A photographic guide to common short cases in

SURGERY

Prof. MHJ Ariyaratne

MBBS(Col). MD(Col). FRCS(Eng). FRCS(Ed).FCS(SL),
Senior Fellow PGIM
Consultant Surgeon and
Senior Professor in Surgery
Faculty of Medicine
General Sir John Kotelawala Defence University
Rathmalana, Sri Lanka.

This book is dedicated
to the students
who firmly believe
that the physical signs
are the foundation
of a sound clinical diagnosis
in Surgery.

FOREWORD (1st Edition)

This book is a treasure trove of spots and "short cases" that have been collected over a number of years of Dr. Ariyaratne's work in the university surgical unit at North Colombo General Hospital. The presentation has been arranged in such manner that the reader, in a short span of time, becomes focused on the case at hand and is introduced to facts that must be remembered in relation to the case.

Use of this method will bring the student up to speed with each of the short cases demonstrated. Thus, the book would serve as an excellent guide to medical students in their first year of clinical work as well as those already in clinical streams. The book is an invaluable source for examination practice because most have been previously presented at the clinical examination for those in their final year of undergraduate studies. It would also serve post-graduates and practicing doctors as a useful clinical aid –"if you have not seen a case in your lifetime of practice, you are more than likely to encounter that rare case, here"!

The quality of the photography is good in most and the presentation is simple. I am indeed proud to have been associated with Dr. Ariyaratne whose main focus of work has been in the area of teaching undergraduates and post-graduates in surgery the art of clinical practice.

Professor K. I. Deen MD, MS, FRCS, F Na Ac Sci.
Professor of Surgery
University of Kelaniya Medical School, Sri Lanka.

FOREWARD (2ND EDITION)

Prof. M.H. Jayantha Ariyaratne has yet again produced a book in clinical surgery for the benefit of undergraduates and postgraduates in Surgery. This book is produced at the Sir John Kotelawela Defence University, Medical Faculty.

Surgeons are usually busy technically savvy Professionals. Finding time to write a useful text is highly commendable. The authors administrative role which is also busy perhaps gave him some time to devote to this professional and academic exercise.

Students are greatly benefited by the inclusion of photographs obtained during his consultations and operations which is an invaluable resource. Prof Ariyaratne is a mature and senior professional who is not only a perfectionist on surgical technique but also puts into his surgical consultation and assessments the art of clinical practice.

I wish him well and hope he will write more books for the benefit of students of Surgery both undergraduates and postgraduates of KDU and all faculties of Sri Lanka.

Prof. Rezvi Sheriff
Vidyajyothi Senior Professor of Medicine
Department of Clinical Sciences
Faculty of Medicine
General Sir John Kotelawala Defence University

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INTRODUCTION

This is a collection of short cases in Surgery, which I have come across in my teaching career as a Senior Lecturer in Surgery. The majority of them were examination cases selected for the final MBBS Examination in the Professorial Surgical Unit, Teaching Hospital Ragama. Some were my clinic patients demonstrated to medical students in my ward classes. Our clinics and the wards are filled with plenty of short cases in Surgery, where a variety of physical signs can be elicited.

Eliciting physical signs is an art where there is no end to mastery of it. It is a habit which the medical student has to inculcate from the 3rd year onwards. Slowly and steadily thus one may amass a wide experience in demonstration of physical signs, which is the key to an accurate diagnosis. Even in the presence of advanced technology we are not in a position yet to give up our fundamental approach to surgical disease by way of physical signs.

It is my earnest hope that the budding doctors will realize the value of relying on physical signs for a reasonable clinical diagnosis before embarking on more sophisticated investigations which are beyond the scope of most of our hospitals in this country. Relying on basic physical signs will help us to select the most appropriate investigations to confirm our clinical diagnosis without much expenditure.

Physical signs are the foundation of a sound clinical diagnosis.

ACKNOWLEDGEMENT

Two decades of experience of teaching medical students, dental students and postgraduate trainees in surgery has convinced me that eliciting physical signs is an art which can be mastered step by step. This book is basically intended for the purpose of guiding the undergraduate and postgraduate trainees in surgery. The valuable suggestions by the trainees have been taken seriously and implemented suitably. Many thanks to them.

I'm particularly thankful to Prof. K. I. Dean, for helping me with the foreword of the 1st edition and also to Prof. Rezvi Sheriff for helping me with the foreword of the 2nd edition.

I'm extremely grateful to Dr. (Miss) K. K. T. Virajani for her invaluable backing during the project of finalizing this 2nd edition. I greatly appreciate with gratitude the cooperation extended to me by the patients who have willingly given their consent for their photographs to be taken for this book. A special word of thanks is extended to my wife and three children for their encouragement and support.

This book is presented in a spirit of sharing knowledge with all who endeavour to treat patients effectively. The experience presented here is the work of many generations of surgeons who have taught me clinical surgery. It is with gratitude that I remember all of them for their guidance and commitment to clinical surgery. Finally I thank wholeheartedly the academic and non-academic staff of the Department of Surgery, Faculty of Medicine, General Sir John Kotelawala Defence University and the nursing staff of the Teaching Hospital Ragama who helped me to bring this book to fruition.

GENERAL OBJECTIVES

Short cases in surgery form a very important part of the Final MBBS Examination. The students are expected to look for physical signs, elicit them, demonstrate them to two examiners and interpret them. Our clinics and wards being filled with plenty of short cases that there is no dearth of opportunity for the medical students to acquaint themselves with most of the physical signs in surgery.

This book is a collection of short cases over a period of nearly 20 years of my clinical practice in the Teaching Hospital of Ragama. This is presented to the student with a view of stimulating the student to look for physical signs during his/her clinical work during the 3rd, 4th and final years.

The photographic memory of cases we all recall is retrieved more rapidly than the text relevant to the case.

It is my sincere wish that the students will use this book in order to inculcate the habit of looking for physical signs in clinical cases they encounter during their exposure to hospital work.

A great part, I believe, of the art of medicine is the ability to observe.

-Hippocrates,
Father of Medicine.

LEARNING OUTCOME

The final year student is trained to arrive at a reasonable clinical diagnosis of most of the clinical problems they will encounter during their internship, based on a detailed history and the physical signs. The clinical impression thus made should be confirmed by the most appropriate tests selected from a battery of investigations. It is of paramount importance to avoid unnecessary and invasive investigations as far as practical.

Any student who is willing to expose himself / herself to a great many cases of surgical problems invariably should be more well versed in interpreting physical signs as they emerge.

This book is intended for the enthusiastic and keen medical students who will leave no stone unturned to acquaint themselves with fundamental knowledge in clinical surgery.

The desired and expected outcome of this whole exercise is to produce a doctor with a very sound knowledge in clinical surgery specially in bedside clinical diagnosis. It is also expected of him/her to add something to what he/she has learned and hand that knowledge down to the next generation as a matter of priority and duty.

Prof. Jayantha Ariyaratne
Faculty of Medicine
General Sir John Kotelawala Defence University

Clinical diagnosis is an art, and the mastery of an art has no end: you can always be a better diagnostician.

-Logan Clendening.

CONTENTS

Direct Inguinal Hernia

- A groin lump (Inguinal lump).
- A common hernia in the elderly.
- Reducible and reproducible.
- A positive expansile cough impulse is visible and palpable.
- A broad based bulge which comes straight out on straining.
- Pressure on the internal ring cannot control the protrusion of the hernia.
- The possibility of a similar hernia on the other side.
- Predisposing factors such as bladder outlet obstruction and chronic lung disease may be found.
- Examination of the swelling in the groin in the standing position is mandatory. Irreducibility, obstruction, strangulation and inflammation are known complications.
- The correction of the precipitating factors is essential.
- Repair is indicated in the majority.

Bilateral Groin Hernia

- Bilateral direct inguinal herniae are commonly seen in old age.
- The known predisposing causes are chronic bronchitis, bladder outlet obstruction and chronic constipation.
- In a younger age group strenuous work such as lifting heavy weights may be a predisposing factor.
- Due to large defects, obstruction of the herniae is unusual.
- In the standing position the herniae become more prominent.
- They are uncommon in childhood.
- They often do not descend into the scrotum.
- After reduction, the protrusion of the herniae cannot be controlled by pressure over the deep inguinal ring.

Inguinoscrotal Hernia

- It is a large inguinoscrotal swelling which is very obvious in the standing position.
- The lump may become less prominent when the patient lies down.
- A long standing inguinoscrotal hernia may become irreducible leading to incarceration.
- Enterocele (a loop of bowel inside the hernial sac) may present with gurgling noises over the lump.
- Obstruction and strangulation are common complications.
- Visible or palpable expansile cough impulse is present over most herniae. But the absence of such impulses does not exclude the possibility of a hernia.
- Most of the inguinoscrotal herniae are caused by indirect herniae.

Sliding Hernia/Hydrocele

- Inguinal herniae may co-exist with scrotal surgical conditions.
- Direct inguinal hernia with a broad base in the left side is often due to a sliding hernia whose wall is partly formed by the protruding viscus.
- In the presence of clinical evidence for the confirmation of a diagnosis of a sliding hernia, a surgical procedure to perform herniotomy should not be contemplated.
- A direct inguinal hernia with a large defect can be managed conservatively or with the help of a truss, in patients who are unfit for any form of surgical procedure.
- Hydrocoelectomy can be undertaken via the inguinal incision made to repair the hernia.

Incisional Hernia

- It is a large incisional hernia occurring in the region of the central abdomen over a surgical scar.
- The predisposing factors are postoperative wound infection, paralytic ileus and chest infection with a cough.
- Concealed burst abdomen may present later as an incisional hernia.
- Anterior abdominal wall laxity due to repeated pregnancies, chronic constipation with straining and bladder outlet obstruction are known to be aetiological agents.
- Irreducibility, intestinal obstruction and strangulation are known complications.

Paraumbilical Hernia

- Paraumbilical herniae come out by the side of the umbilicus due to a weakening or a defect situated around the umbilicus.
- The umbilicus is pushed to a side forming a crescentic slit.
- The majority are due to protrusion of the omentum with or without a small loop of bowel.
- Middle aged or old women with repeated pregnancies who are obese, are vulnerable to develop this hernia due to weakening of the anterior abdominal wall musculature.
- Intestinal obstruction is a common complication which may lead to strangulation and fecal peritonitis.
- Consequently early repair of the defect is indicated to prevent such morbidity and mortality.
- The traditional Mayo's repair has been replaced by a mesh repair or anatomical repair with a darn.

Umbilical Hernia

- Complete protrusion of the umbilicus occurs commonly in childhood.
- Adult umbilical herniae may occur due to gross ascites or divarication of recti.
- In children if the hernia persists beyond the age of two years, repair of the defect is indicated under GA.
- It is advisable to manage adult umbilical herniae conservatively in patients with ascites due to advanced liver disease.

Epigastric Hernia

- Epigastric herniae are due to protrusion of extraperitoneal fat through a narrow defect in the linea alba extending from the xiphoid to the umbilicus.
- The lump felt in the midline appears as a small lipoma hence the word a fatty hernia.
- The typical features of a hernia such as reducibility, reproducibility and cough impulse are not found in the majority of epigastric herniae.
- In some a small loop of peritoneum may come out giving rise to a sharp pain over the site of the lump.
- Rarely there can be a large defect through which protrusion of a viscus can occur.
- Early epigastric herniae may present with pain in the epigastrium after meals mimicking a peptic ulcer. Surgical repair is indicated in the majority of cases.

Vaginal Hydrocele

- This is a long standing hydrocele with transillumination.
- A hydrocele is due to an abnormal collection of fluid in the tunica vaginalis .They are cystic lumps confined to the scrotum.
- Cross fluctuation and transillumination are commonly present physical signs.
- Infection, suppuration and formation of a haematocele are common complications.
- In a long standing hydrocele the cyst wall may be thickened preventing a beam of light to go through.
- Testicular atrophy can be the outcome of a chronic hydrocele.

Congenital Hydrocele

- This is a cystic lump in the scrotum with brilliant transillumination.
- Even an inguinoscrotal hernia which is empty may also transilluminate when flashed with a beam of light.
- Ultrasonography will confirm the diagnosis and pick up any abnormality in the underlying testis. Some may subside in size with time. Some may need surgical intervention sooner or later.

Bilateral Hydrocele

- Bilateral hydroceles of varying sizes are not uncommon.
- Most of them are primary hydroceles without any demonstrable aetiology (idiopathic hydroceles).
- Some of these hydroceles may become enormous in size causing the penis to disappear (vanishing penis).
- Most of these patients have some sort of discomfort in wearing under garments and most of them are socially embarrassed .
- Haematoma formation is a common complication leading to suppuration occasionally.
- Calcification of the wall may interfere with eliciting transillumination causing some diagnostic confusion.
- Ultrasonography is essential to detect the presence of testicular atrophy pre-operatively.
- Unfit patients may benefit from intermittent needle aspiration under strict aseptic conditions.

Large Epididymal Cyst

- Cyst of the epididymis is uncommon in childhood.
- It presents as a truly scrotal lump confined to the scrotum completely separated from the testis.
- It is a cystic lump with brilliant transillumination.
- Most of them are harmless and may be left alone.
- Lump in the same anatomical site may be due to a spermatocele which is not as transilluminable as a cyst of the epididymis.

Varicocele

- This is due to tortuous and dilated veins in the pampiniform plexus. In the standing position it becomes very prominent and may feel like a bag of worms. A cough impulse may be elicited over the lump and there is warmth on palpation.
- A long standing varicocele may cause testicular atrophy and dysfunction.
- If bilateral, spermatogenesis will be impaired.
- Occasionally left renal carcinoma is the cause for a left varicocele which may not change its size depending on the change of position of the patient.
- On the supine position a varicocele (not due to a renal tumour) may completely disappear. Most can be managed conservatively and some may need surgical intervention such as embolization or ligation of the main branches of veins in the inguinal canal.

Absent Testis

- Undescended testis is due to imperfect descent of the testis into the hemiscrotum. The testis is arrested at a point in between its origin and destination which is the hemiscrotum.
- The affected hemiscrotum is rudimentary. There can be a co-existing indirect inguinal hernial sac which may be the cause of intermittent pain. The malignant change in an undescended testis is a known complication in a minority of cases.
- Torsion of the testis and orchitis are common complication of this condition. Ultrasonography is indicated to visualize the exact location of the testis.
- Exploration of the inguinal canal, mobilization of the testis to the scrotum and fixation of the testis in a dartos pouch by the age of 18 months is the treatment of choice (orchidopexy).

Sebaceous Cyst

- A very common retention cyst of the hairy skin.
- Due to a blocked duct which opens into a hair follicle.
- Filled with altered keratin, not sebum.
- May be multiple and not found in the palm and the sole.
- The common sights are the face, the neck, the scalp (wens) and the scrotum. They are uncommon in children.
- The overlying skin may appear bluish, discharging cheesy material through the punctum.
- The lump moves with the overlying skin in all directions.
- Filled with pultacious (porridge like) material giving rise to the sign of indentation. When infected the material may undergo liquefaction and the sign of indentation will become impossible to be elicited. Infection, suppuration and ulceration are common complications.
- Complete excision with a skin ellipse keeping the punctum in the centre, along the skin lines is the treatment of choice..

Sebaceous Cyst

- Scrotal wall sebaceous cysts are common.
- Usually multiple. Infection and suppuration are common complications.
- An infected scrotal sebaceous cyst may present with pain and a discharging boggy mass.
- If the infection and suppuration are not treated at an early stage, the cyst can undergo ulceration which looks like a carcinoma.
- Multiple avulsion method is useful for the treatment of uncomplicated scrotal sebaceous cysts.

Sebaceous Cyst

- May be mistaken as a external angular dermoid cyst.
- The site of the lump is cosmetically unacceptable. Elective excision under a field block is the treatment of choice.

- Note that the dome is bluish.

Sebaceous Cyst

- This is a large sebaceous cyst of the natal cleft. The dome is bluish.
- This is vulnerable to develop infection.

- This is a large midline sebaceous cyst with indentation. The material inside is toothpaste like and it is due to accumulation of epithelial debris, not sebum. Hence the word a pilar cyst.

Infected Sebaceous Cyst

- May lead to suppuration.
- Surgical treatment is undertaken to remove the infected cyst wall and the material within the cyst.
- Inadequate surgical removal may lead to recurrence.
- The glycaemic state of the patient should be assessed.
- Surgical intervention under local anaesthesia should not be undertaken.
- General anaesthesia or spinal anaesthesia would help the surgeon to remove the infected cyst wall completely and adequately.

Infected Sebaceous Cyst

- Infection occurring in a sebaceous cyst is a common complication.
- The cyst in the picture is situated very close to the danger area of the face.
- The risk of cavernous sinus thrombosis is high with infected sebaceous cysts in the “danger area” of the face.
- It is more advisable to remove them electively before any infection occurs.

Intermammary Sebaceous Cyst

- A punctum which is a small pit on the side of a hair follicle is diagnostic of a sebaceous cyst.

Sebaceous Horn

- An uncommon complication of a longstanding sebaceous cyst. Altered keratin material discharging onto the surface through a wide punctum is the basis of formation of a horn.

Pilar Cysts of the Scalp

Pilar Cysts of the Scalp

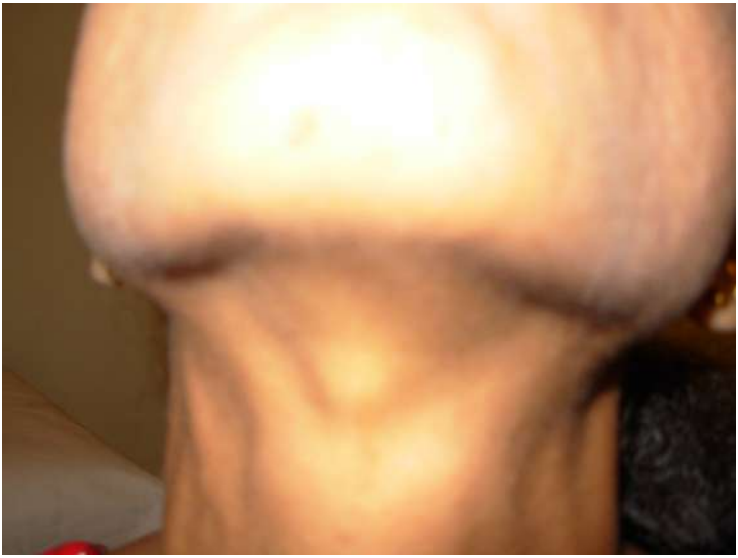
Formerly they were called sebaceous cysts of the scalp. Multiple cysts in the scalp are called wens. These scalp cysts can get traumatized during combing of hair and may get secondarily infected. Infection of these cysts are common. If untreated suppuration may ensue and rupture spontaneously giving rise to an ulcer which may mimic a malignancy (Cock's peculiar tumour).

Midline Dermoid Cyst

Midline Dermoids

- A congenital dermoid occurs along the lines of embryonal fusion (sequestration/inclusion dermoids).
- The common sites are the midline, external angular position, internal angular position and the retroauricular region.
- The lump has been present from birth or since childhood.
- The anatomical plane is beneath the skin.
- The surface is smooth and cross fluctuation can be elicited.
- Demonstration of transillumination is impossible.
- Rarely some of the dermoids beneath the scalp may communicate with the intracranial structures.
- Long standing external angular dermoids may cause a permanent depression in the outer table in the skull.
- Most of them cause cosmetic problems and some may get infected.

Midline Infrahyoid Dermoid Cyst



A congenital dermoid in the midline is the commonest type of sequestration dermoid. This lump does not move with deglutition or with movements of the tongue in and out.

Posterior Auricular Dermoid Cyst

Congenital dermoid cysts are inclusion or sequestration cysts which occur along the lines of embryonal fusion.

Posterior auricular site is also a known anatomical position for a congenital dermoid. These lumps are usually cystic. Transillumination may not be possible in some long standing cysts.

External Angular Dermoid Cyst

This is a congenital cyst which occurs along the line of embryonal fusion. It is present from infancy or childhood and may increase in size with the growth of the child.

The lump is found beneath the skin and is not attached to the deeper structures. In some cases it appears as if the cyst is entrapped within a bony depression. Cross fluctuation can be elicited but transillumination is impossible.

Rarely there can be some intracranial connection with the lump. Some external angular dermoid cysts can have a dumb-bell extension in to the orbit.

Implantation Dermoid Cyst

- An acquired type of dermoid cyst. Trauma to the affected site is reported in 50% of the cases. Appears firm to hard on palpation. Difficult to demonstrate cross fluctuation and transillumination.
- Occurs as a result of piece of skin being driven off forcefully into the interior due to some external trauma.
- The palms and the soles are commoner sites.
- Infection may occur in some implantation dermoids.
- Complete excision under an avascular field is indicated.

Implantation Dermoid Cyst

Implantation Dermoid-unusual site

Ganglion

- Occurs in relation to fibrous tissue surrounding joints or tendon sheaths. Caused by cystic and myxomatous degeneration of fibrous tissue.
- The common sites are the ventral and dorsal aspects of the wrist joints, the dorsum of the hand and feet. They are beneath the skin but attached to the deep fibrous sheaths.
- Usually spherical in shape and has a smooth surface. Some are multilocular or tense. But the consistency can vary from soft to hard.
- It is rarely seen in children.
- Around the wrist the ganglia may communicate with scapholunate ligament or scapho-trapezio-trapezoid joint.

Ganglion

- Another common site for a ganglion.
- Is a tense and cystic swelling found beneath the skin.
- The lump is well localized and painless.
- Transillumination is a very characteristic sign
- Complete excision under an avascular field is indicated preferably under general anaesthesia or regional anaesthesia in order to avoid any recurrence.
- Histopathological confirmation of the excised lump is mandatory in all cases of clinically diagnosed ganglia.

Ganglion

- An uncommon site for a ganglion.
- Wearing shoes and footwear may be difficult.

- A ganglion on the ventral aspect of the right wrist.
- Anatomically the radial artery is very close to the base of this ganglion.

Lipoma

- Lipomata are commonly found in the trunk and the proximal limbs.
- This is in the nape of the neck.
- The colour of the surrounding skin is similar to that of the overlying skin.
- The lump is beneath the skin and the base is free to move.
- The surface can be finely lobular or smooth.
- The slipping sign can be elicited in small lipomata.
- Transillumination may or may not be elicited.

Interscapular Lipoma

- A common site for a lipoma.
- The surface lobulation indicates that the lump is a lipoma.
- Some lipomata are fluctuant and transillumination is an occasional finding. It may be due to the fact that the individual adipocyte has features of a tiny cyst.
- Sarcomatous change is an uncommon complication occurring in lipomata situated in some anatomical sites such as scapular area, thigh, buttocks and retroperitoneal space.
- Fat necrosis and saponification are known complications of long standing lipomata.

Large Lipoma in an unusual site

Multinodular Goitre

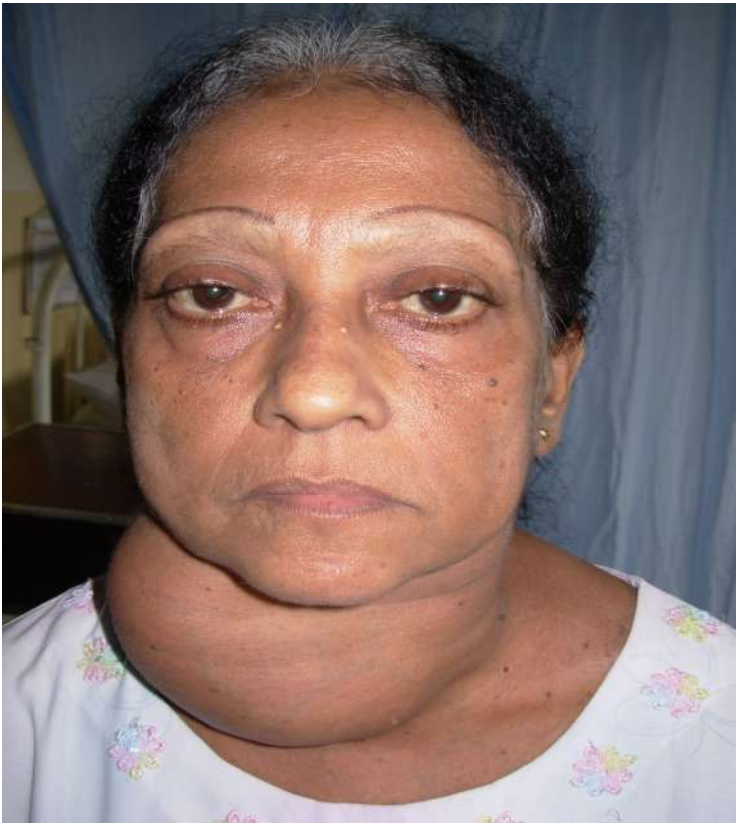
- A bosselated lump in the anterior triangle of the neck, usually of several years duration. The lump moves up on swallowing, then stops moving and finally moves down to its original position.
- Clinically the patient maybe hypothyroid, euthyroid or hyperthyroid.
- The position of the trachea should be checked and evidence of retrosternal extension should be looked for.
- Toxic changes and malignant transformation are known complications of a multinodular goitre. There can be pressure symptoms and unsightly appearance.
- Development of follicular carcinoma with or without bone deposits may occur in a long standing multinodular goitre.

Retrosternal Goitre with tracheal shift

This is a large multinodular goiter (Grade III) with prominent neck veins due to retrosternal extension. The tracheal groove is clearly seen to be shifted to the right.

Solitary Nodular Goitre

Hypothyroid Goitre



- Hypothyroid goitre with retrosternal extension.
- The hypothyroid features of facial puffiness and loss of eyebrows are clearly seen.

Graves' Disease

- Often these patients present with heat intolerance, undue sweating, anxiety, irregular menstruation and losing weight in spite of an increased appetite.
- It is an autoimmune disease with eye signs and a diffuse goitre. The toxicity and the goitre appear almost at the same time. This patient has remarkable bilateral lid retraction.
- Links with other autoimmune disorders among the members of the family should be kept in mind.
- In addition the presence of exophthalmos, ophthalmoplegia, lid lag and loss of accommodation reflex should be looked for.
- A rapid fine tremor, proximal muscle wasting and pretribial myxoedema are seen in some patients with Graves' disease.
- A smooth goitre with a bruit, tachycardia and atrial fibrillation are common cardiovascular features.

Thyroglossal Cyst

- A congenital condition due to a developmental error in the descent of the thyroid gland.
- Mostly found in the infrahyoid region slightly deviated from the midline towards the left side.
- Upward movement with the protrusion of the tongue when the lower jaw is fixed, is almost diagnostic of a thyroglossal cyst.
- The possibility of the ectopic thyroid gland should be excluded ultrasonically before any surgical removal.
- Infection of the cyst is a known complication.
- Spontaneous rupture of an infected cyst or incision of a cyst abscess may give rise to a fistula. Malignant change is very rare.
- Sistrunk's operation is the treatment of choice.

Hodgkin's Lymphoma

Is the commonest type of lymphoma. Presents as a painless, progressive lymph node enlargement with malaise, fever and pruritus. The enlarged lymph nodes are rubbery, non-tender and discrete. Dissemination into bone may give rise to pancytopaenia and anaemia. Splenomegaly is a common finding.

Examination of all the lymph node groups clinically accessible should be undertaken.

Supraclavicular Lymphadenopathy

- Enlarged lymph nodes due to secondary deposits in the left supraclavicular area is called Troisier's sign (Virchow's nodes).
- Oesphageal carcinoma, stomach carcinoma and bronchial carcinoma are the common malignancies giving rise to the above physical sign.
- Pancreatic, testicular, prostatic, bladder and large bowel carcinomas can occasionally give rise to secondary deposits in the above region.

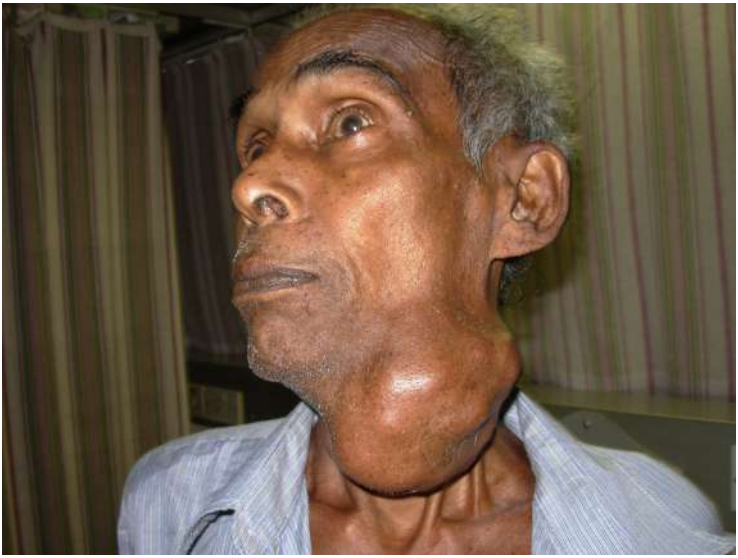
Cervical Lymphadenopathy

Chronic upper cervical tuberculous lymphadenitis is a common cause. Other causes such as glandular fever, toxoplasmosis, cat scratch disease and lymphadenopathy in HIV are uncommon . Tuberculous lymphadenitis will present with matted lymph nodes. Caseous tuberculous pus may perforate the deep fascia and give rise to a collar stud abscess (cold abscess).

Tuberculous Sinus

This is complicated cervical tuberculous lymphadenitis. The sinus formation is due to spontaneous rupture of caseous tuberculous pus from a cold abscess. The sinus will persist as there is a direct tract communicating with the deep cervical tuberculous nodes. This is a complex problem of cervical tuberculosis and spontaneous recovery does not occur at all. The drug therapy for tuberculosis is mandatory.

Large Cervical Lymph Node Deposits



Examination of the oral cavity is an important step in looking for a possible primary for such a large deposit. Occasionally one may not be able to find a primary growth responsible for the above deposits (carcinoma of unknown primary– CUP). Usually these deposits are fixed to the base.

Inguinal Lymphadenopathy

3.5% of the Hodgkin's lymphomas may present as an inguinal mass. Examination of the cervical, axillary and abdominal lymph node areas is mandatory. Enlargement of the liver and spleen should be noted.

Acute lymphadenitis in this region is due to bacterial infections. Abscess formation is a common complication of such bacterial lymphadenitis.

Torticollis

This is a baby with congenital torticollis. This is due to trauma to the sternocleidomastoid muscle during birth (ischaemic necrosis). The necrosed part of the muscle is replaced by fibrosis leading to the above deformity. There can be a palpable tumour over the affected muscle and if the deformity persists facial asymmetry may develop.

Parotid Lump

This is a parotid lump which is beneath the skin and the base has a limited movement due to the branches of the facial nerve traversing between the deep and the superficial lobes.

The majority of the salivary neoplasms occur in the parotid gland and the most of them are benign pleomorphic adenomas. Long standing tumours may undergo malignant change and may present with recent rapid enlargement, tender firm areas and with infiltration of facial nerve branches. Some tumours involve the deep lobe and may be bilateral.

Papilloma

- This is a benign skin lesion which is also referred to as a skin tag. It can occur anywhere on the skin.
- It is due to simple overgrowth of the skin involving all the layers with a central vascular supply.
- It is not a neoplasm but a hamartoma.
- Some are pedunculated, some are sessile. They are soft and solid. Some may be pigmented.
- Due to presence of hair follicles, sebaceous glands and sweat glands there can be infection and suppuration.
- An ulcerated and oedematous papilloma with granulation tissue may look malignant.
- Some are unsightly and may catch on clothes. Some may rub against the adjoining surface of the body.
- Complete excision under a field block is indicated.

Papilloma

Pedunculated Papilloma

Keloid

- A keloid scar on an injection site.
- Dark skinned people are more vulnerable to develop keloids over sites of skin trauma
- Surgical excision may aggravate the process of keloid formation and therefore operative removal is not advocated.
- Local infiltration with triamsinolone is indicated as an effective modality of treatment.

Pigmented Naevus (Mole)

- A hyperpigmented nodule present since childhood.
- Usually remains benign forever.
- Recent rapid enlargement, itching, ulceration, bleeding, satellite nodule formation, loss of central hair and regional lymphadenopathy are features of malignant change.
- Local wide excision is diagnostic and therapeutic as well.

Pigmented Naevus

Pigmented Lesion on Left Sole

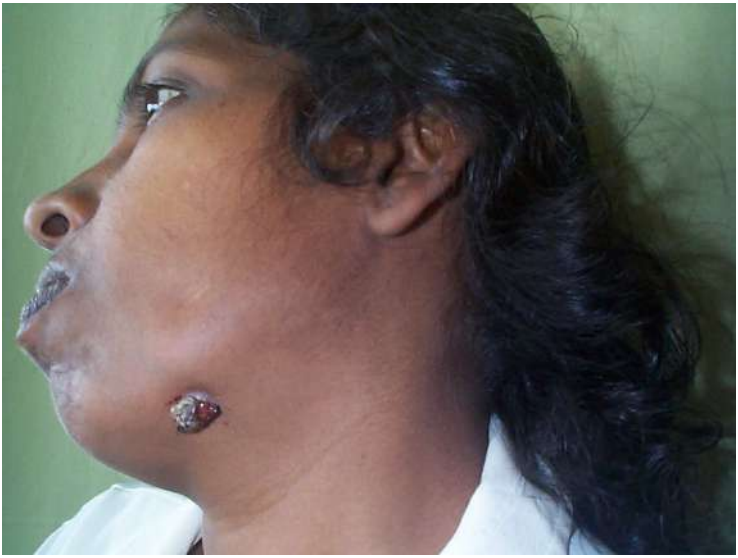
Pigmented Lesion with a Malignant Change

- This is an ulcerated, pigmented skin lesion in the heel.
- Changing behaviour such as recent rapid enlargement, ulceration, bleeding, and itching should be taken seriously as evidence of malignant change occurring in a pigmented lesion. In dark skinned people acral melanoma, which is the commonest variety may present like this. Regional lymphadenopathy may be detected.

Granuloma

- The lesion looks like a haemangioma. This is a healing pyogenic granuloma with lot of healthy granulation tissue.
- Excision and cauterization is the treatment of choice.

Pyogenic Granuloma due to Dentoalveolar Abscess



A dentoalveolar abscess occurs in relation to a tooth socket probably due to a carious tooth or an impacted tooth. The abscess will protrude the skin beneath the lower jaw and may spontaneously rupture. Until the tooth socket infection is eradicated, the patient will have a discharging sinus in the background of osteomyelitis.

Some may present with a pyogenic granuloma as shown in the picture. Straightforward incision and drainage is not going to help the patient as far as the infected tooth socket remains there.

Mucous Cyst

This is a retention or extravasation cyst arising from the minor salivary glands. Usually the cysts are dome shaped and soft in consistency. Similar mucus cysts may occur along the occlusion line in the inner cheek. These lumps interfere with speech and eating.

Unroofing or deroofing of the cyst may be carried out under local anaesthesia. Large cysts may be dealt with by marsupialization.

Mucous Cyst

Multiple Neurofibromatosis

- This is a spot diagnosis which is an autosomal dominant surgical condition.
- Multiple fibromata are scattered all over the body.
- Occasional café-au-lait patches are seen.
- Hearing may be defective due to an acoustic neuroma.
- Neuromata arising from nerve plexus may undergo malignant change.
- Flexiform neurofibromatosis may disfigure the external appearance of the patient.
- Dumbell tumour arising from the spinal nerve roots is an uncommon complication.

Meningocele

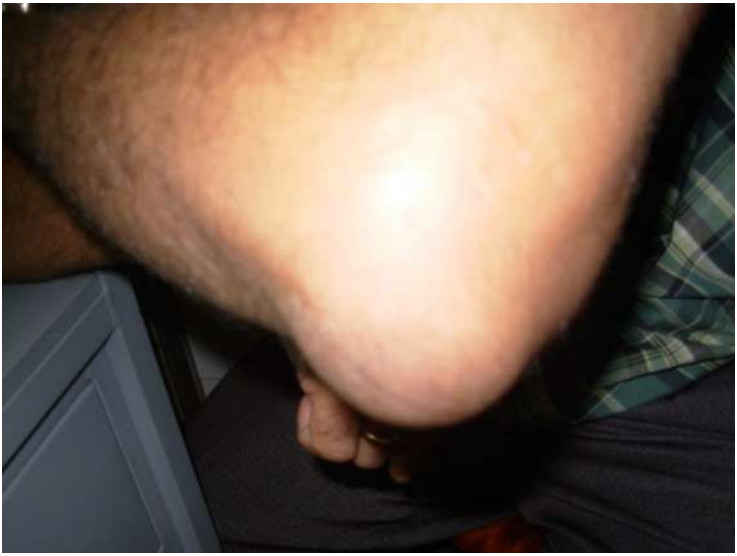
- A protrusion present from birth, through a defect in the spino-laminar segment.
- This sac only contains cerebrospinal fluid.
- Underlying spina bifida is frequently associated with this condition.
- Early excision and repair is indicated during infancy.
- It is soft, fluctuant and transilluminant.
- A meningocele is fully covered by skin.
- In a meningomyelocele, in addition to the protrusion of meninges there is a part of the spinal cord or cauda equina within it.

Baker's Cyst

A cystic lump in the popliteal fossa. It is a pulsion diverticulum of the synovial lining of the knee joint. It is situated in the midline at the level of the joint line. The lump disappears when the knee is flexed. The lump reappears when the knee is straightened. Cross fluctuation and transillumination are difficult to be demonstrated because of its situation at a deeper level.

The commonest aetiological factor is chronic disease in the affected knee joint such as osteoarthrosis or rheumatoid arthritis. Examination of the affected knee joint for the presence of crepitation is essential.

Olecranon Bursa



Miner's elbow (student's elbow). This is a subcutaneous bursa which occurs over the olecranon process of the ulna. This bursa can get infected from time to time and may present as a painful swelling with all the features of acute inflammation. Planned operation to remove the bursa in an avascular field under general anaesthesia is the treatment of choice.

Olecranon Bursae (Miner's elbow)

Varicose Veins

They are unsightly dilated and tortuous superficial veins of the lower limb. Primary varicose veins are due to valvular incompetence. Distribution of varices are anatomically linked to the greater and lesser saphenous territories. The varices outside these territories should be taken as abnormal varices due to arteriovenous malformation.

Saphena Varix

It is a single varix occurring at the saphenous opening. It has a characteristic palpable thrill when the patient coughs. A femoral hernia in that anatomical situation has to be excluded clinically before any surgical intervention.

Incompetent Perforator

Incompetent saphenofemoral junction is a primary cause of varices in the great saphenous system. Anatomically mid-thigh perforator is inaccessible due to the presence of a thick layer of fat in that locality. This is an unusual case where the incompetent perforator is visible and palpable as a blowout. Confirmation using duplex scan is essential before surgical intervention.

Chronic Venous Ulcer

Chronic ulcer at the lower leg is due to complicated venous hypertension. An area of hyperpigmentation is visible.

Thickening of the lower leg skin is due to lipodermatosclerosis. Venous eczema may complicate chronic venous hypertension. Sapheno-femoral and sapheno-popliteal incompetence is a major aetiological factor. Coexisting peripheral vascular disease should be looked for. In a long standing-ulcer, the edge may undergo malignant change (Marjolin's ulcer).

Varicose Eczema

Varicose eczema is a common complication of chronic venous hypertension. It mimics a primary dermatological condition of the skin. The primary cause which is the chronic venous disease should be investigated and treated as the primary modality of management. Duplex study of the venous system in the affected lower limb is essential before embarking on any form of surgical intervention.

Capillary Haemangioma

A capillary haemangioma of the face. It is a developmental malformation of capillaries. It is also called a Port Wine stain.

Haemangioma

Is a developmental malformation of blood vessels. It is a hamartoma and not a true tumour. There are 3 clinical types: capillary, venous and arterial. These lesions tend to bleed profusely after minor trauma.

Severe Pallor

Severe pallor due to chronic blood loss may occur as a result of an undetected malignancy. E.g. caecal carcinoma, carcinoma of the flexures, carcinoma of stomach etc. Bleeding haemorrhoids if not properly treated may give rise to severe pallor as shown in the picture.

Dry Gangrene

This is an uncommon complication of acute arterial insufficiency developing in an old man. The commonest cause is embolization from a proximal thrombus, the primary sites being the left heart and subclavian artery stenosis with dilatation due to a cervical rib, containing thrombi. Rarely Raynaud's phenomenon can give rise to such a complication. Echocardiography will help to detect any thrombi and tumours (atrial myxoma) in the left side of the heart. Occlusive arterial disease due to atheromatosis affecting the upper limb vasculature is uncommon.

Congenital Vascular Malformation in the Ankle

It is a developmental malformation of blood vessels and not a true tumour. This may be better described as a hamartoma. These lesions tend to grow in size and bleed profusely when traumatized. Disfigurement of the limbs involved and impairment of functions of the adjoining soft tissues and the joints are the presenting features.

Inflammatory Carcinoma of Breast

Mastitis carcinomatosa is a very aggressive breast malignancy which is rare. It commonly occurs during pregnancy and lactation. The skin is red in colour and warm to touch, and oedema and tenderness of the affected area are common features. The patients with the above condition tend to present with pain in the affected breast, which is an uncommon presentation of breast malignancies (10%).

Ulceration Over a Tumour

Local advancement of a breast malignancy can occur anteriorly involving the adjacent skin, which may undergo ulceration. There can be oozing and secondary bacterial infection leading to an unbearable smell and discomfort. A toilet mastectomy may be indicated as a method of palliation.

Nipple Retraction

Recent nipple retraction in a middle aged or elderly woman should be considered as a manifestation of a malignant process until proven otherwise. The benign conditions responsible for the same problems are periductal mastitis, and duct ectasia. Subareolar chronic infections such as chronic mastitis due to tuberculosis may give rise to a similar picture. Bilateral long standing nipple retraction occurring in young females may interfere with lactation and so early detection to restore the anatomical position should be undertaken at an early stage.

Breast Distortion

Distortion of the contour of the breast when compared with the normal side is a known presentation of a locally advanced breast carcinoma. The distortion may occur due to tethering, dimpling, puckering and displacement of the nipple areolar complex. These tumours are invariably locally advanced (T4). Posterior infiltration into the pectoral muscle and fascia and fixity into the anterior chest wall may also contribute to the distortion of the breast.

Breast Abscess

Lactating breast abscess occurs when there is milk engorgement due to blockade of lactiferous ducts. The causative organism is *Staphylococcus aureus*. The classical features of acute inflammation seen in this case are a lump and erythema. A radial incision made over the affected segment is the approach for drainage. Closer to the areola circumareolar incisions are of cosmetic value.

Gynaecomastia

Bilateral gynaecomazia which will lead to large breasts in males is an embarrassing surgical condition. In the majority there is no known cause. This is cosmetically unacceptable. The known causes are drug therapy e.g. oral cimetedine, testicular atrophy, testicular tumours, bilateral orchidectomy, Hansen's disease of the testicles and Klinefelter's syndrome (XXY). Chronic alcoholism with liver disease may predispose to the development of gynaecomazia. Some patients may benefit from subcutaneous mastectomy.

Cellulitis

- Spreading inflammation in the subcutaneous tissue due to bacterial infection is called cellulitis.
- The causative organisms are *β Haemolytic streptococcus*, *Staphylococcus aureus* and gram negative bacilli.
- In metabolically deranged and immunocompromized patients
- septicaemia may occur.
- Lymphadenitis and lymphangitis are common regional complications.
- Vesical formation, cutaneous gangrene and pus formation are local complications.
- Cellulitis of polymicrobial origin e.g.– diabetes, should be treated with broad spectrum antibiotics.

Complicated Cellulitis

This patient has complicated cellulitis with vesicle formation. There is evidence of erysipelas. The commonest organism responsible for both conditions is *Streptococcus pyogenes*. In some patients the responsible organism is *Staph. aureus*. In immunocompromised and metabolically deranged patients e.g. diabetes, the cellulitis is polymicrobial in origin. The spreading nature of cellulitis is due to the action of hyaluronidase and streptokinase of the causative organism. There can be regional lymphadenitis and intransit lymphangitis. Systemic features of septicaemia are: fluctuating fever with chills and rigors, nausea and vomiting and general ill health. Cellulitis should be taken as a serious infection in patients with uncontrolled diabetes, decompensated chronic liver disease, immunodeficiency, joint prosthesis, and cardiac implants.

Erysipelas

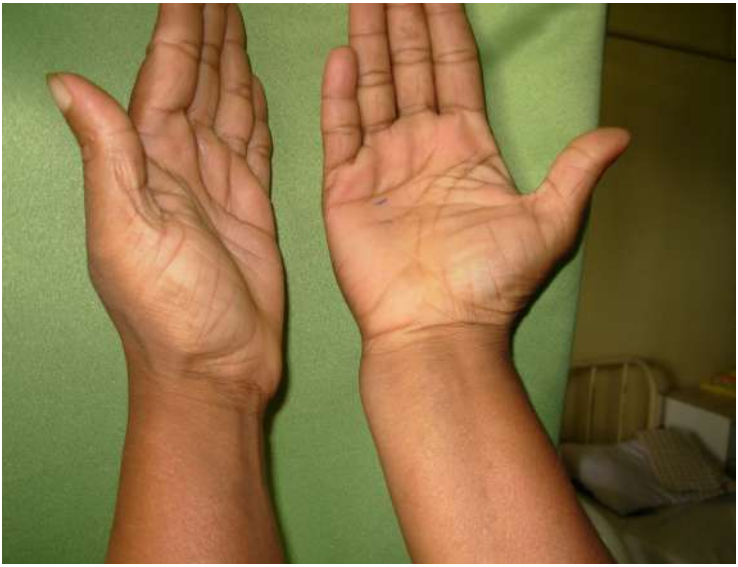
It is a spreading inflammation of the skin and subcutaneous tissue due *Streptococcus pyogenes*. Poor hygienic conditions and debilitating conditions are predisposing causes. This rapid spread may give rise to septicaemia. Usually the outline of the affected area is well demarcated and is crimson in colour. Intravenous Penicillin is the drug of choice.

Dupuytren's Contracture

It is due to an unknown pathological process leading to thickening of fascia mostly in the palm and rarely in the sole.

The affected finger is drawn into flexion due to the overlying skin of the palm being adherent to the underlying thickened fascial nodules. The ring finger and the little finger are often affected. Repeated trauma to the palm, familial tendency, male gender, cirrhosis, diabetes and epileptics on dilantin sodium are thought to be predisposing factors.

Carpal Tunnel Syndrome (Old Colles' Fracture)



Malunited Colles' fracture of the wrist with wasting of the thenar eminence. This is an uncommon cause of the carpal tunnel syndrome. Occurrence of this complication should be prevented by undertaking proper manipulation and reduction of all wrist fractures prior to immobilization.

Ulnar Claw

Ulnar nerve injury at the wrist leading to ulnar claw (main en griffe). There is loss of sensation over the lateral one and half fingers and the palm.

Polydactyly

Supernumary digits may present as polydactyly. The common digit involved is the thumb which can have an extra phalanx. The incidence of other congenital abnormalities should be looked for. Syndactyly is fusion of digits.

Furunculosis

The furuncle is a *Staphylococcal* infection of a hair follicle. A furuncle can proceed to suppuration and central necrosis. An underlying cause such as advanced diabetes should be looked for. Incision and drainage should be undertaken if there is suppuration.

Carbuncle

This condition occurs in patients with poorly controlled diabetes, in pressure areas. There is subcutaneous necrosis with superadded infection leading to suppuration discharging on to the surface via multiple sinuses. Complete excision of the suppurative lesion has to be undertaken as a matter of priority. The skin defect created as a result of such undertaking may be dealt with by skin grafting later on.

Osgood Schlatter's Disease

The tibial tubercle may become avulsed from the shaft due to undue tension exerted on it by the ligamentum patellae. This presents as a bony lump and becomes tender to touch. Radiologically this may lead to a diagnostic confusion with a tumour. This condition should be managed with rest and analgesia and there is no indication for any form of surgical intervention.

Marjolin's Ulcer

A long standing scar undergoing carcinomatous change will lead to a Marjolin's ulcer. Original Marjolin's ulcer was described on a scar due to burn injury. Any long standing ulcer or a chronic discharging sinus due to osteomyelitis can undergo carcinomatous change. The edge of the ulcer will become rolled up or everted. Regional lymphadenopathy indicates spread to the draining nodes.

Osteoma

This is picture of a young patient with a benign bone tumour in the angle of the mandible. In the presence of multiple epidermal cysts of the skin this condition represents a rare condition called Gardner's syndrome. Intestinal polyposis is a feature and can be detected by colonoscopy. Gardner's syndrome is a predisposing condition for colonic carcinoma.

Exostoses (Osteochondroma)

- Benign cartilaginous cap bony projection
- Common around knee joint - lower end of the femur and upper end of the tibia and fibula.
- Bony projection is always growing away from the epiphysial plate towards the diaphysial end of the bone.
- Familial disorder of bones which commonly affects males.
- Can be pedunculated or sessile
- Complications are
  - Mechanical symptoms
  - Nerve impingement
  - Vascular pseudo aneurysms
  - Fractures
  - Infarctions
- Rarely undergoes malignant transformation
- Management—excision of the bony growth.

Ruptured Long Head of Biceps

The long head of the biceps brachii can rupture in the bicipital groove. It occurs spontaneously due to tendon attrition. A lump may appear in the arm which becomes prominent when the elbow is flexed against resistance. One may feel a gap proximal to the lump in the arm. This may be mistaken as a neoplasm arising from the muscle. Flexion of the elbow is hardly weakened and the problem may be left alone without any form of surgical treatment.

Above Elbow Full Plaster Cast

This is a full plaster cast immobilizing two main joints (wrist and elbow joints). The fracture has to be in between these two joints. Development of compartment syndrome due to a tight plaster should be borne in mind as a matter of clinical importance. Volkmann's ischaemia is a preventable condition with early diagnosis.

Above Knee Full Plaster Cast With a Window

This is an above knee full plaster cast with a window. The window may have been created to look after an open fracture or some soft tissue injury in that locality.

Colles' plaster

- Pop applied after colles' fracture.
- Position - wrist semiflexed, ulnar deviated and forearm is semi pronated.
- Carpo metarcarpal joint of the thumb and head of metarcarpals are not incorporated into the cast
- Plaster van extended upto the elbow

Scaphoid plaster

- When the fracture is non-displaced , it usually can be successfully treated with a cast.
- Hand is held in ‘’glass holding ‘’position
- Thumb is incorporated to the plaster.
- Although the fracture may heal in six weeks, it may take longer for some patients.

Anal Growth

A painful growth with bleeding is a common presentation. Most of these patients have unbearable pain and often resist digital rectal examination. Examination under anaesthesia is the preferred method of investigation. The majority of them are squamous cell carcinomas. Other rare varieties of anal malignancies are basaloid carcinoma, mucoepidermoid carcinoma, basal cell carcinoma and malignant melanoma. Human papilloma virus has been implicated as a cause of anal carcinoma.

Cystic Hygroma

- Congenital cystic lymphatic malformation.
- Commonly find in the posterior triangle of the neck - supraclavicular fossa
- Other sites are Axilla and inguinal region
- Brilliantly transilluminable lobulated soft and fluctuant swelling
- Ultrasound scan of the neck is carried out to assess the relationship with adjacent neurovascular bundle
- May regress spontaneously
- Complete and meticulous dissection is carried out to prevent recurrence