

# Differential diagnosis

# Types of swelling

- According to the cause
  - - Congenital
  - - Traumatic
  - - Inflammatory
  - - Neoplastic

# CONGENITAL SWELLINGS

- **DERMOID** :This cyst generally develops in the line of embryonic fusion. So this cyst may appear anywhere in the midline of the body as also in places where the two embryonic processes meet each other e.g. at the outer angle of the orbit (where the fronto-nasal process and the maxillary process fuse with each other), behind the pinna (Post auricular dermoid), just below the tongue in the midline (Sub-lingual dermoid) etc.



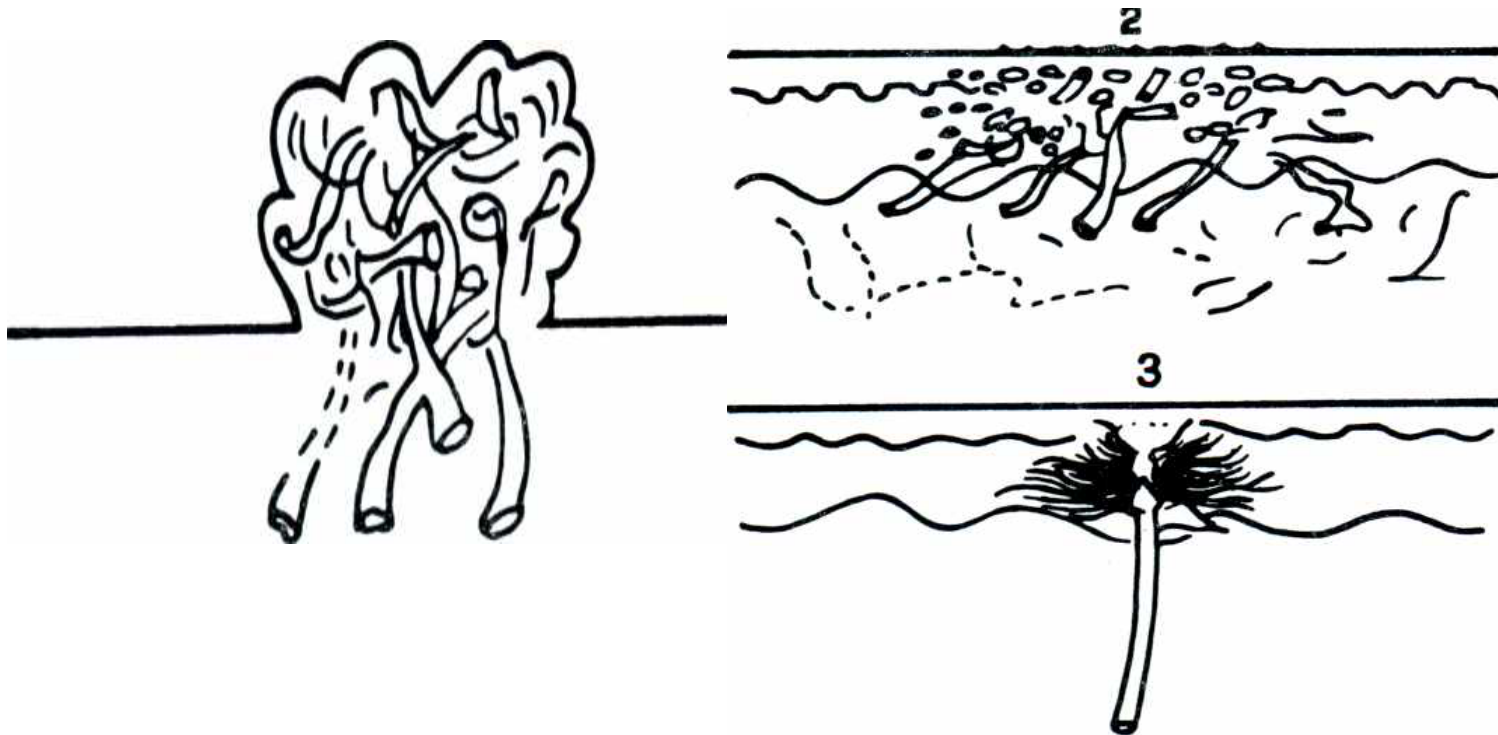
- Implantation or acquired dermoid
- It is ***not a congenital swelling in the true sense, but it is described*** here as it is included in the category of the dermoid cyst.
- It is actually a traumatic swelling and results from the surface ectoderm being driven into the subjacent tissue.

# HAEMANGIOMAS

**These are vascular malformations or hamartomas and may arise from the capillary or the vein or the artery and accordingly called a capillary haemangioma or cavernous haemangioma or a plexiform (cirroid) haemangioma respectively**



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1. Strawberry Naevus;
2. Port-wine stain, which is a collection of dilated intradermal capillaries.
3. Spider Naevus, in which there are visible radiating branches from a single arteriole.



- Capillary Haemangiomas — are bright red or purple coloured patches of varying sizes. These are generally flat and not much raised above the skin surface. Pressure may cause complete disappearance or diminution of the colour which returns immediately when the pressure is released. Important varieties are:
  - (i) ***Port-wine stain is a diffuse telangiectasia***
  - (ii) ***Salmon patch is usually present since birth and*** often seen in the forehead or on the occiput. It usually disappears before first birthday.
  - (iii) ***Spider Naevus has a central red spot with*** numerous radiating fine blood vessels like the legs of a spider. It is mostly seen on the upper half of the trunk, face and arms. These fade completely when compressed with the finger refill as soon as the pressure is released

- Cavernous hamangioma:
- Cavernous Haemangioma is a bigger haemangioma than the capillary one . It consists of dilated spaces containing blood and gives rise to soft spongy bluish swelling, which is compressible and can be emptied by pressure but reappears on release of pressure. Common occurrence is seen in the lips, cheeks, face, brain, etc.

# Congenital arteriovenous fistula

- It is the result of persistence of congenital communication between the arteries and veins affecting the extremities usually. The diagnosis is made by warm limb, enlargement of the limb, localized bruit over the fistula, presence of varicose veins and insufficiency of the distal circulation.
- Acquired arteriovenous fistula may appear following trauma or may be created surgically for haemodialysis.

# traumatic

- Traumatic swellings arising from the skin and subcutaneous tissues are rare.
- ***Haematoma*** following a trauma may give rise to swelling
- Acquired Dermoid cyst

# INFLAMMATORY

- **ERYSIPELAS.—** It is a spreading cuticular lymphangitis which may follow even a **scratch**. The causative organism is mostly *Str. Pyogenes*. The conditions which predispose this disease are debilitating state and poor health of the patient. The condition commences as a rose-pink rash which extends to the adjacent skin. The vesicles appear sooner or later over the rash and rupture

- CELLULITIS
- It is a spreading inflammation of the subcutaneous and fascial tissues leading to suppuration, sloughing or even gangrene (especially in cases of diabetes) of the affected part.
- The commonest organism is again *Streptococcus pyogenes*. The organisms gain access through an accidental wound, however trivial it may be.
- The victims are generally diabetic or debilitated individuals with poor nutrition.

- The affected part becomes swollen, hot and tender. The condition starts with redness, itching and stiffness at the site of inoculation. The part gradually looks brawny and becomes oedematous which is demonstrated by pitting on pressure.

**ABSCESS.— An abscess is a collection of pus within the body.**

- **Pyogenic Abscess.—** This is the commonest variety of abscess and may result from cellulitis or acute lymphadenitis.
- The organisms gain entry either directly through the penetrating wound or local extension from adjacent focus of infection or haematogenous or lymphatic spread from a distance.





- Cold Abscess.—this abscess is cold and non-reacting in nature. It does not produce hot and painful abscess as seen in pyogenic abscess. Brawny induration, oedema and tenderness are conspicuous by their absence.
- Cold abscess is almost always a sequel of tubercular infection anywhere in the body commonly in the lymph nodes and bone.
- Caseation of the lymph nodes forms the cold abscess. The commonest sites are at the neck and axilla

- **BOIL (Furuncle).**— Infection of a hair follicle with *Staphylococcus aureus* leads to this condition.
- It may be associated with perifolliculitis, which may proceed to suppuration.
- It starts with a painful and indurated swelling which gradually extends. There will be tremendous tenderness with surrounding oedema.

- **CARBUNCLE.—** It is a bigger form of boil and the causative organism is again *Staphylococcus aureus*.
- This is due to infective gangrene of the subcutaneous tissue where the infection has already spread.
- Generally men above 40 years of age are sufferers and they are mostly ***diabetic***.
- Carbuncles are commonly seen on the back, in the nape of the neck where the skin is coarse and the vitality of the tissue is less.

# NEOPLASTIC SWELLINGS

- ***BENIGN NEOPLASMS :***
- PAPILOMA.— This is a simple overgrowth of all layers of the skin.
- Mostly it is a pedunculated growth having branched villous processes.
- It consists of a central axis of connective tissue, blood vessels and lymphatics.



- FIBROMA.—
- This is a tumour of the fibrous tissue.
- Most fibromas are combined with other mesodermal tissues, such as fat (Fibrolipoma), the muscles (Fibromyoma), nerve sheath (Neurofibroma) etc.
- Neurofibroma may be seen in multiple numbers, which is called Neurofibromatosis (Von Recklinghausen's disease)

- LIPOMA.— A lipoma is a cluster of fat cells which become overactive and so distended with fat that it produces a palpable swelling.
- This is the commonest tumour of the subcutaneous tissue.
- It may occur anywhere in the body, hence it is known as '**universal tumour**', **but mostly seen** in the back of the neck, shoulder and the back.
- The edge is definite and slips under the palpating finger, which is known as '**slip sign**'.
- ***This sign is helpful to differentiate this condition from a cyst in which case*** the edge does not slip away from the palpating finger, but yields to it. Consistency is soft but does not fluctuate.





- **MOLES (pigmented naevus, freckles, benign melanoma).**—
- 'Naevus' means a lesion which is present since birth.
- Although many of these may be present since birth, yet others appear later in life. This lesion contains an excess quantity of melanin, derived from melanocytes.



# malignant

- **BASAL CELL CARCINOMA (Rodent ulcer).— This tumour of low-grade malignancy is common in white-skinned people..**
- 90% of this tumour is found in the upper part of the face above the line drawn from the angle of the mouth to the lobule of the ear, the ***commonest site being inner or outer canthus of the eye***
- It starts as a brownish nodule and later on becomes ulcerated with a well defined ***hard and raised edge with a beaded appearance.***

- This characteristic feature of eroding the tissues, which come in contact with it, has given it the name 'rodent'.
- Dissemination by lymphatic or blood vessels does not occur. So the ***regional lymph nodes are not enlarged and*** there will be no metastasis to the distant organs.



- **SQUAMOUS CELL CARCINOMA** (syn. **Epidermoid** carcinoma or epithelioma).—
- These are previously irradiated skin, a long standing ulcer e.g. varicose ulcer, scar from a burn (Marjolin's ulcer), repeated irritation of the skin by various chemicals such as dyes, tar etc. and a few premalignant conditions such as Bowen's disease, Leukoplakia, Paget's disease etc.

- This tumour originates from prickle cell layer of the skin. It may give rise to sessile cauliflower mass or fungating ulcer ***with raised and everted margin. The base is always indurated and hard as*** also the edge.
- The regional lymph nodes are often involved as lymphatic spread is quite common and takes place early.





- **MALIGNANT MELANOMA.—** It is a malignant tumour of melanocytes, which originate from the neural crest and so ectodermal in origin. It may occur de novo or in a benign mole.
- Melanocytes are stimulated by ultraviolet light.
- A halo of brown pigment may be seen in the skin around the tumour which indicates local infiltration of the tumour.
- Satellite nodules may be seen in the skin and subcutaneous tissue between the primary tumour and the nearest regional lymph nodes.

- This is due to lymphatic spread of the tumour by embolism which stops in the wall of the lymphatic and starts growing. These nodules are often hard in consistency.
- Malignant melanoma also metastasises through blood stream to the liver, lungs, bones and brain.



- **SARCOMA.**—This is a malignant tumour of connective tissue. It may occur from any structure derived from mesoblastic origin.
- In contradistinction to the carcinomas, the sarcomas usually affect younger age group.
- These are rapid growing tumours and disseminate mainly by the blood stream

# hyperkeratosis

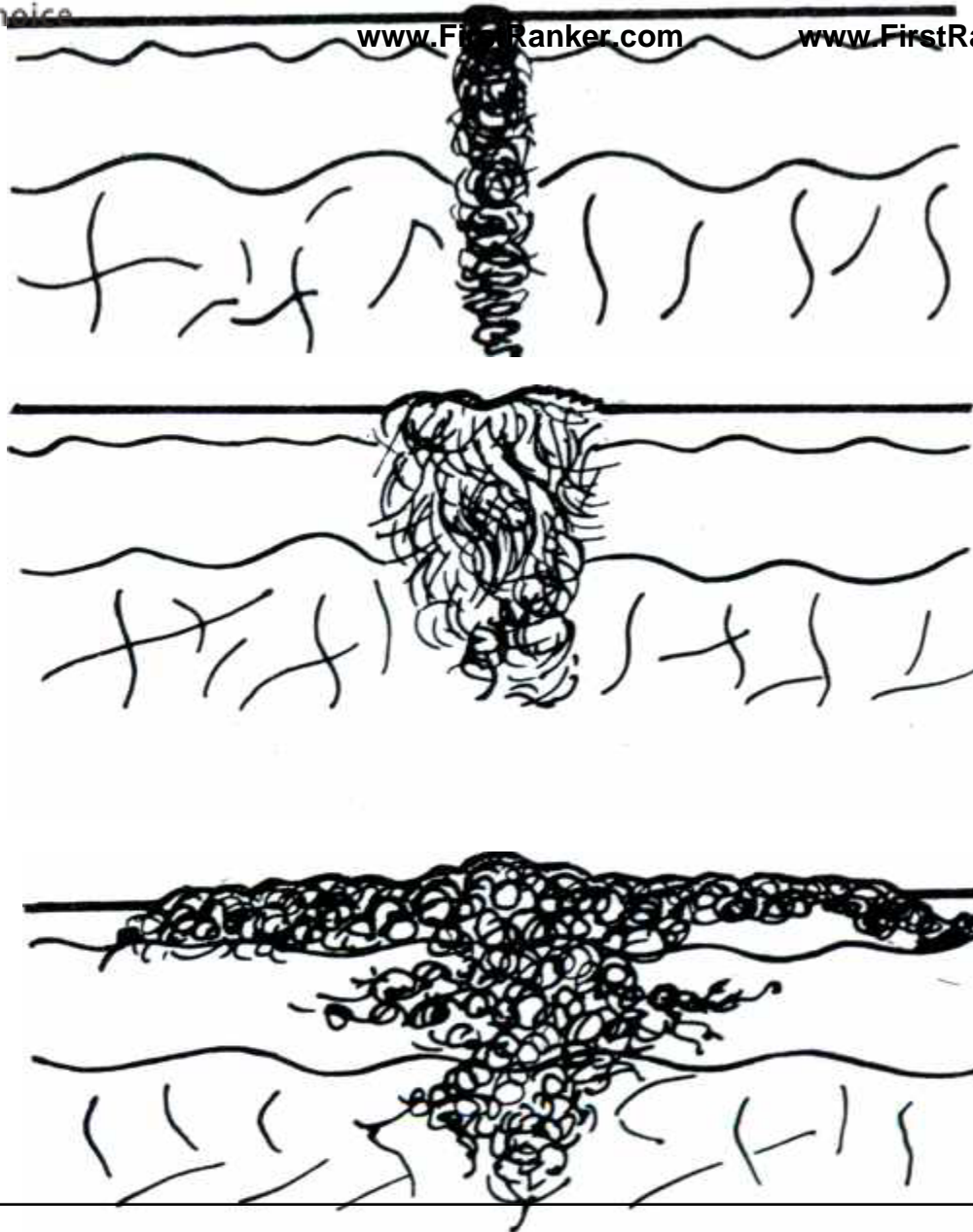
- **WARTS.—** These are patches of overgrown skin with hyperkeratosis.
- Kiss lesions may appear in the skin where they frequently come into contact with warts.
- This condition frequently affects the hands, the face, the knees, the sole of the feet (plantar warts) and axilla.



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- **KELOID and HYPERTROPHIC SCAR.— This is not a tumour but an overgrowth of the fibrous tissue which is concerned in wound healing and strengthening of the wound.**
- In abnormal cases there may be an excessive amount of fibrous tissue in the scar, which is called hypertrophic scar.
- In contradistinction to the hypertrophic scar, ***in a keloid the fibrous tissue extends beyond the original wound.***





## Scars (Keloid and Hypertrophic Scars)

