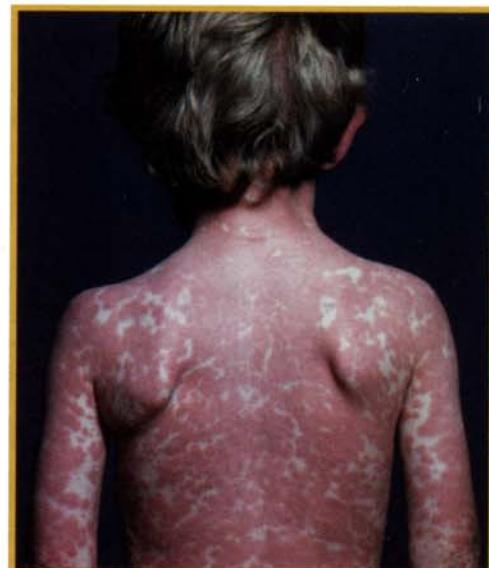
Psoriasis

2) Moist/Macerated rash

- a) Candidiasis
- b) Tinea cruris
- c) Tinea pedis
- d) Tinea capitis
- e) Contact dermatitis

3) Urticaria / Angio-oedema

- a) Acute urticaria (greater than two-third of cases, self-limited, recurrence lasts less than six weeks)
- b) Chronic urticaria (one-third of cases, recurrence lasts greater than six weeks)
 - Associated with triggers (aetiology not identified in up to 90% of patients)
 - Drugs (antibiotics, hormones, nonsteroidal anti-inflammatory drugs (NSAIDs), aspirin, local anaesthetics, opiates, angiotensin-converting enzyme (ACE) inhibitors)
 - Physical contact (animal saliva, plant resins, latex, metals, lotions, soap)
 - Insect stings – risk of anaphylaxis (bees, wasps, hornets)
 - Latex – risk of anaphylaxis if sensitised (gloves, condoms, balloons)
 - Aeroallergens (oral allergy syndrome)
 - Foods and additives (only 10% if placebo controlled)
 - Infections (greater than 80% of urticaria in paediatric patients)



Drug eruption – amoxycillin

- Associated with angio-oedema (50% of urticaria, both acute and chronic)
- Associated with systemic disease
 - Systemic lupus erythematosus (SLE)
 - Henoch-Schönlein purpura
 - Cryoglobulinaemia
 - Autoimmune thyroid disease
 - Mastocytosis
 - Urticular vasculitis



Facial rash – SLE



Urticular rash in Henoch-Schönlein purpura

Key Objectives

- Categorise skin problems by rash type, configuration and the distribution of the lesion.
- Determine whether the condition is acute, chronic or a manifestation of a systemic illness based on lesion resolution, length of occurrence, and clinical picture.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Elicit a detailed history and physical examination including timing of symptom onset, duration of lesions, identification of precipitants.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - Select patients in need of further investigation and specialised care.
- Conduct an effective plan of management for a patient with a skin rash:
 - Outline management for common skin conditions.
- Select patients in need of specialised care.

102B Childhood Communicable Diseases with or without Skin Rash

Overview

Communicable diseases are common in childhood and vary from mild inconveniences to life-threatening disorders. Clinicians need to differentiate between these common conditions and initiate management specific to the cause.

Causes

1) Presenting with a rash

- a) Viral (measles, rubella, roseola, varicella, herpes zoster, herpes simplex, molluscum contagiosum ('water warts'))
- b) Bacterial (meningococcal septicaemia, scarlet fever, 'scalded skin' syndrome, impetigo, staphylococcal or streptococcal toxic shock syndrome)
- c) Other (mycoplasma infection)



2) Presenting with sore throat

- a) Viral (infectious mononucleosis)
- b) Bacterial (diphtheria, streptococcal)

3) Presenting with diarrhoea

Key Objectives

- Recognise early those life-threatening presentations involving a skin rash.
- Describe the principles of immunisation procedures.
- Determine the incubation period and possible route of communication of the underlying disease.
- Outline measures of prevention to contain the spread of communicable disease.

General/Specific Objectives

- Through efficient, focused, data gathering:
 - Identify the presenting features of the rash, sore throat or diarrhoea; and identify and treat possible cases of meningococcal septicaemia and other life-threatening conditions.
 - Determine the immunisation status of the infants/children.
 - Determine history of contacts, travel, farm visits, ingestion of unpasteurised milk or uncooked meat, source of water supply.
 - When dealing with an infant, consider prenatal issues, especially maternal history of infection.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - Evaluate fully the individual and contacts of individuals with sexually transmitted diseases (STDs).
 - Describe rapid viral testing, stool tests, and viral serology.
- Conduct an effective initial plan of management for a patient with a childhood communicable disease:
 - Outline the procedure for immunisation and for immunising an incompletely immunised child.
 - Outline management of specific communicable diseases.

103 Speech and Language Abnormalities / Dysphonia / Hoarseness

Overview

Speech disorders present in all age groups, central causes being more common in the elderly while non-neurological articulation disorders present more frequently in younger patients.

Causes

1) Receptive disorders (hearing/deafness)

2) Central disorders

a) Aphasia – speech apparatus intact

(see #050 Hemiplegia / Hemisensory Loss / Stroke with or without Aphasia / Prevention of Stroke)

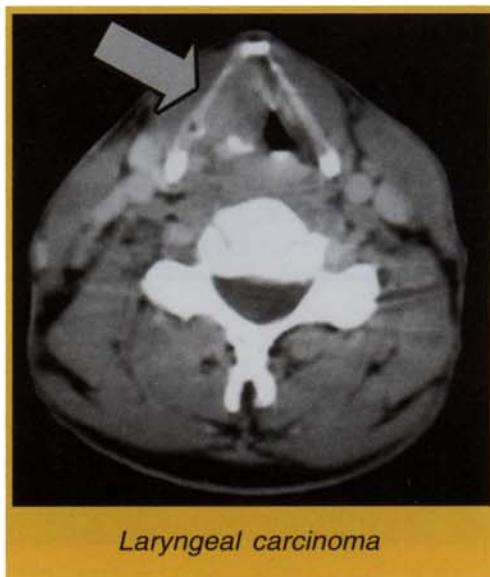
b) Mental retardation

3) Articulation disorder

a) Nasal / Badly articulated / Slurred speech

- Soft palate with or without other muscles paralysis (myasthenia, multiple sclerosis)
- Bulbar/Pseudobulbar palsy (amyotrophic lateral sclerosis)
- Tongue paralysis / Macroglossia (cranial polyradiculitis, allergic oedema)

b) Disorders of speech rhythm/timing/audibility (Parkinson disease, multiple sclerosis, cerebellar lesions, dementia, etc.)



c) Speech apparatus lesions

- Hoarseness
 - Inflammation (infection, allergy, abuse/misuse, smoking, alcohol)
 - Neoplasms (laryngeal benign/malignant)
 - Recurrent nerve (thyroidectomy/parathyroidectomy, tumour)
- Stammer/Stutter
- Open nasal speech (soft palate paralysis, cleft palate)
- Dysphasic (in deafness)

d) Silent/Non-speaking (catatonia, depression, brainstem encephalitis, functional)

Key Objectives

- Determine whether the speech apparatus is intact and the speech disorder is centrally determined.
- Determine whether neurological deficits are present.

General/Specific Objectives

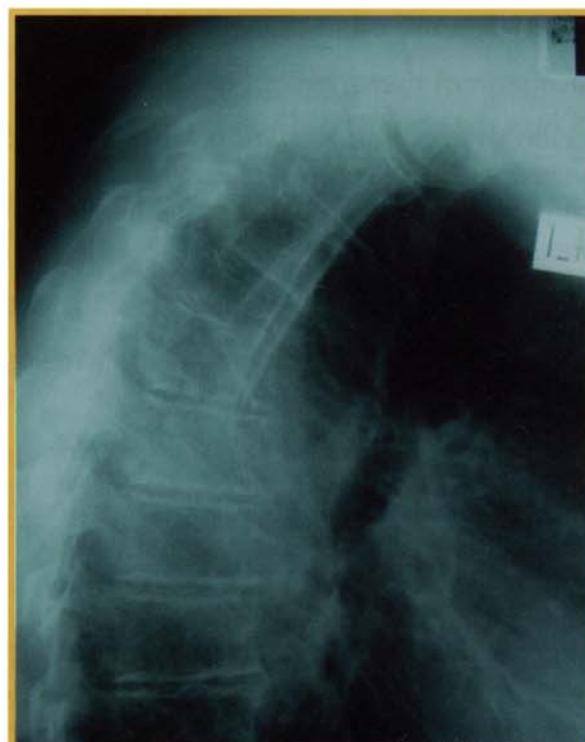
- Through efficient, focused data gathering:
 - Elicit information indicative of inflammation/infection, voice abuse or misuse, smoking or alcohol.
 - Determine whether there is dysphagia, cough, haemoptysis, or dyspnoea.
 - Conduct physical examination of head and neck.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - Select patients to receive routine investigations or in need for laryngoscopy referral.
- Conduct an effective plan of management for a patient with speech and language abnormalities:
 - Outline management plan for common causes of speech disorders (e.g. voice rest, fluids and humidity, anti-reflux therapy, no smoking).
 - Select patients in need of specialised care.

Overview

The most common spinal fractures are wedge crush fractures of vertebral bodies (osteoporosis, malignancies). Spinal cord injuries from trauma result from motor vehicle accidents (MVA), falls, sports-related trauma, or assault with weapons. The average age at the time of spinal injury is approximately 35 years, and men are four times more likely to be injured than are women. The sequelae of such events have a major impact on society in terms of the cost of rehabilitation and long term care, litigation and liability. Initial immobilisation and maintenance of ventilation are of critical importance.

Causes

- 1) Traumatic or pathological fractures/dislocations of the vertebral column**
- 2) Penetrating injury**
- 3) Acute disc rupture**
- 4) Ruptured arteriovenous malformation**
- 5) Spontaneous epidural haematoma**



Vertebral crush fracture

Key Objectives

- Understand how to triage and manage patients with potential or actual acute spinal injury and make an appropriate examination of such patients.
- Provide an appropriate plan of management for the patient with acute spinal cord compression or transection.
- Contrast the impairment of ventilatory muscle strength in the case of complete or incomplete cervical spinal cord injury, and explain the effect of denervation of abdominal musculature.
- State that respiratory impairment and susceptibility to respiratory complications are greater with more cephalad injuries of the spinal cord.

General/Specific Objectives

- Through efficient, focused, data gathering:
 - Determine whether there is any impediment of respiratory function.
 - Elicit history about mechanism of injury and examine structures in the spine which have been damaged.
 - Perform examination of spine, motor power in arms and legs, sensation, superficial and deep tendon reflexes.
- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - Select diagnostic imaging for assessment of spinal stability.
 - Outline diagnostic imaging of the lungs in patients with spinal cord injury (e.g. upright films are often contraindicated).
- Conduct an effective plan of management for a patient with spinal injuries:
 - Conduct education of people at risk for prevention of spinal injuries (diving into shallow water, skiing out of control, injuries associated with rugby and Australian League football, cross-checking from behind in hockey, drinking and driving, etc.).
 - List indications for immobilisation; for bladder catheterisation.
 - Initiate and maintain 'spinal precautions' and 'log rolling' of patients; outline methods available for stabilising the spine.
 - List indications for steroid treatment; list analgesic drugs to use.
 - Counsel and support patient and family including access to rehabilitation programmes.
 - Select patients in need of specialised care.

Overview

A normal spleen is not palpable, so that a palpable spleen is virtually always indicative of an underlying problem unless it is confused with the left lobe of the liver or an enlarged left kidney.

Causes

1) Congestive – (liver cirrhosis, portal thrombosis)

2) Infective

- a) Viral – hepatitis, glandular fever (Epstein-Barr virus (EBV)), cytomegalovirus (CMV)
- b) Bacterial – bacterial endocarditis, brucellosis, septicaemia
- c) Protozoal – malaria, leishmaniasis
- d) Fungal – histoplasmosis

3) Neoplastic (chronic leukaemia, lymphoma, myeloproliferative disorders, myelofibrosis)

4) Associated with haemolysis (acquired and congenital haemolytic anaemia)

5) Inflammatory (Still disease, Felty syndrome)

6) Infiltrations – sarcoid, amyloid, lipid storage disorders

Key Objectives

- Perform an abdominal examination for splenomegaly and differentiate an enlarged spleen from the left kidney or left lobe of the liver.
- In a patient with splenomegaly, determine whether it is associated with hepatomegaly.

General/Specific Objectives

- Through efficient, focused, data gathering:
 - Determine whether stigmata of chronic liver disease, an infective process (e.g. fever, chills, lymphadenopathy, Osler nodes, etc.), weight loss, anaemia or jaundice are present in order to differentiate between causes of splenomegaly.

- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis; and important in formulating a differential diagnosis:
 - Select and interpret laboratory investigations for various causes of splenomegaly.
- Conduct an effective plan of management for a patient with splenomegaly:
 - Recognise that management depends on the underlying cause.
 - Select patients in need of specialised care.



Overview

'Cross-eye', 'squint' or 'wandering eye' conditions are usually obvious and will often lead to early medical advice being sought. However, poor vision in one eye is often not noted until a much later stage when the possibility of significant visual impairment is high. Both types of presentations require specialist advice.

Causes

- 1) Esotropia (convergent, internal, cross-eye) – congenital and acquired**
- 2) Exotropia (divergent, external, wall-eye) – congenital and acquired**
- 3) Vertical strabismus**
- 4) Mechanical restriction**
- 5) Convergence insufficiency**
- 6) Amblyopia without strabismus**

Key Objectives

- Determine the type of strabismus and the necessary timing of intervention.
- Screening of infants for poor vision as early as possible when suspected.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Identify relevant family history.
 - Differentiate pseudostrabismus (lid configuration or negative angle kappa or markedly positive angle kappa) from true strabismus.
 - Conduct an examination of visual acuity, ocular movement, and failure of alignment by the cover/uncover test.
 - Manage and reassure where appropriate.
- Select patients with true strabismus and/or amblyopia for specialised care.

107A Substance Abuse / Drug Addiction/Withdrawal

Overview

Alcohol and nicotine abuse are such common conditions that virtually every clinician is confronted with their complications.

Causes

- 1) Alcohol**
- 2) Nicotine**
- 3) Benzodiazepines, sedative-hypnotic, anxiolytic**
- 4) Opioids**
- 5) Cannabis**
- 6) Cocaine**
- 7) Hallucinogens**
- 8) Inhalants**
- 9) Amphetamines**
- 10) Performance drugs**

Key Objective

- Determine whether the patient is in need of emergency care because of withdrawal symptoms or other complications.

General/Specific Objectives

- Through efficient, focused data gathering:
 - Determine past and recent quantity and frequency of abuse, severity of abuse and dependence, readiness to change or denial, complications of use, family history, past treatment history, support network, and withdrawal symptoms; identify social problems such as assault and impaired driving.
 - Define limits of non-hazardous alcohol; differentiate social from problem drinking/dependence.
 - Examine for mental function, weight loss, route of administration, neurologic examination, signs of use.

- Interpret critical clinical and laboratory findings which were key in the processes of exclusion, differentiation, and diagnosis:
 - Select patients for toxicology screening, liver function if suspected of alcohol abuse and contrast sensitivity and specificity with 'CAGE' questions:
 - * Have you felt the need to ***Cut*** down on your drinking?
 - * Have you felt ***Annoyed*** by criticism of drinking?
 - * Have you felt ***Guilty*** about your drinking?
 - * Do you feel the need for an ***Eye*** opener in the morning?
- Conduct an effective plan of management for a patient with substance abuse:
 - Outline spectrum of treatment options including mutual/self-help, low-intensity outpatient treatment, non-medical detoxification and residential treatment, medically supervised detoxification and intensive inpatient treatment.
 - Outline office counselling for mild to moderate alcohol dependence (reviewing assessment findings, set drinking goals, conduct of periodic followup).
 - Outline alcohol withdrawal management, indications and contraindications for disulfiram, and naltrexone, methadone; outline management of withdrawal from opioids and benzodiazepines.
 - Outline management for stopping nicotine including advice to quit, nicotine replacement therapy, setting quitting dates, behavioural counselling, information about community resources.
 - Discuss guidelines for safe prescription writing for benzodiazepines and opioids.
 - Outline management of cardiovascular complications of cocaine and alcohol.
 - Outline prevention, detection and management of infectious complications of intravenous (IV) drug use including hepatitis B, C, and HIV.
 - Select patients in need of specialised care.

107B Pathological/Problem Gambling**Overview**

Gambling is the act of staking money or some other item of value on the outcome of an event determined by chance. It is an accepted leisure pursuit enjoyed by the majority of adult Australians. Problem gambling may affect one to three percent of the adult population. Two-thirds of problem gamblers are men, who typically present in their thirties (women present later) and have problems with continuous forms of gambling such as poker machines (slots), off-course agency betting, casino or internet gaming or the stock market.

Problem gamblers are preoccupied with gambling and have needed to use increasing amounts of money or goods to continue. They have had repeated unsuccessful attempts to cut back, control or stop their gambling. They tend to gamble more when they are losing to chase their losses and then rely on others to provide the money to relieve the desperate financial situations created by their gambling. They gamble to escape personal or work problems or to relieve dysphoria, anxiety or depression. They frequently lie to conceal the extent of their gambling involvement, and many will have jeopardised or lost a significant relationship or career opportunity as a result. Many will have committed illegal acts such as forgery, fraud, theft or embezzlement to finance their gambling, and 20% will make a serious attempt at suicide. Bipolar patients may gamble excessively when in a manic phase. Problem gambling has a strong association with alcohol abuse and antisocial personality.

Key Objective

- Determine whether the pattern of gambling behaviour has disrupted the individual's personal, family or vocational pursuits and impaired social and occupational functioning.

General/Specific Objectives

Through efficient and focused data gathering:

- Elicit history and pattern of gambling behaviour from onset to the present.
- Clarify reasons for current presentation.
- Establish impact of gambling on spouse, family, work and social relationships.
- Identify individual triggers for problem gambling behaviour.
- Elicit associated illegal behaviours to maintain gambling behaviour.
- Recognise and treat comorbid psychiatric disorders, especially mood disorders, substance abuse, attention deficit hyperactivity disorder and personality disorders.
- Refer for appropriate financial and psychological counselling.
- Provide ongoing psychological support to the family.

Overview

Suicidality is a spectrum ranging from suicidal ideation to self-harm to completed suicide. Suicide is a conscious fatal self-destructive act, which although grievous, is relatively rare. Suicidal ideation and intent may fluctuate unpredictably over brief periods of time. Suicidal behaviour has no single cause but a conjunction of many biopsychosocial and cognitive factors. Hypofunction of brain serotonin systems may explain some suicidal behaviour.

About 2,000 Australians commit suicide each year and at least 20,000 deliberately harm themselves annually. Most people who commit suicide have visited a doctor (either clinician or psychiatrist) in the weeks prior to the act. Knowledge of the major risk and protective factors for self-harm, as well as the predisposing and precipitating events, is essential for appropriate early identification and management in primary care. Survivors, including health professionals, are left traumatised and with a confused spectrum of emotions.

Major Causal Risk Factors

1) Previous deliberate self-harm

- a) Organised plan
- b) Access to means

2) Psychiatric disorder

- a) Major depression
- b) Bipolar disorder
- c) Other disorders including dysthymia
- d) Substance abuse
- e) Schizophrenia / Schizoaffective disorder especially command hallucinations
- f) Personality disorder
- g) Panic/Anxiety disorder
- h) Organic mental disorders (delirium, anorexia nervosa)

3) Socio-cultural factors

These include:

Living alone; older age; male; unmarried/separated marital status; family history of suicide; physical illness – terminal disease, chronic pain, HIV-AIDS, chronic neurological disorders; rural versus urban – access to support networks; unemployed/unskilled; indigenous aboriginal Australians; recent or anniversary loss life event; environmental influences.