AIDS TO SURGERY EXAMINATION

version 2.0

SHORT CASES

OPERATIVE SURGERY

Dr. K P SINHA
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SCIENTIFIC BOOK COMPANY
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By

Dr. K. P. Sinha

M.B.B.S (Hons.) Gold Medalist, M.S. (Pat)
F.R.C.S. (Edin), F.R.C.S. (G), F.I.C.S. (U.S.A)
Professor & Head of Deptt. - SURGERY
Patliputra Medical College & Hospital
Dhanbad, India.

Dr. Deepak Kumar

M.B.B.S (Hons.)
Seth G S Medical College & KEM Hospital.
Mumbai. 400012 India.

SCIENTIFIC BOOK COMPANY

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PREFACE

The aim of this book is not to substitute a standard text book of Surgery. Its very purpose is to garnish the overall knowledge of a final year student who is preparing to appear in the Surgery examination.

This book has been written in lucid and easy to understand language. This will enable the average student to revise his overall theoretical knowledge in Clinical surgery, which will prove invaluable in the examination, pertaining to **"Short Cases"** that are commonly encountered during the examination, including the orthopaedic cases.

To make this book more comprehensive additional section has been devoted to **"Operative Surgery"**. All this makes this book not only **"Precise and Concise"** but also an absolute necessary **"Hand book"** during the examinations.

I would like to extend my gratitude to **Prof. Om Prakash, Prof. Diwakar Mishra, Prof. M. L. Agrawal** and **Prof. A. Q. Siddique** for their invaluable advice and suggestions.

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Dr. K. P. Sinha
Dr. Deepak Kumar

TABLE OF CONTENTS

SECTION 1

SHORT CASES IN SURGERY

SHORT CASES IN SURGERY

Short cases form important part in the clinical examination. What follows is an outline of discussion of various cases which are commonly encountered in clinical practice and undergraduate and post graduate examination halls. For more details the students should consult standard text books of Surgery.

In short cases, the students are not required to take detail history, but confine to detail local examination (Inspection, palpation, percussion and ascultation). However, in selected cases, examiner may ask questions regarding onsent, duration & progress of the disease.

It is important to avoid presenting irrelevant information. At the end of the presentation, there should be only two or three differential diagnosis, presented in the correct order of more probable one first. Never argue with the examiners.

I. LUMP OR SWELLING

A. SKIN AND SUBCUTANEOUS TISSUE

1. SEBACEOUS CYST
(Epidermoid cyst)

It is a RETENTION CYST of Sebaceous gland, developed due to obstruction of its duct.

Common sites :

- SCALP, FACE, SCROTUM, neck, shoulder and chest.
- Globular or spherical in shape.
- Has a bluish spot called PUNCTUM, the site where it is adherent to the skin. In many cases punctum may be absent but FIXITY TO SKIN at some point must be present (c/f Dermoid).
- Area surrounding the sebaceous cyst of the scalp is bald probably due to interference of its blood supply.
- Sign of INDENTATION is present, as it contains yellowish white poultice like material.
- Its lining is superficial squamous epithelium (Epidermoid cyst).

D/D :

Dermoid cyst, Lipoma, Neurofibroma.

Complications :

1. **Infection.**
2. **Ulceration**—Ulcerated, infected sebaceous cyst, specially situated over the scalp. Resembling an Epithelioma is termed COCK'S PECULIAR TUMOUR.
3. **Sebaceous horn**—Due to drying up of slowly escaping sebaceous material.

Treatment :

Surgical excision, usually under local anaesthesia. Wall of the

cyst must be removed by complete excision, or avulsion of the cyst wall (in pieces) otherwise recurrence is probable.

2. DERMOID CYST

I. SEQUESTRATION DERMOID (Inclusion dermoid) :

It develops due to inclusion of primitive ectodermal cells at the time of embryonal fusion.

Sites : In the MID LINE, scalp (OUTER CANTHUS OF THE EYE), root of nose, mid line of neck, branchial cyst.

Clinically : It is spherical or ovoid in shape, smooth surfaced, nontender, fluctuant, non-compressible and non-transilluminant. Dermoid over the scalp may have intra cranial extension. However, impulse on coughing may be present provided the opening is large. X-ray shows bony defect. SKIN IS USUALLY FREE.

It is lined by squamous epithelium & the wall contains dermal elements (e.g.—hair roots etc), c/f sebaceous cyst.

D/D : Sebaceous cyst, Lipoma, Neurofibroma, Meningocoele (External angular or root of nose).

Treatment : Excision of the cyst. Scalp dermoids having intracranial extension may need osteoplastic craniotomy.

II. IMPLANTATION DERMOIDS :

It develops from squamous epithelium driven into deeper tissues and implanted beneath the surface, as a result of accidental or surgical trauma (common in tailors—needle prick injury). Common sites are tips of fingers, palms and soles. It contains white greasy material. Clinically it is a tense, smooth, usually nontender cystic swelling.

Treatment : Excision of the cyst.

III. TUBULODERMOID :

It develops from non-obliterated portion of a congenital ectodermal duct e.g. thyroglossal duct, ependymal cyst, post anal dermoid.

IV. TERATOMATOUS DERMOID :

It develops from totipotent cells, lined usually by ectodermal cells. They are found commonly in the ovary, testis, mediastinum,

retroperitoneum and the sacral area. It contains hair, teeth, cartilage and/or bone. Malignant change can occur.

3. LIPOMA

It is a BENIGN TUMOUR OF FAT CELLS. They occur anywhere in the body (UNIVERSAL TUMOUR) except in palm and sole. It may be encapsulated (commonest) or diffuse. Depending on the presence of additional tissue, it may be a fibrolipoma (fibrous and fatty tissue), neurolipoma (nervous and fatty tissue) or naevolipoma (excessive vascular tissue and fatty tissue). Depending upon the sites, Lipoma may be subcutaneous (commonest), subfascial, subsynovial, intra articular, subserous, submucous, inter muscular and intra dural.

Dercum' disease (Neurolipomatosis) is characterised by painful deposits of fat mainly on the abdomen, back and thigh.

Common sites :

Head & neck area, back, thighs and abdominal wall.

RETROPERITONEAL LIPOMA (D/D Hydronephrosis), and large lipoma of thigh and shoulder sometimes undergoes myxomatous degeneration or becomes MALIGNANT (Liposarcoma).

Clinical features :

Subcutaneus lipoma is the commonest of all. It is a SOFT, LOBULATED, NONTENDER, PSEUDO FLUCTUANT (Whole mass is displaced while testing for fluctuation), AND THE MARGIN SLIPS UNDER THE PALPATING FINGER.

D/D :

Neurofibroma, Sebaceous cyst, cold abscess.

Treatment :

Lipoma causing symptom or even for cosmetic region should be excised under anaesthesia. Resultant cavity may be drained to avoid haematoma formation & subsequent infection.

4. NEUROFIBROMA

It is a BENIGN TUMOUR arising from the NERVE SHEATH.

(a) Localised or Solitary Neurofibroma :

It commonly arises from the PERIPHERAL NERVE

(subcutaneous) or from the MEDIAN or ULNAR nerve above the elbow or 8th cranial nerve (ACOUSTIC NEUROMA).

Neurofibromas are not encapsulated, and are composed of spindle cells, with elongated serpentine nuclei.

Clinically : It is SMOOTH, FIRM, MOBILE WITH WELL DEFINED MARGINS and MOBILE in a direction perpendicular to the axis of the involved nerve.

There may be pain, paraesthesia and weakness in the distribution of the nerve.

D/D : Lipoma, sebaceous cyst, fibroma.

(b) Generalised Neurofibromatosis (VON RECKLING HAUSEN'S DISEASE) :

There are multiple nodules in the skin all over the body. It has an autosomal dominant mode of inheritance with a positive family history in 50% of cases. CAFE-AU-LAIT spots (pigmentation) are often associated. Malignant (sarcomatous) changes may occur only in Von-Reckling Hausen's disease in about 5-13% of cases.

(c) Plexiform Neurofibormatosis or Patchy Dermatocoele :

Usually the 5th cranial nerve (Trigeminal) is involved. The affected nerve is enormously thickened with the thickening, oedema and pigmentation of the overlying skin. Sometimes the OVERLYING SKIN MAY BE DRAWN OUT AND FOLDED.

(d) Elephantiasis Neurofibromatosa :

Usually the lower limb is affected. The skin becomes coarse, dry and thickened along with the thickening of subcutaneous tissue.

Complications : Pain, Paraesthesia, ulceration, malignant change (Neuro-fibrosarcoma).

Treatment : Subcutaneous neurofibroma CAUSING SYMPTOMS may be excised under anaesthesia. GENERALISED NEUROFIBROMATOSIS MAY NOT require any surgical intervention unless complications tend to occur i.e. ulceration or suspicion of malignant change.

Neurofibromas affecting the major nerve may require careful DECOMPRESSION because they are difficult to remove without removal of the nerve itself.

5. KELOID

- It is found in scars of surgery, burns and pricks. Probably it develops due to defects in the maturation and stabilisation of collagen fibres. Keloid continues to grow into the SURROUNDING SKIN in a tumour like fashion (c/f hypertrophic scar) and is more common in young adults.
- A spontaneous type is found on the chest (sternum). Its shape is like a butter fly. A HYPERTROPHIC SCAR always remains confined to the site of injury and never invades normal skin.
- It reaches its maximum prominence at about 3 to 6 MONTHS. After this time, it gradually regresses. The BEST SCARS are obtained in OLD PEOPLE.
- However, it is difficult to differentiate between keloid and hypertrophic scar before the time period of 6 months.

D/D :

Hypertrophic scar.

Clinically :

There is histroy of injury or surgery. It causes ITCHING. The Scar (Keloid) is RAISED, LOBULATED, FIRM, PINKISH with claw-like processes growing out from it, into the NORMAL SKIN. Tenderness is usually absent.

Treatment :

No treatment is satisfactory and the recurrence is common. For cosmetic reason, itching and progressive state, treatment becomes necessary.

1. LOCAL STEROID INJECTION—**Triamcinolone** is injected directly into the Keloid scar using an insulin syringe, until the scar becomes white.
2. Superficial X-RAY THERAPY.
3. Complete excision followed by "Z" plasty or split skin graft.
4. Intra Keloidal excision or shaving the scar to its base and application of a split skin graft.

6. HAEMANGIOMA

It is a HAMARTOMA of blood vessels, commonly found in skin and subcutaneous tissue. It can also occur in other parts of body e.g. liver, bowel, intra cranial, vertebrae etc.

1. CAPILLARY HAEMANGIOMA :

Salmon Patch : Occurs at birth but uaually disappears by one year of age.

Port Wine Stain : It is a purple or dark red flat patch, which PERSISTS throughout life. Treatment by excision and grafting or by CO_2 snow (cryosurgery) or Nd Yag Laser may be successful.

Strawberry Angioma : It develops between one and three weeks of age and presents as a strawberry-like swelling. It is compressible. Usually it resolves completely by the age of 7 or 8 years.

2. CAVERNOUS (VENOUS) HAEMANGIOMA :

They consist of dilated blood spaces with thin walls supported by a tenuous stroma. It is common on face, ear and lip. Cavernous haemangioma can also arise in other internal organs e.g. in liver.

Clinically : It is bluish swelling, RAISED above the skin surface with spongy feel and COMPRESSIBLE. Occasionally it is calcified with palpable nodules within it. It is also found in Sturge Weber syndrome.

3. PLEXIFORM OR ARTERIAL HAEMANGIOMA :

It is a diffuse, PULSATILE, compressible swelling with systolic thrill & bruit. It feels like a bag of earth worms. The pulsating swelling of arteries and arterialised vein is called a CIRSOID ANEURYSM.

Complications : Ulceration and haemorrhage.

D/D :

Any cutaneous swelling.

Treatment :

1. BOILING WATER INJECTION (Or, Hypertonic saline (20%) or any other sclerosing agent)—which is repeated at regular interval.

2. Application of YAG LASER in selected cases.
3. Excision and suture/grafting in selected cases where adequate fibrosis has occurred as a result of sclerotherapy.
4. Therapeutic embolisation of feeding artery (as revealed by arteriography).

7. NAEVUS (BENIGN MELANOMA)

1. Junctional Naevus : It is flat, or raised smooth and pigmented (JET BLACK) usually HAIRLESS. Common sites are PALM, SOLE and genitalia. Microscopically aggregations of melanocytes are found projecting into the dermis. It may change into a MALIGNANT melanoma.

2. Intradermal Naevus (Common Mole) : It is flat or raised, smooth, dark brown in colour, usually HAIRY. Common sites are limbs, face and trunk. MALIGNANT CHANGE DOES NOT occur.

3. Compound Naevus : It is a combination of junctional and intradermal naevi.

4. Juvenile Melanoma : It is a type of compound naevus seen in children, usually on the face.

Features of Malignant change in a Naevus :

1. INCREASE IN SIZE.
2. Hyperpigmentation (variation in colour).
3. SPREAD OF PIGMENT into the surrounding skin.
4. HALO of pigment in the surrounding skin.
5. ULCERATION, BLEEDING, CRUSTING erosion and itching.
6. Enlargement of regional lymph nodes.

Treatment :

The lesion could be excised or destroyed by CRYOSURGERY for cosmetic reasons, or where the lesion is subject to repeated trauma or suspicion of malignant change. EXCISION BIOPSY is the treatment of choice.

8. MALIGNANT MELANOMA

It is a MALIGNANT TUMOUR arising from MELANOCYTES or Melanoblasts after puberty.