

Swelling

Inspection

Site: exact anatomic position

Number: single or multiple

Shape: spherical, oval, kidney-shaped or irregular

Size: measure exact size in cm using a tape measure (measure longitudinal and transverse axis and if possible the depth)

Surface:

The color: red in hemangioma, black in melanoma

The surface is smooth or irregular

Overlying skin: is it normal? Inflamed? Or ulcerated?

Shiny, smooth skin with prominent veins suggest sarcoma

Black punctum over skin of a swelling is diagnostic of sebaceous cyst

Redness of overlying skin indicates inflammation

Presence of scar of previous surgery suggests that the swelling is recurrent one

An edematous skin with multiple peels like an orange peel (termed as Peau d'Orange) appearance suggests an infiltrating malignant lump blocking cutaneous lymphatics.

Movement (pulsation): can be seen in aortic aneurysm

Site related signs:

If the swelling is over the abdomen or chest or spinal canal ask the patient to cough for an impulse on coughing. A visible increase in the size of the swelling synchronous with the cough is termed as impulse on coughing)

If the swelling is in the limb inspect the distal limb for any pressure effects, like edema or nerve palsy

If the swelling is in the neck, look for movement on deglutition

Inspection:

Site & number

Shape & size

Surface & skin over the swelling

Pulsatility

Site related signs

Palpation

Temperature: with dorsum of your fingers compare temperature of the swelling with normal skin. Local rise in temperature could be due to:

Cellulitis and abscess

Sarcoma

Vascular swelling

Tenderness: usually indicates inflammation

Confirm size & shape

Surface: is it smooth, lobular, nodular or irregular

Edge: palpate with tips of your fingers and note whether it is:

Well-defined and regular (mostly in benign swelling)

Well-defined and irregular (mostly in malignant swelling)

Diffuse and ill-defined (inflammatory swelling like cellulitis)

Slipping edge (characteristic for lipoma)

Consistency: could be soft, cystic, firm, hard, bony hard or variable.

If the swelling is soft or cystic look for the following signs:

Sign of moulding (indentation):

Press a finger over the swelling for 1-2 seconds then remove it, if the swelling remains indented this indicates positive moulding sign:

Sign of moulding is positive in:

Sebaceous cyst

Dermoid cyst

Colonic mass with fecal matter

Fluctuation: transmission of an impulse in two directions at right angles to each other. It implies presence of fluid in the swelling

Trans-illumination: demonstration of transmission of light through a swelling. It indicates presence of clear fluid in the swelling.

Transillumination is positive in:

Cystic hygroma

Epididymal cyst

Meningocele with thin skin

Ranula

Congenital hydrocele

Impulse on coughing: if swelling is likely to be communicating with peritoneal, pleural cavity or spinal canal ask the patient to cough, if the swelling increases in size or becomes tense (when you grasp it) it indicates positive impulse or coughing.

Reducibility: try to reduce or return the swelling to its normal cavity, it could be positive in:

Hernias

Meningocele

Varicocele

Saphena varix

Compressibility: when the swelling is compressed it reduces in size but on releasing the pressure it returns to its original size without straining or coughing. This is characteristic of hemangioma.

Pulsatility: seen in aortic aneurysm. Place four fingers over the swelling as far apart as possible and note the finger movement, if the fingers move upward and apart from each other this indicates an expansile pulsation as seen in aortic aneurysm. But if the fingers are raised vertically without moving apart from each other it is a transmitted pulsation, seen when a mass sits over an artery as stomach malignancies sitting over the aorta.

Fixity: test fixity to

Skin

Subcutaneous tissue

Muscles & tendons

Bone

If it is fixed to the skin, the skin over it cannot be pinched off

If the skin can be pinched off over the swelling this indicates that the swelling is under the skin

Ask the patient to contract the underlying muscle:

If the swelling is in the subcutaneous tissue above the muscle the swelling becomes more prominent and mobile in all directions.

If the swelling is within the muscle itself it becomes fixed and immobile

If the swelling is deep to the muscle it becomes less prominent and difficult to palpate.

If the swelling is fixed to above it becomes totally immobile irrespective to muscle contraction.

On palpation:

Temperature and tenderness

Confirm the size and shape

Palpate surface and edges

Note the consistency

If soft or cystic, do specific tests

Fixity to other structures

Percussion

Tympanic note indicates presence of gas in:

Enterocele

Pharyngocele

Hydatid thrill in hydatid cyst

Auscultation

Pulsation can be heard in vascular swelling or in swelling with rich vascularity

Focal examination

Examination of lymph nodes

Palpate the regional lymph nodes, if they are enlarged then palpate the next group draining the previous ones for any enlargement.

Pressure effect on

Bone: erosion

Artery: weak distal pulse

Vein: edema and dilated veins

Nerve: parasthesia and wasting

Joints above and below: look whether their movement is affected or not.