



EXAMINATION OF COMMON SHORT CASES IN SURGERY

KHIN TUN
NYI NYI NAING



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**Khin Tun
Nyi Nyi Naing**

**Universiti Malaysia Sarawak
2013**

~ This book is dedicated to our
medical students of UNIMAS, past present and
future ~

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Nyi Nyi Naing

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FOREWORD

Learning medicine, like other sciences, has always been built on the three pillars of acquiring knowledge, psychomotor skills and a professional attitude. A combination of these three domains provides the student with essential competency and appropriate attitude to become a great doctor.

Accurate elicitation of clinical signs is vital to diagnose and treat patients. Acquiring knowledge and skills towards this end is important to be a great doctor, despite the technological advances in laboratory investigations and imaging which are expensive, invasive and sometimes harmful.

There are many books on clinical examination but this book will help students to perform well on the clinical examination in surgery, with proper sequence and systematic manner on specific common short cases in surgery.

I am sure this book will become an important reference material for all aspiring medical students as well as young lecturers in the field.

Professor Dr Ahmad Hata Rasit

Dean, Faculty of Medicine and Health Sciences

Universiti Malaysia Sarawak

Kuching

Sarawak

PREFACE

The aim of this small book is to help students to perform well and pass the clinical examinations in surgery. This book can be used as a companion to other surgical text books and also as a guide for doing clinical work and clerkship in the wards. The basis of Clinical Surgery like Surgical Crescendo and Surgical Filter are included in this book to provide a useful format for examination and presentation of surgical cases.

Authors focuses on the proper sequence and steps to be followed in physical examination of surgical cases. Short notes on common cases have also been added which we hope would be very helpful in clinical examinations, vivas and Objective Structured Clinical Examination.

This book is not intended as a substitute to any text book of surgery but as a complementary text to help students to pass the examinations.

Students are advised to practice in clinical clerkship, history taking, physical examination and also in presentation.

Practice does not always make perfect!

Only perfect practice make perfect.

So, practice in the right method, right sequence and in the right attitude.

Khin Tun
Nyi Nyi Naing

Chapter 1

Surgical Crescendo And Surgical Filter

Surgical crescendo is the various steps in managing a surgical patient and consists of:

- History Taking
- Physical Examination
- Provisional Diagnosis
- Differential Diagnosis
- Investigations
- Endoscopy
- Exploratory Laparotomy

History Taking

- Chief complaint/s and duration
- History of present illness
- Past history
- Family history
- Personal history
- Social history
- Drug history

Physical Examination

- General examination
- Systemic examination
- Local examination
 - Inspection
 - Palpation
 - Percussion
 - Auscultation

Investigations

- Clinical
- Laboratory
- Special
 - Ultrasonography (USG)
 - Radiology - plain X-ray, contrast X-ray , computerized tomography (CT scan), magnetic resonance imaging (MRI)
 - Nuclear medicine scans, ect.

Diagnosis

To get the proper diagnosis one should first consider the anatomical origin of the lesion before screening through the surgical filter.

Surgical Filter

Surgical filter is the process by which the diagnosis and the differential diagnosis of a surgical problem is solved systematically.

It consists of:

- Congenital
- Acquired
 - Traumatic
 - Infective / Inflammatory
 - Metabolic
 - Vascular
 - Degenerative
 - Neoplastic- Benign / Malignant (Primary or Secondary)
 - Autoimmune
 - Iatrogenic
 - Idiopathic

Detail history, thorough examination and appropriate investigations will lead to the correct diagnosis.

STUDY FORMAT:

Pathology

- Aetiology
- Pathogenesis

- Pathology
 - Macroscopic
 - Microscopic
 - Spread in malignant tumours (Direct, Lymphatic, Blood)
- Peculiar features

Clinical Features

- Emergency presentation
- Elective presentation
- Due to the local lesion
- Due to metastases
- General features

Treatment

- Medical
- Surgical

Indications for Surgery

- Non Invasive
- Less Invasive
- Invasive

Complications

- Immediate /Late
- Local /System wise . . Respiratory, Cardiovascular system etc.

Prognosis

- Short term
- Long term

Whenever confronted with a problem or lesion, always think of the -

- Causes
- Itself and
- Effects

Chapter 2

Clinical Examination

Short Cases Examination

Sequence of examination (in general)

- I. Introduction/Permission
- II. Positioning the patient - sitting/standing/lying (both patient and clinician must be in comfortable position)
- III. Exposure - adequate
- IV. Comparison - if paired organ/structure
- V. Local examination
- VI. Regional examination
- VII. Looking for effects of the pathology
- VIII. Looking for underlying cause of pathology
- IX. Looking for similar pathology elsewhere
- X. Looking for possible associated pathology
- XI. Thanking the patient

Medical student should bring:

1. Stethoscope
2. Measuring tape
3. Hammer

4. Pen-torch
5. Tube (for trans-illumination test)
6. Tourniquet

STEPS

1. Inspection - LOOK
2. Palpation - FEEL
3. Percussion
4. Auscultation - LISTEN

Chapter 3

Examination of Lump/Swelling

STEPS

- **LOOK**

- number, site, shape, size (use measuring tape), surface, colour, signs of inflammation.

- **FEEL**

- temperature, tenderness (ask before you touch the patient)
- surface – smooth/irregular/lobular/nodular
- edge/margin – sharp/round/irregular/well-defined/ill-defined/vague
- consistency * – soft/cystic/firm/hard
- skin and surrounding areas

- **PRESS**

- pulsatility - transmitted/expansile/thrill
- compressibility/reducibility
- fluctuation test* (test in two directions/ two planes, at right angle to each other, using watching finger and displacing finger. Fix the lump first if it is mobile)

- **MOVE**

- fixity — relation with the skin (pinch the skin over the lump) and relation to the deeper structure (move the lump in 2 directions in 2 conditions).

- Special test – Slipping sign[†], lobulation sign[†], moulding sign, Paget's sign

- Trans-illumination test *

- **PERCUSSION** (exceptional)

- **LISTEN** (exceptional) - bruit

- **REGIONAL**

- lymph nodes
- extremities – distal neurological deficit, ischaemia

* fluctuation test and trans-illumination test have to be done only if consistency of the swelling is soft or cystic.

† characteristic features of lipoma.

Slipping sign: press at the edge of the swelling, and look for whether the edge of the lump slips away from palpating finger. It means that the lump is freely mobile. This sign is pathognomic of encapsulated lipoma.

Lobulation sign: in encapsulated lipoma, the overlying skin or edges show series of curves and dimples due to the attachment of fibrous septa from the capsule of the lipoma to the overlying skin.

Paget's sign: use the index and middle finger of one hand to stabilize the lump from edges. Press the middle part of the lump with the index figure of the other hand. This method is used for testing fluctuation in a small lump.

How to make a diagnosis?

First consider in which **anatomical plane** the lump is situated, e.g., skin, subcutaneous, beneath fascia and from which anatomical structure (**anatomical origin**) does it arise from? e.g., from vascular structure, solid organ, muscle, bone, etc.

According to anatomical plane:

1. Lesions derived from the epidermis
e.g., skin tag, pedunculated papilloma, warts, naevus or melanoma
2. Lesions derived from the dermis
e.g., dermatofibroma, pyogenic granuloma, Keloid,
3. Lesion derived from the skin appendages
e.g., Sebaceous cyst, keratoacanthoma
4. Lesions arising from subcutaneous layer (not attached to skin)
e.g., Lipoma, Dermoid cyst, Ganglion
5. Lesion derived from vascular structure
e.g., Strawberry naevus, Port wine stain

Common cases

LIPOMA

It is a slow-growing benign tumour arising from adult fat cells. It can occur anywhere in the body where fat is found, hence known as “universal tumour”.

Gross Types:

1. Encapsulated type - Commonest. Lipoma is surrounded by a capsule. It is a true lipoma.
2. Diffuse type - Rare. It is characterized by deposition of fat without any capsule, ill-defined edge and no lobulation sign. Often called as ‘pseudolipoma’.

Histological types:

1. Lipoma – composed of adult fat cell only.
2. Fibro-lipoma – mixture of fibrous tissue and adipose tissue.
3. Neuro-lipoma – mixture of nervous tissue and adipose tissue.
4. Naevus-lipoma – adipose tissue mixed with haemangiomatous tissue.

According to anatomical sites:

1. Subcutaneous – commonest form.
2. Subfacial or subaponeurotic – occur under palmar or plantar fascia.

3. Intermuscular

- common in thigh or around the shoulder.
- difficult to distinguish from a fibrosarcoma.

4. Parosteal - rarely found under periosteum of bone.

5. Intra-articular

6. Subsynovial

7. Subserous - sometimes seen under the pleural.

8. Submucous

- occur in the tongue, GI tract & upper respiratory tract
- in the larynx, it may cause respiratory obstruction.
- in the intestine, it may cause intussusceptions.

9. Retroperitoneal

- present as large tumour
- can undergo malignant change in long-standing cases.
- usually of diffuse type and are liable to recur after excision.

10. Intraglandular – occasionally seen in the pancreas, breast & kidney.

11. Extradural

Clinical classification:

1. Sessile or pedunculated
2. Solitary or multiple

Clinical Features:

Symptoms:

They are usually painless, slowly growing swellings beneath the skin. Main reason of complaint is just cosmetic or complications. But depending on sites, there may be other symptoms and problems.

Signs:

Subcutaneous lipoma:

They may show lobulated surface with well-defined margin. They are soft in consistency with positive slipping sign. The overlying skin can be pinched as they are not attached to it and no attachment to deeper structures. Fluctuation test may be positive because of its soft consistency (pseudo-fluctuation).

Complications:

- secondary infection leading to abscess
- trauma
- haemorrhage within tumour
- ulceration
- calcification
- saponification
- myxomatous degeneration
- sarcomatous change

If the neuro-lipomas are multiple, the condition is known as "Neurolipomatosis". It can be associated with Dercum's disease, characterized by tender deposit of fat.