SUPERFASCIAL LUMPS

SKIN&SUBCUTANEOUS TUMOURS\ CYSTS

"Notes in blue"

Surgery team 429 :
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Skin anatomy

* Epidermis: openings of glands “appendages”

*Papillary dermis: basal cell layer “basal cell adenoma and basal cell carcinoma arise from it”

* Dermis : “contains the main gland that opens in the surface” contains sweat & sebaceous glands

Benign skin tumours

papilloma(wart): most common benign tumor in the body

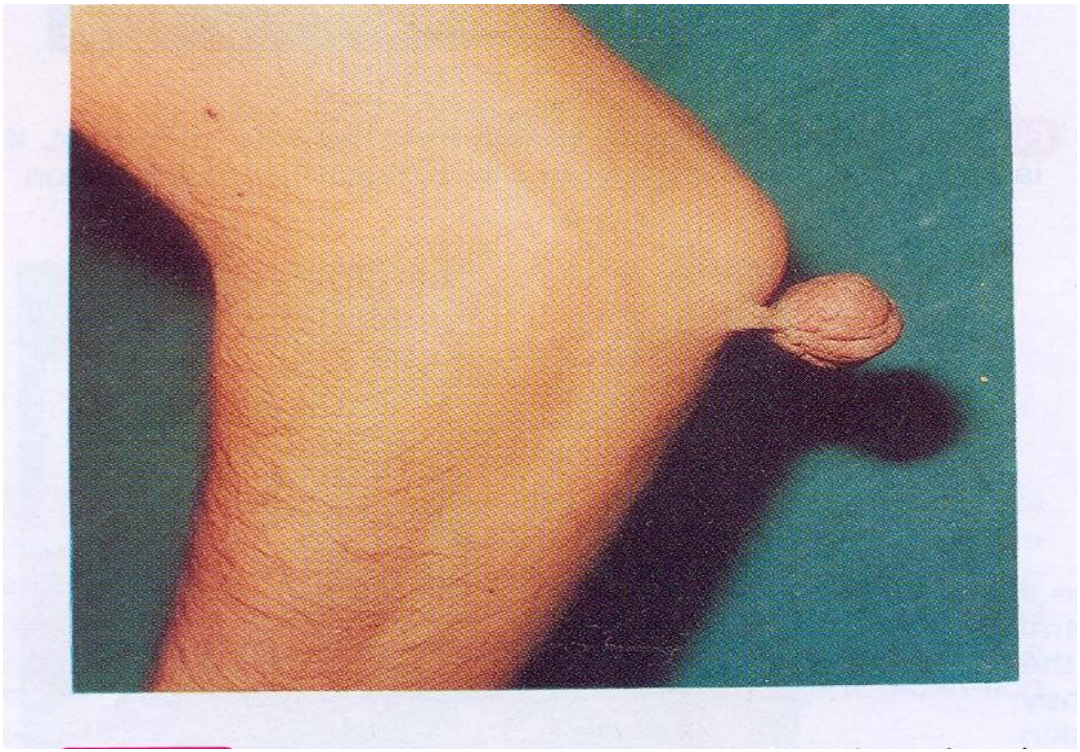
* finger like projection of all skin layers

* usually infective (papilloma virus) infective in origin and very contagious “if some one has one or two warts and keep itching it may transfer to other part in the body”

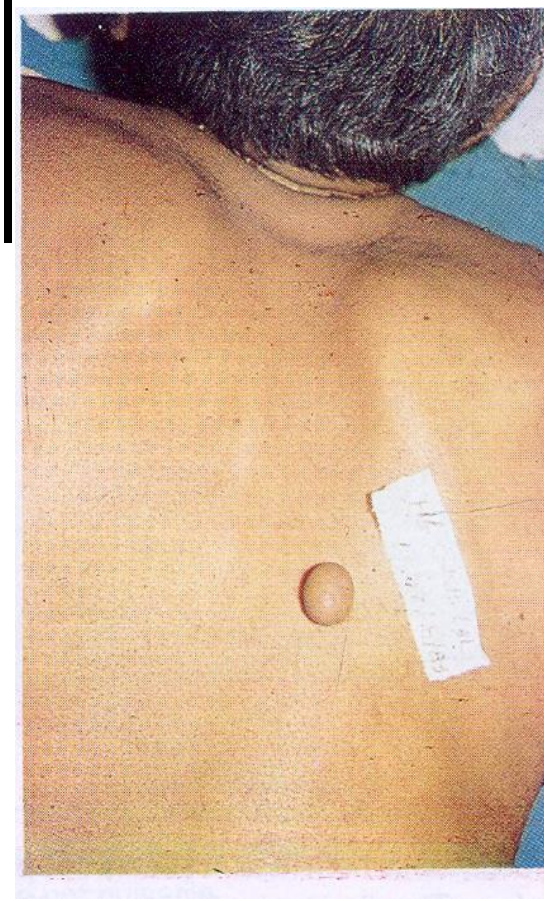
*pedunculated or sessile “significant in their management”

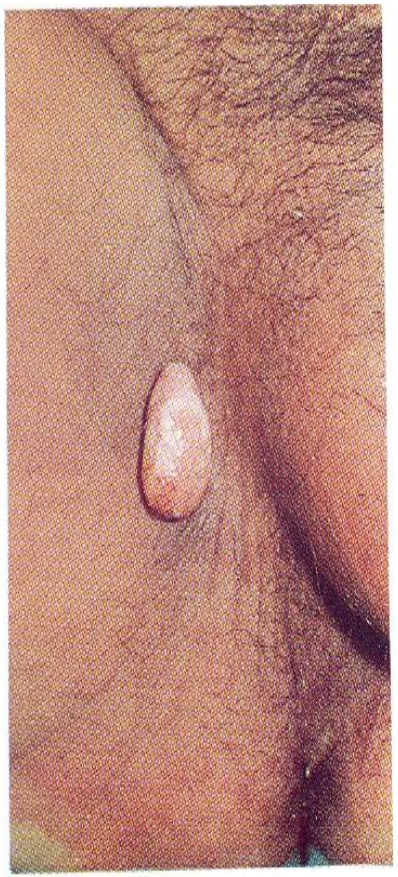
Rx : cauterization →(small or multiple) usually just go to dermatologist and he\she will utilize it either chemically or electrically

excision “surgical” →(if it was large or sessile type)

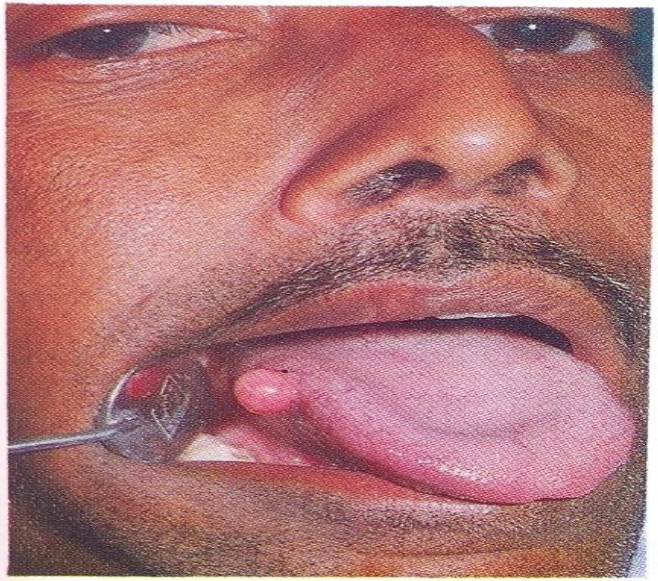


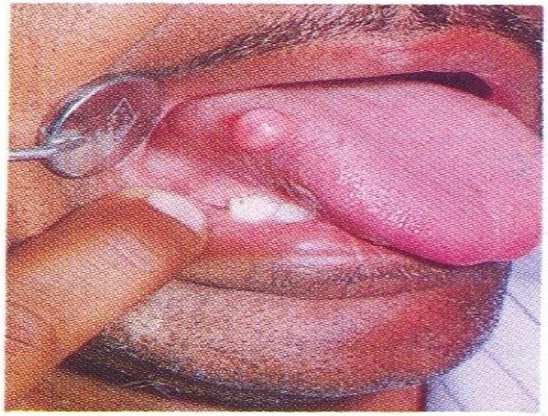
Example of pedunculated papilloma “has a stalk that connect it to the body” and its hanging.

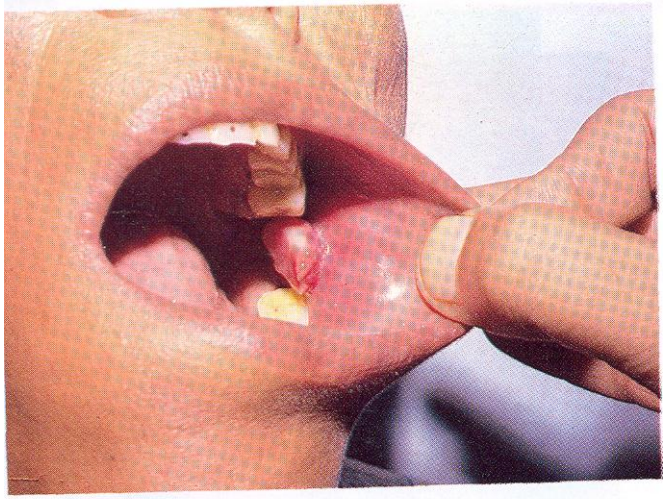




- Example of sessile “flat” papilloma







- They may arise in the mucosal area
- In the GI “intestine, colon, stomach”

they are called **polyps**

- In the skin they called papilloma

SCAR

"other benign issue of the skin"

Fibrous tissue proleferation following "etiology" : after :1- trauma

2-surgery 3- infection

it is usually flat (but there is various type of scar which may not be flat)

If some one have an operation without any infection there will be very fine scar tissue which is not even seen.

But if there is secondary infection to the wound of the pt. usually will have very bad big scar.

Hyper trophic scar

Differ from the original scar that it has an Excessive fibrous tissue in a scar that's why its raised and slipping up on the wound may be red hot and itching

* confined to the scar confined to the same area of the incision doesn't go beyond it when compare it with 3rd type which is the keloid

*no neovascularization

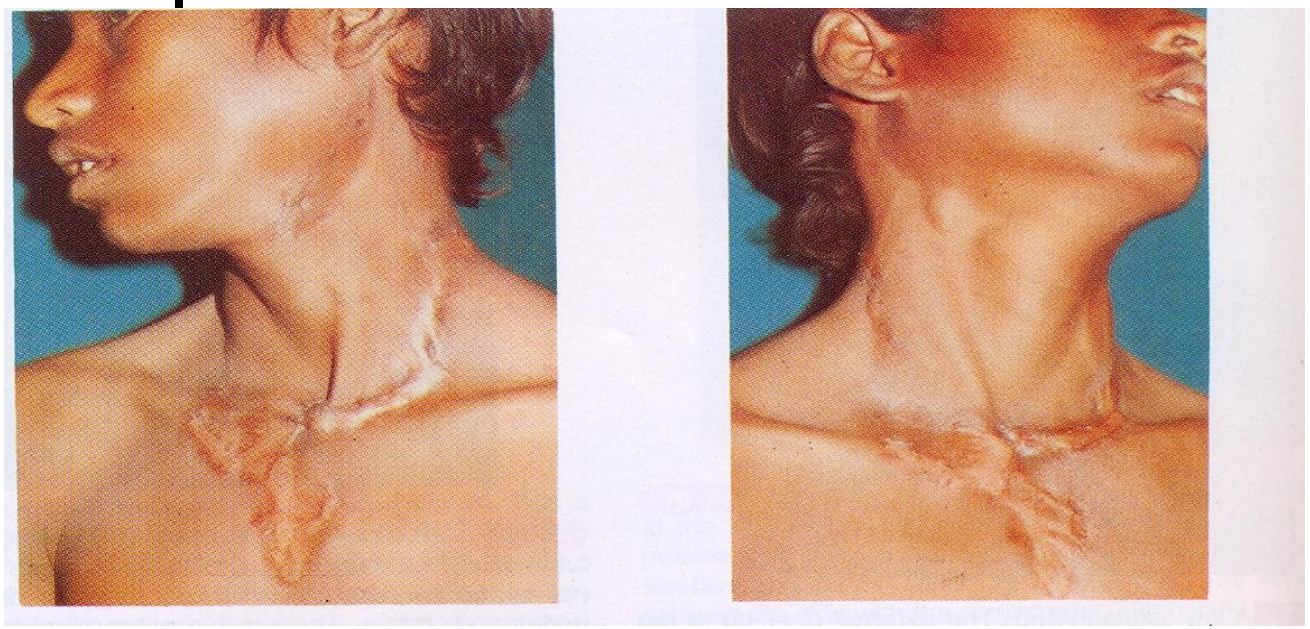
*wound infection is an important factor causing that scar .

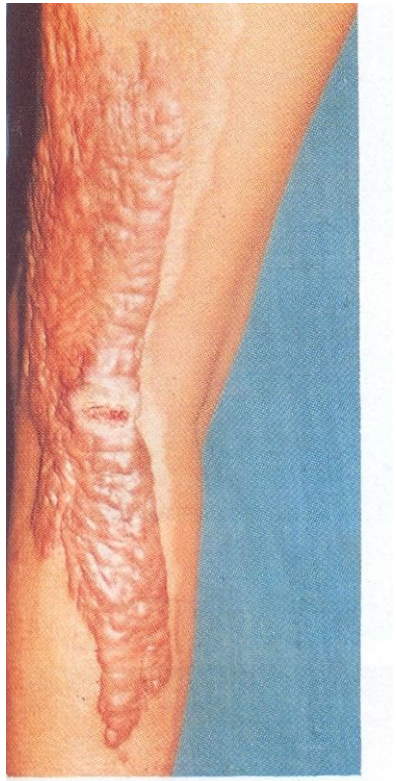
how to recognize it?

* clinically it is a raised , non tender swelling with no itching

* it may regress and become flat gradually in six months to 2 years "activity time of the collagen tissue so repair in the wound take up to 2 yrs.

* does not usually recur after excision can be easily excised within the scar it self to make it smaller





- Ex. Of hypertrophic scar which is raised within the scar “ this pt had a burn “

Keloid

worst type of scars

Excessive fibrous and collagen tissue with neovascular proliferation in a scar

"that's why it behaves like a tumor"

*usually extends beyond the original scar

keloid- -continue

* initially raised , pink , tender , itchy and may ulcerate “very annoying”.

* more common in dark skinned people

* progressive v.s. non progressive

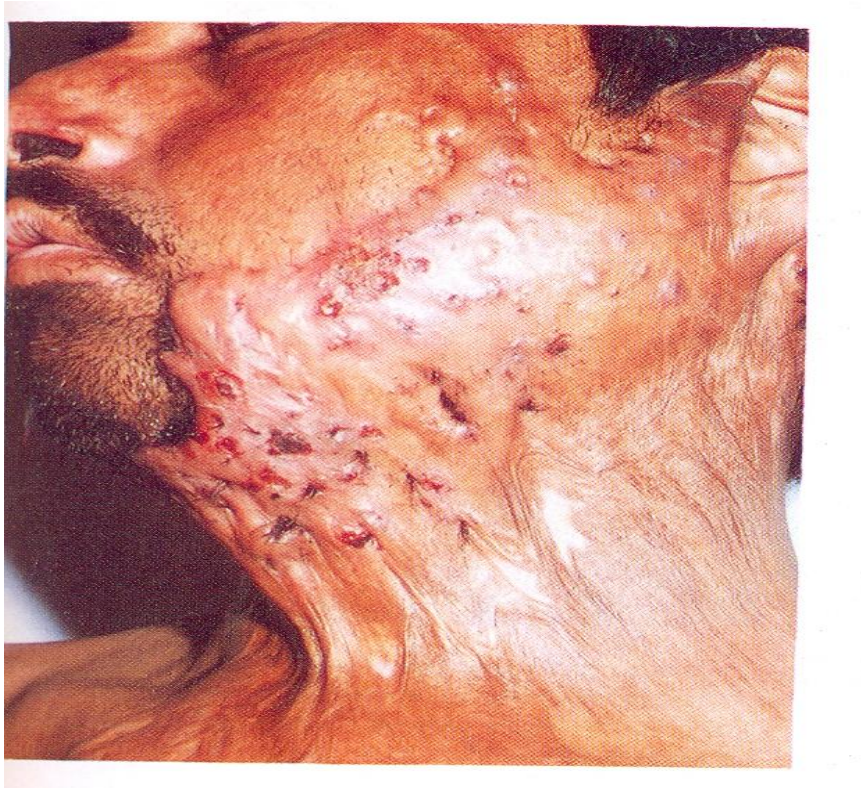
“its progressive not like the hypertrophic scar which is non-progressive”

* aquired v/s spontaneous ”most of the time its acquired”

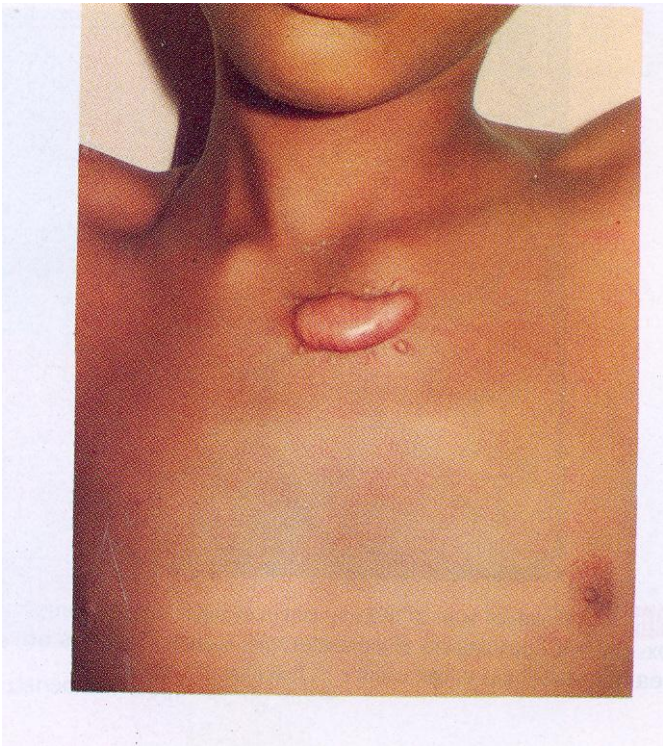
Rx

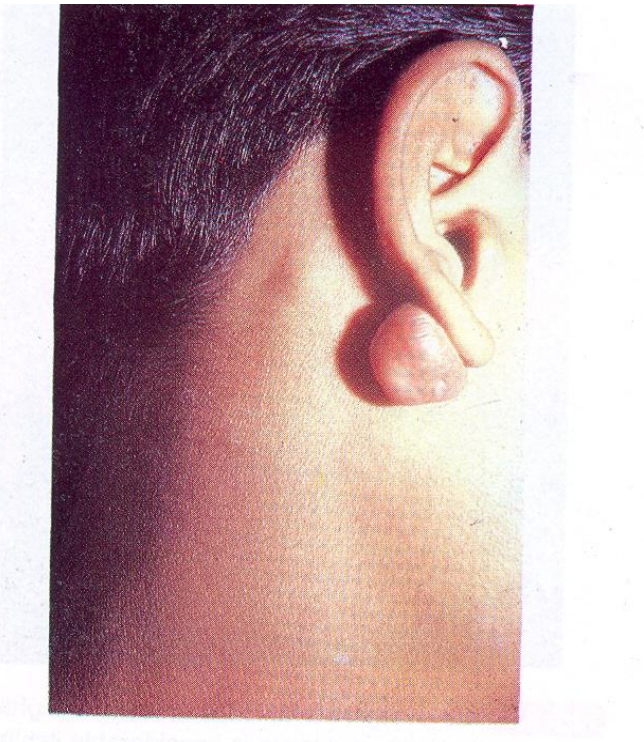
- injection (hyaluronidase , steroides etc.

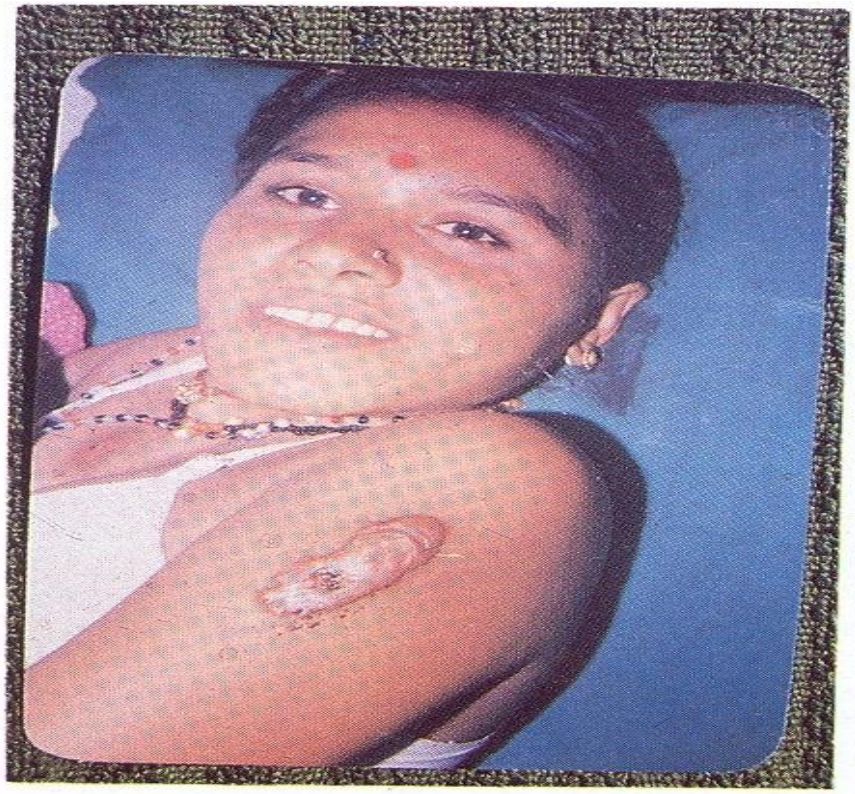
-excision & grafting) massaging and cream may reduce the size but it has to be excised within the scar, few mm on either side so that it don’t extend further



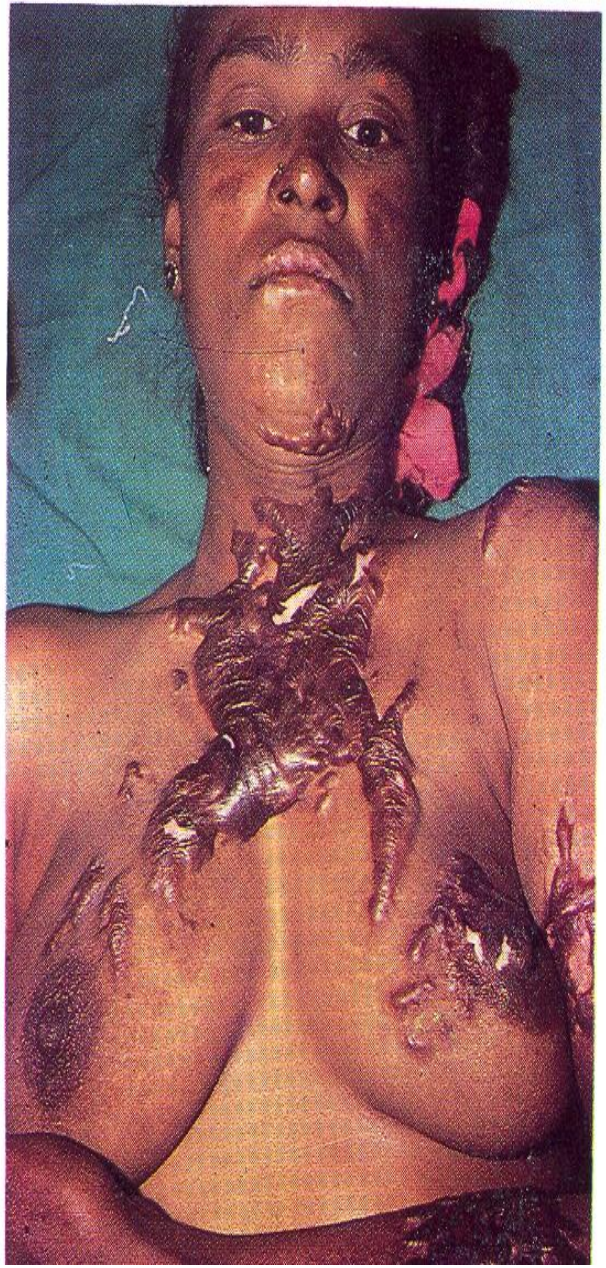
- The original scar is only in the neck area and here it has extended, some time you will see pt just with small puncture wound on the chest then he develop keloid
- Some time even after ear piercing then he may develop keloid

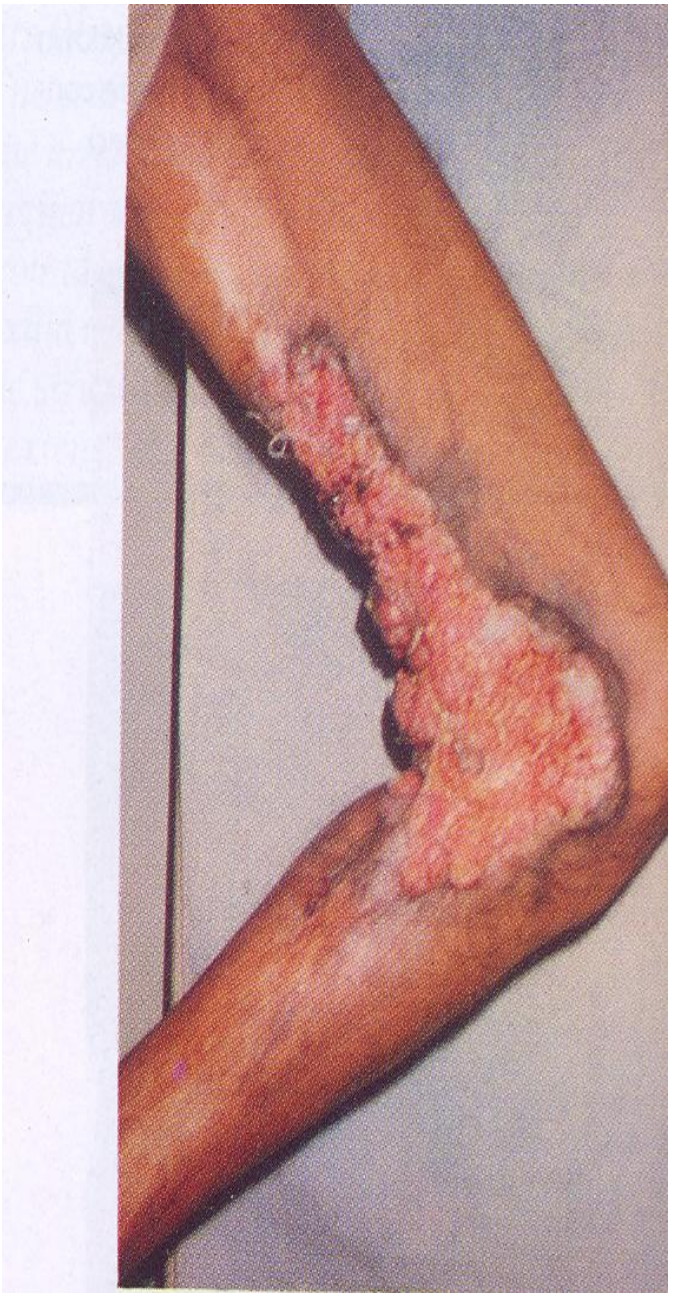






- Even After BCG vaccination may develop a very bad scar





Pyogenic granuloma Other imp beningn lump of the skin:

pyogenic b\c initially they are due to infection
but actully it is due to increase granulation tissue proliferation in any wound and that's why its very red and hemorrhagic

- Normally when there is a wound the epithelium try to come from side to side to cover the defect, but if the opening is wide the granulation grows faster than the skin.
- Many pt will come with blood in their clothes b\c every time they touch it, it bleeds → its very vascular b\c of the granulation tissue

* Excessive granulation tissue growth in ulcers.

* Firm, bright , red selling that bleed on touch.

* recurrent bleeding when exposed to minor Trauma "one of the complication"

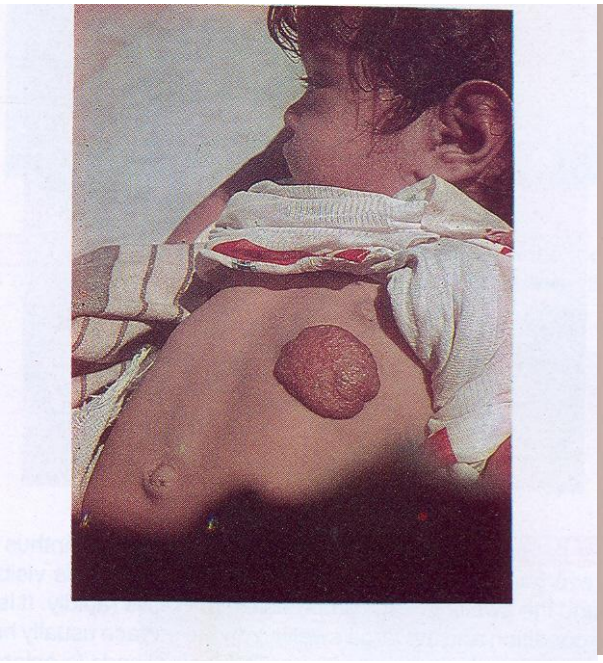
Rx : cauterization either electrically or chemically when its small v/s excesion with skin graft when its large .

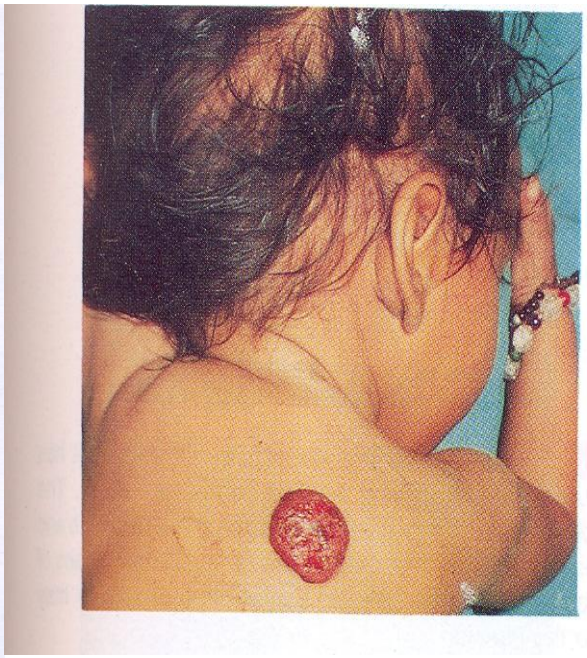
Haemangioma

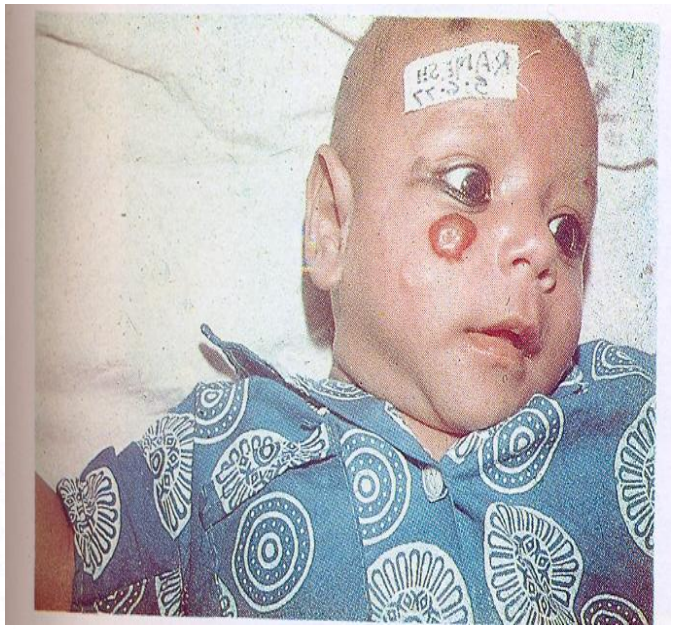
It is a developmental malformation of blood vessels rather than a tumour.

Types: capillary , cavernous ,arterial.

It commonly occurs in skin & sub cutaneous tissue but can occurs in other organs e.g lips , tongue ,liver ,brain and kidney may be affected.







Malignant skin tumours

Basal cell carcinoma (BCC), squamous cell carcinoma and malignant melanoma these are the 3 most imp malignant tumor of the skin in addition to something called marginal ulcer
most imp to know: aggressiveness of tumor , how to diagnose it on inspection

Malignant skin tumours

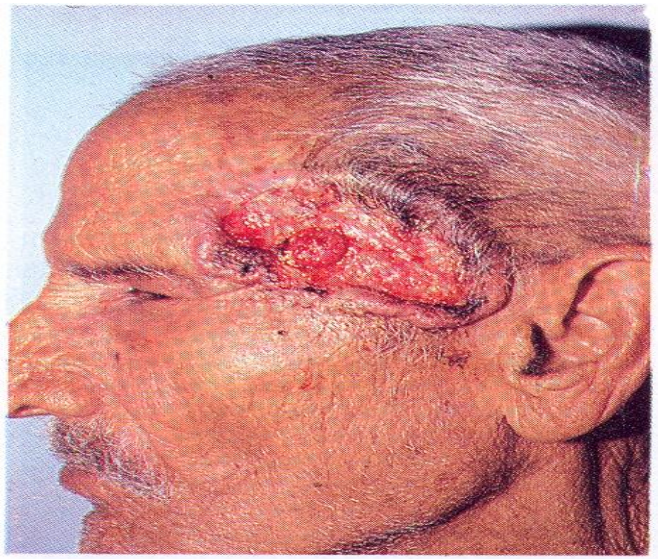
Basal cell carcinoma (BCC) : Most locally skin malignant tumor among the skin tumor. Arise from basal cell layer

* Ulcerated tumour of basal cell layer of skin.
* Middle aged white tropical males (Australia).
common in face.
* low grade and slowly growing tumour (years).

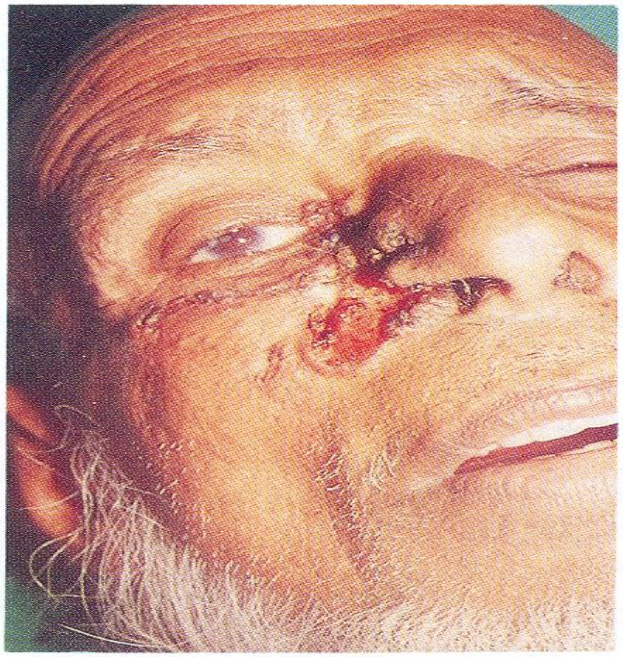
Clinically:

* Rolled-in edges (inverted) with attempts of healing .
* floor showes an un healthy granulation with a scab.
*The base is indurated and may be fixed to bone.
* spreads locally to LN (usually no L.N metastases).

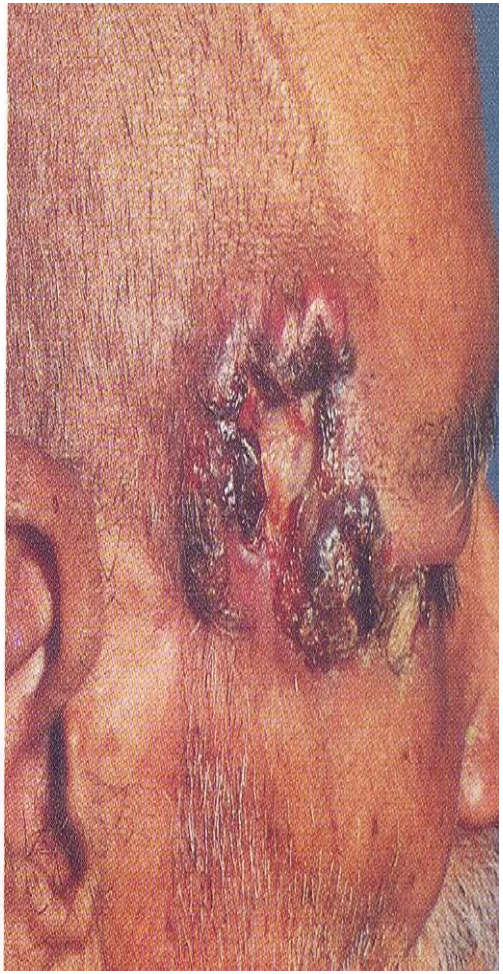
Rx : radio therapy & surgery usually its curative if its done early



- Basal cell carcinoma you can see the margin inverted into the skin
- Its very classic significant finding in BCC that the margin are in growing this is b\c its very slowly growing tumor there is high chance for the epithelium to attend healing



- The commonest site is this triangle b\w ear, nose and check you found it most of the time here it can even destroy the nose over years



Squamous cell carcinoma (Epithelioma)

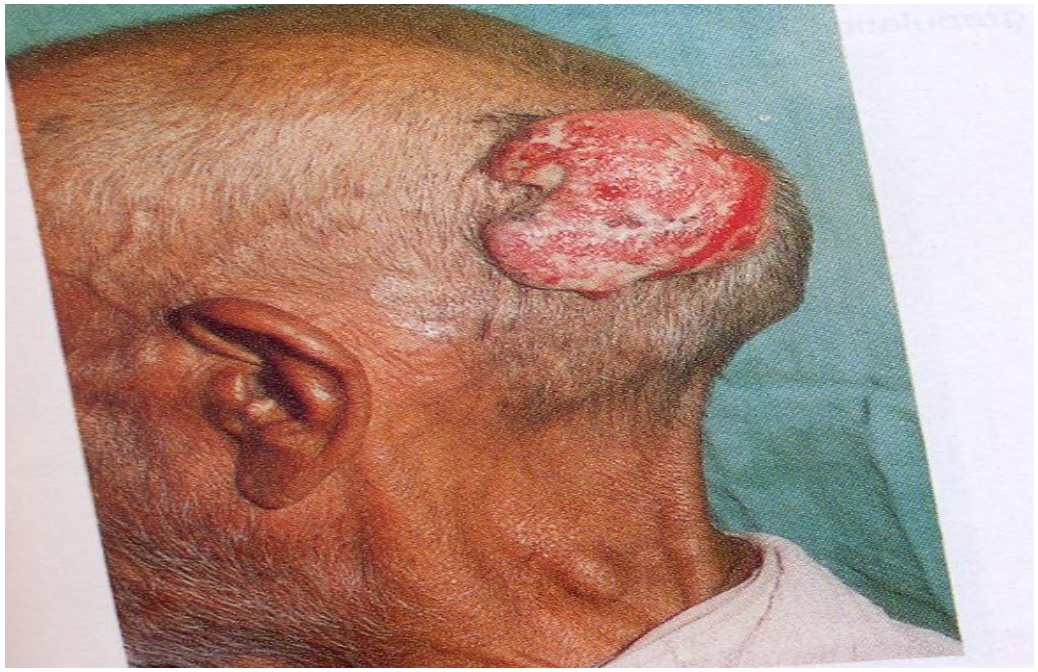
- Arise from squamous cell layer of skin or mucus membrane.
- It may arise from metaplasia of columnar epitheleum due to chronic irritation "infection or inflammation" (gall bladder "lined by colomnar epith. But with gall stones there maybe sq cell metaplastic, bronchus, stomach .etc.)
- it can arise de novo from squamous originally or tissue which has changed into squamous cell (metaplasia)
- Some pt with chronic "infection or inflammation" adeno or epithelial cell "glandular cell" changes into sq cell then it maybe site of carcinoma
- It can occur any where in the body, M>F .
- More malignant and rapidly growing than BCC.
- Edges are rolled out (everted) "b\c its fast growing tumor edges is growing out" **imp**

Spreads :

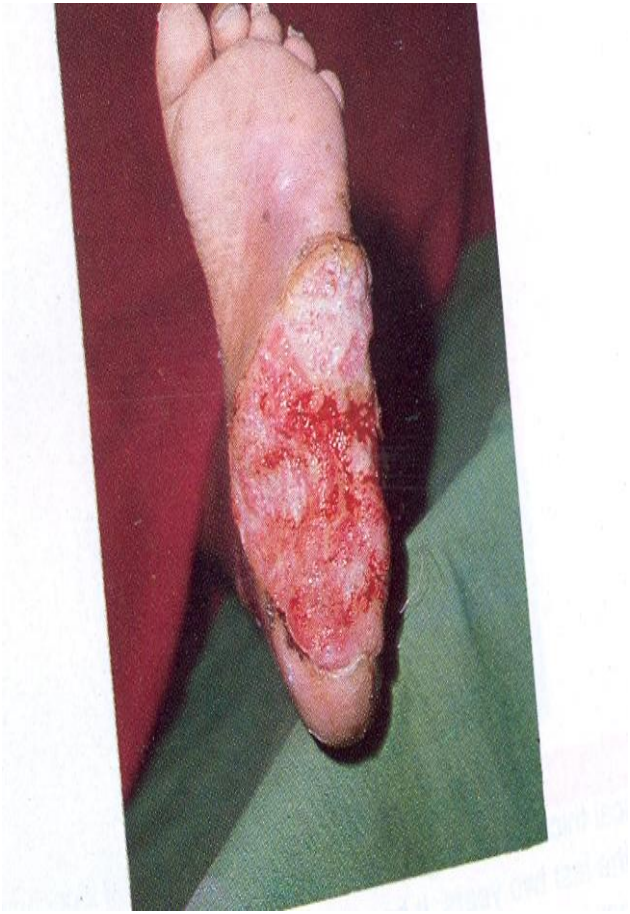
locally , L.N ,and blood

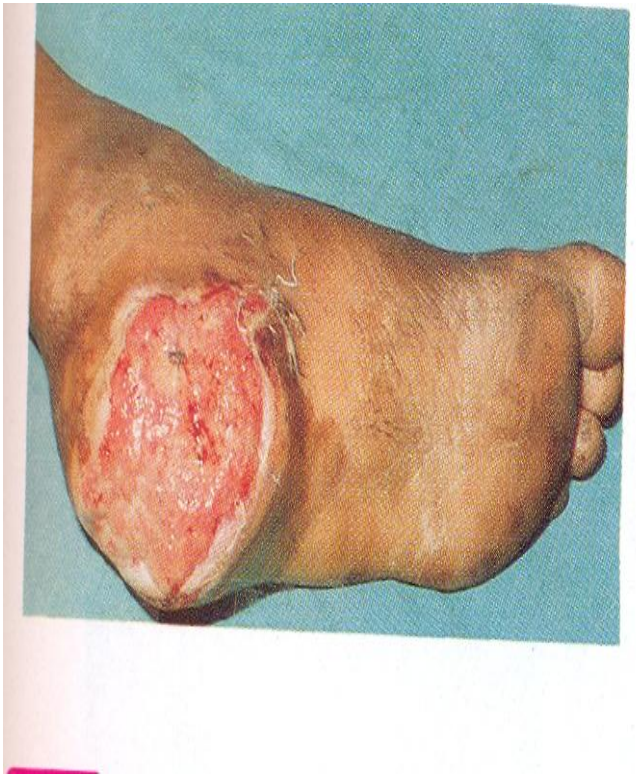
Rx:

Radiotherapy & Surgery



- You see the difference b\w the edges in that ulcer and the previous ulcer this is growing out ”everted” edges while basal cell carcinoma are inverted.





Marjolin ulcer

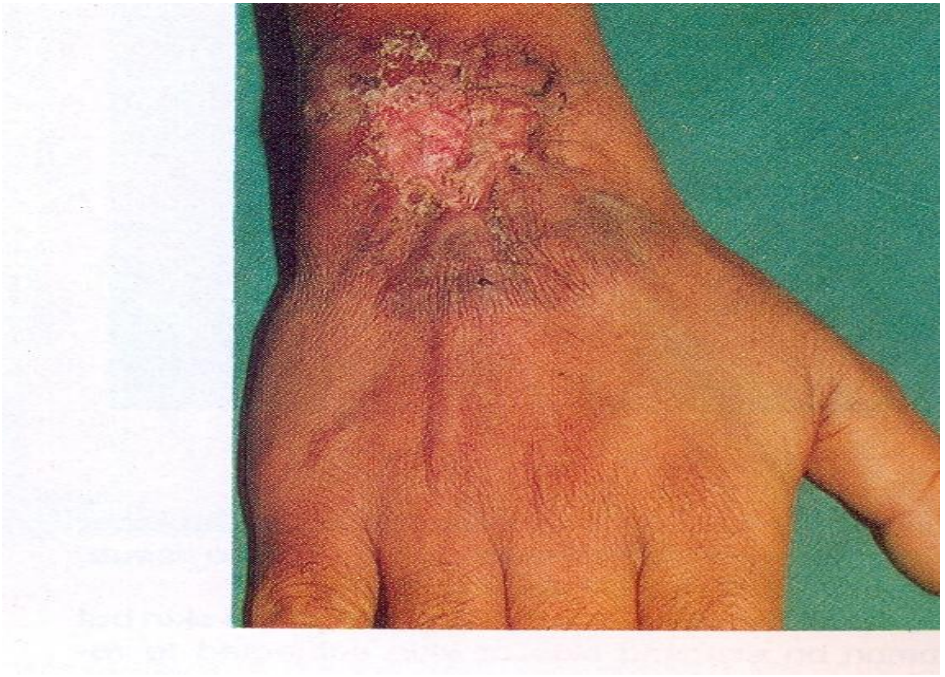
special type of sq. cell carcinoma that arises from long standing infection of ulceration “like ulceration scars” But its less malignant than sq. cell carcinoma

It is a low grade squamous cell carcinoma arising

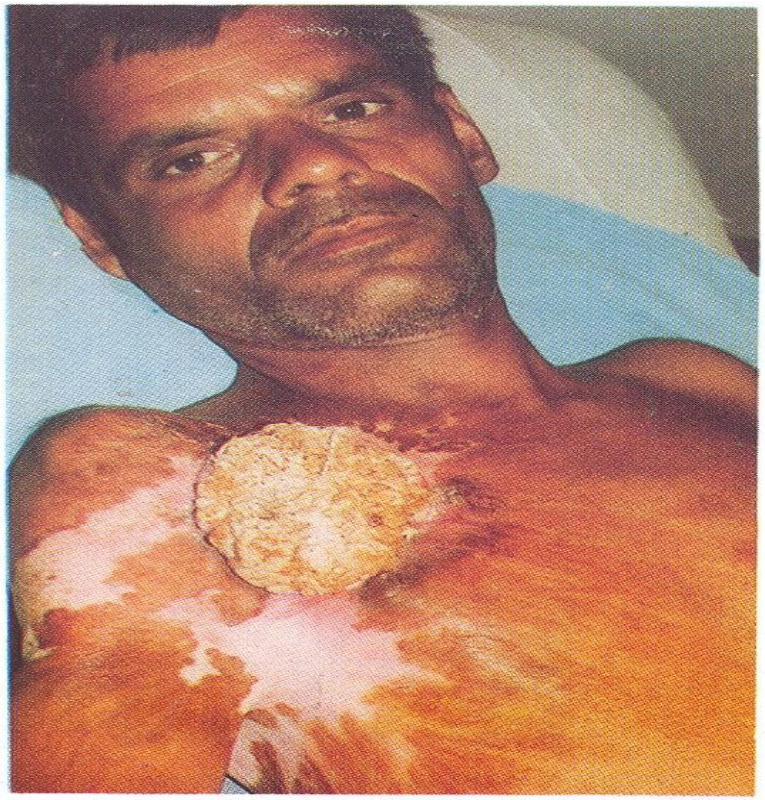
in chronically inflammed ulcers or scars.

Rx:

Radiotherapy & Surgery



- This pt has burn scar in his hand for 20 years now he start developing sq cell carcinoma then its called marginal ulcer



- Old scar of burn now he develop marginal ulcer at the site of the previous scar

Naevus (mole)

- A localised cutaneous malformations.
- Includes moles & birth marks.

They may present at birth ,or even later in life .

Types:

Junctional, Intradermal, Compound, Blue naevus

Juvenile and Freckle

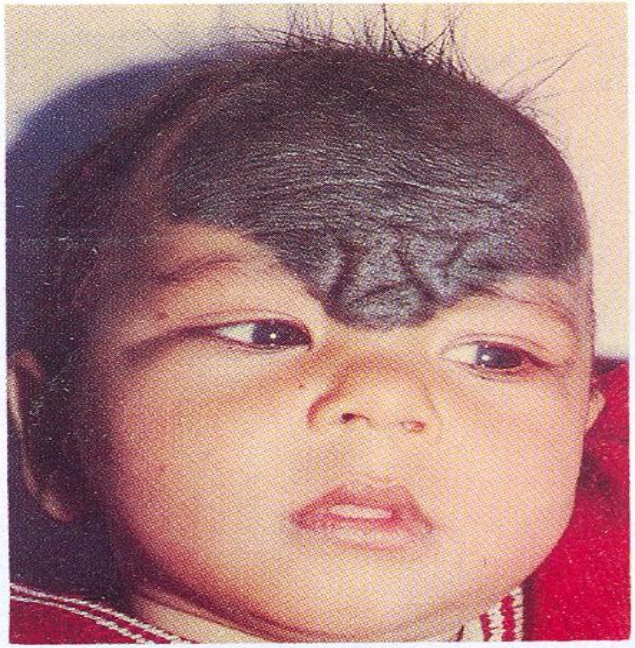
Naevus cont;

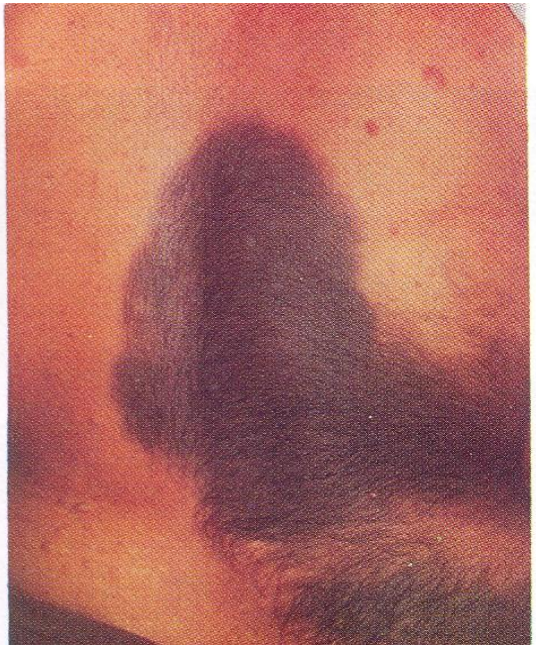
Evidences of malignant change :

imp,. In this stage you have to know when mole or nevus change into malignancy “most of the nevi are benign but you have to have certain awareness when any of this happen in preexisting mole then this maybe evidence of change into malignancy “melanoma”

- **-Increase in size**
- **-change to irregular edge**
- **- change in thickness**
- **-change in colour “deepining in color**
- **-Change in surrounding tissue**
- **-symptoms e.g: itching, bleeding discharge**
- **-lymphadenopathy**
- **-microscopic evidence** ”by biopsy evidence of metaplasia changes “characteristic of the cells”

you have to keep in minds that this pt needs to have excision with wide margin other wise this pt may develop malignant melanoma which is very aggressive and difficult to treat.





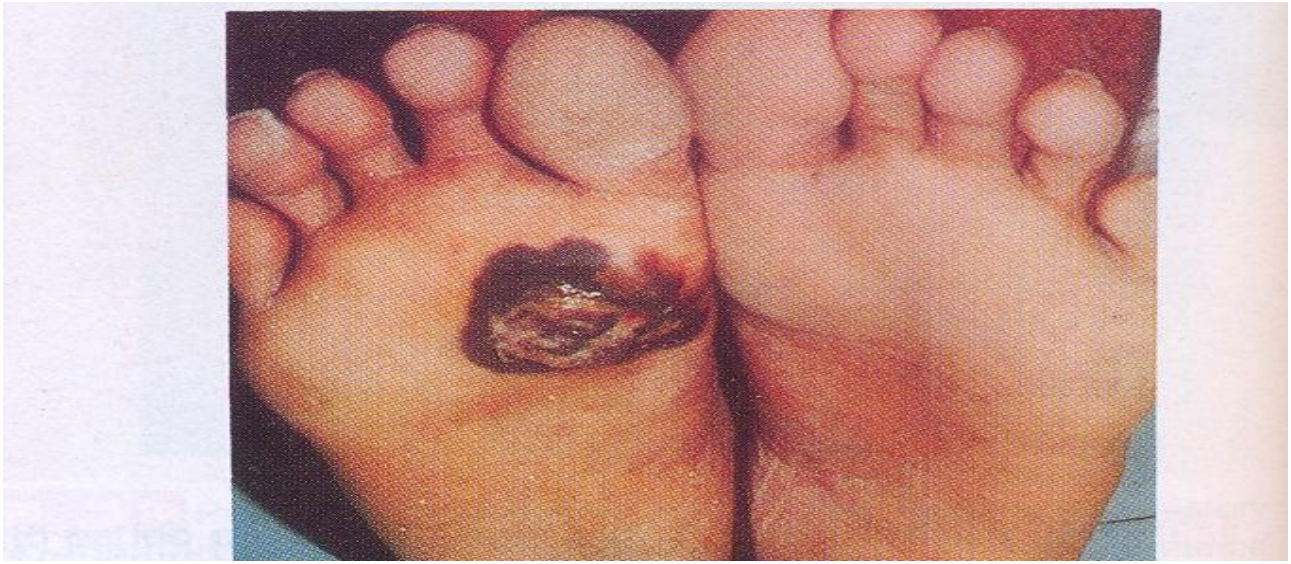
- Example of nevi

Malignant Melanoma

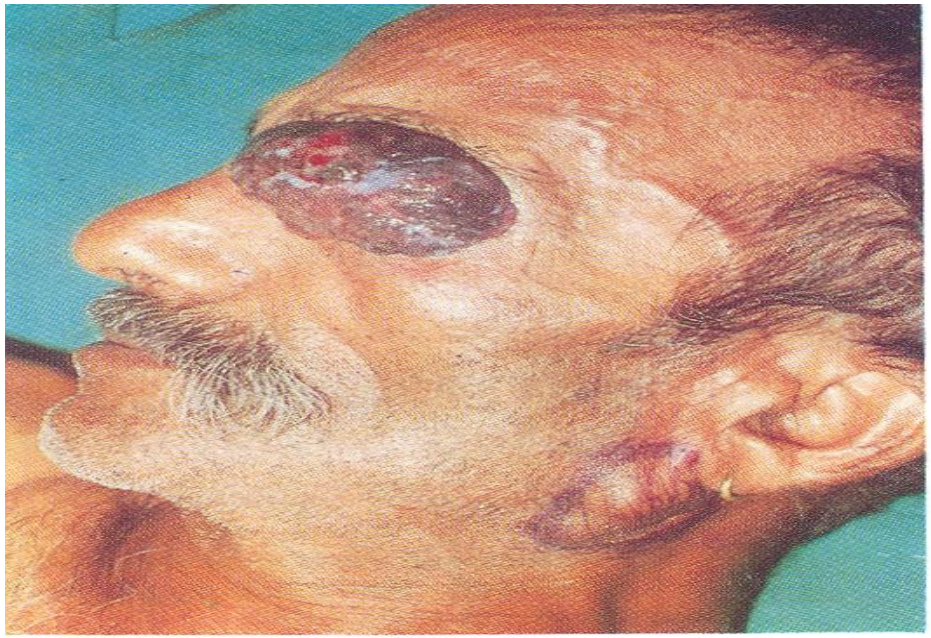
- It a rare but most rapidly infiltrating skin tumour
- most of the time it arise from Pre-existing naevus (90 %),
- Rarely De-novo “no Pre-existing naevus” (10 %).

Metastasis :

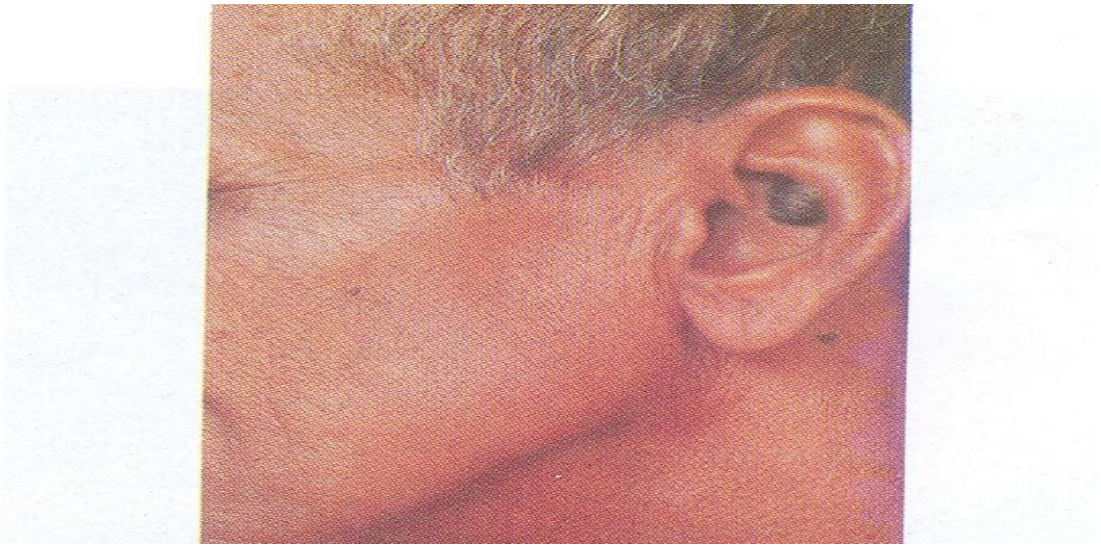
- Local & satellite nodules.
- Lymphatic.
- Blood (liver, lung, bone etc;)



- Example of melanoma with brown discoloration around the ulcer

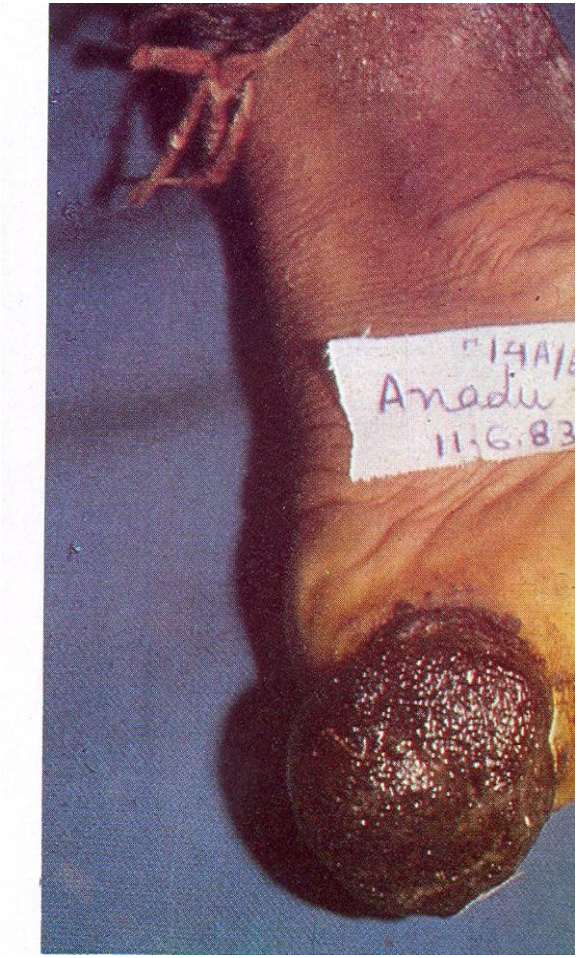


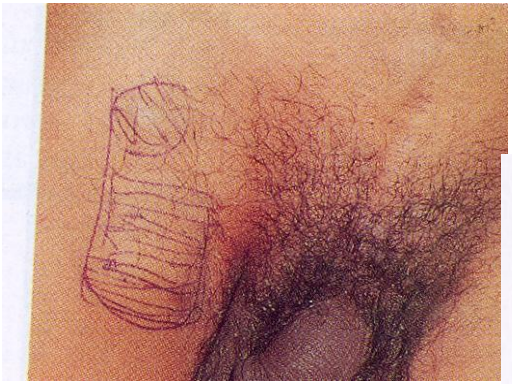
- It can occur in the eye b\c the iris has melanocyte “when ever melanocyte are there melanoma and nevi could be developed”

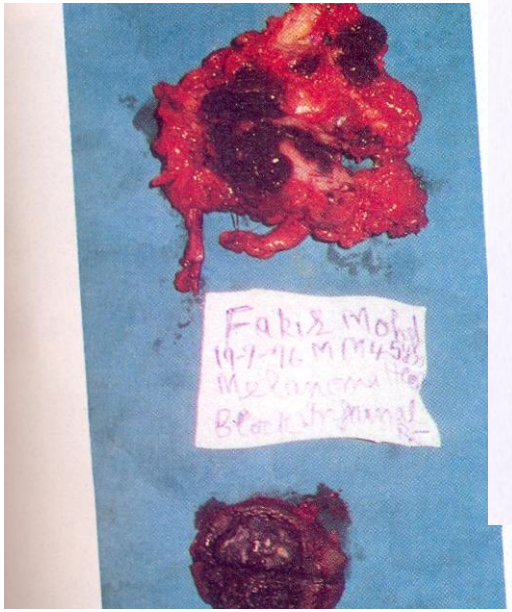


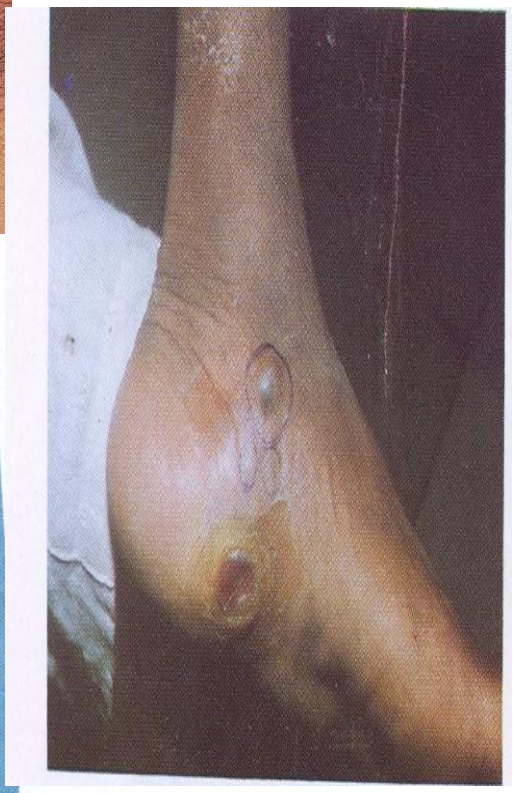
- This pt had it in the ear
- When the pt come with cervical lymph node enlargement if you not going to examine carefully inside the ear you may not discover the 1ry tumor

- You may found pt with inguinal lymph node enlargement and biopsy showed malignant melanoma, but the primary may be within the skin of the anal canal “unless examining this area you may miss the 1ry tumor”









Melanoma in the heel

Skin Cysts

we have various type of skin cyst

Implantation Dermoid :

It is a post traumatic dermoid.

commonly in fingers and hands of farmers & taylors. Due to minor trauma so its common in manual workers

There was 2 type of dermoid : congenital and acquired and the most imp acquired is the Implantation Dermoid

They may present in housemaid b\c when they are cleaning the dishes with metallic swaps they may have many punctures in their fingers and may present with small swelling in the skin

*Tense , may be hard tender swelling.

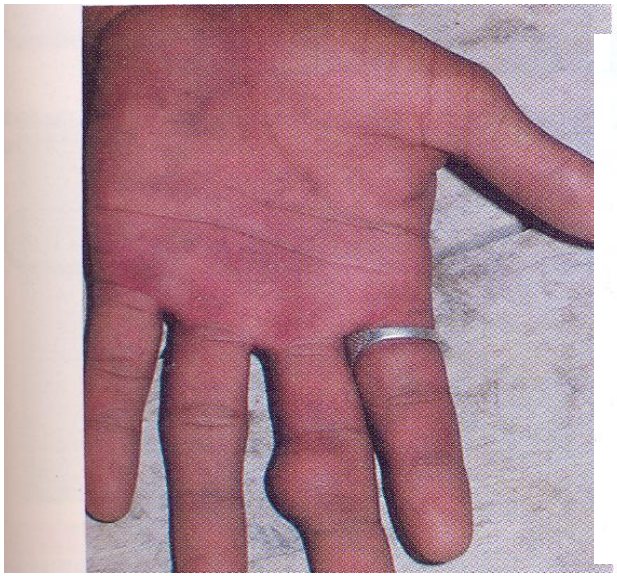
*Attached to skin which may be scarred

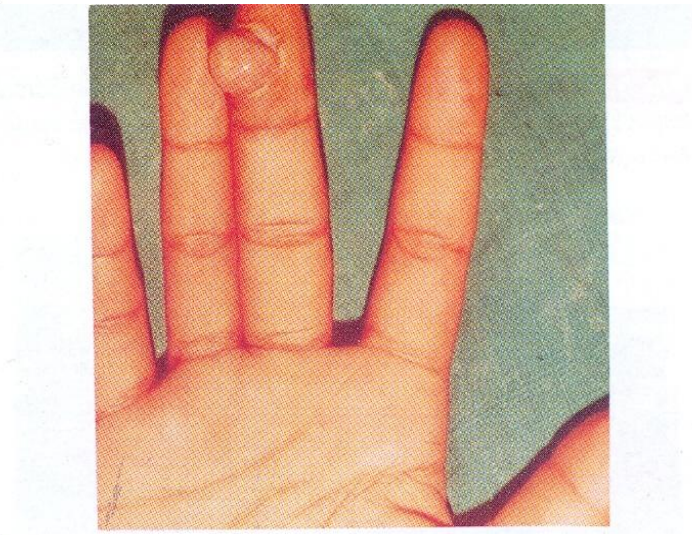
*Contains desquamated epithelial cells.

*pain and ulceration "main complication of the cyst" may occur following repeated trauma

*Excesion is curative.

May confuse it with something called ganglion





- Example of Implantation Dermoid :in the finger

Sebaceous Cyst

Another imp, very common swelling

*It is a retention cyst due to blockage of its duct.

*Lined by squamous epithelium and contains sebum and desq. Epithelium.

*Commonly in scalp , Face , scrotum and vulva (never in palm & sole b\c there is no hair or Sebaceous gland).

Clinically:

Spherical, cystic or tense swelling , attached to skin with punctum "black head this is very diagnostic for Sebaceous cyst" that may discharge sebum upon squeezing.

- Indentation: when you press it, it indent" and fluctuation tests may be positive .But transillumination test is negative. "its not clear fluid with very bad odor"

Seb. Cyst cont;

Complications:

cosmotic "not acceptable"

Infection

ulceration

Cock peculiar tumour rare benign tumor (pyogenic granuloma due to ulceration)

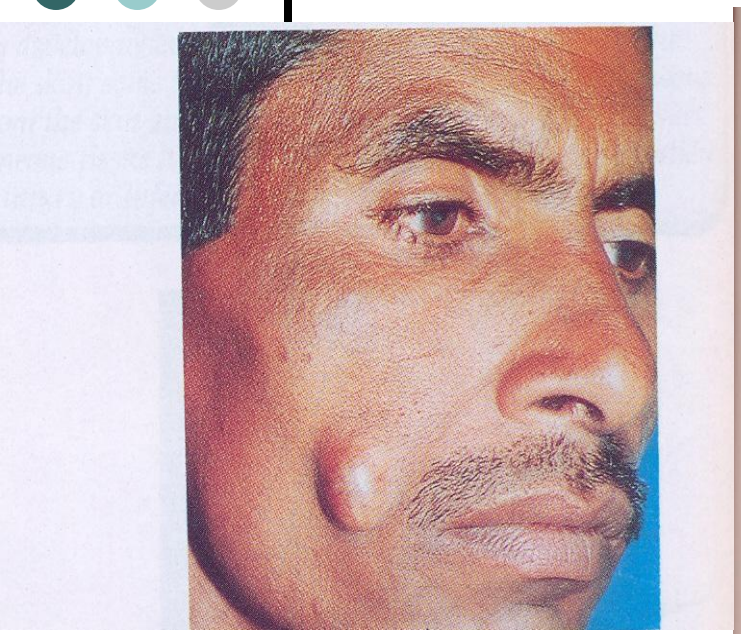
sebaceous Horn rare due to secretion keeps drying up and accumulating raising (inspissated secreted sebum)

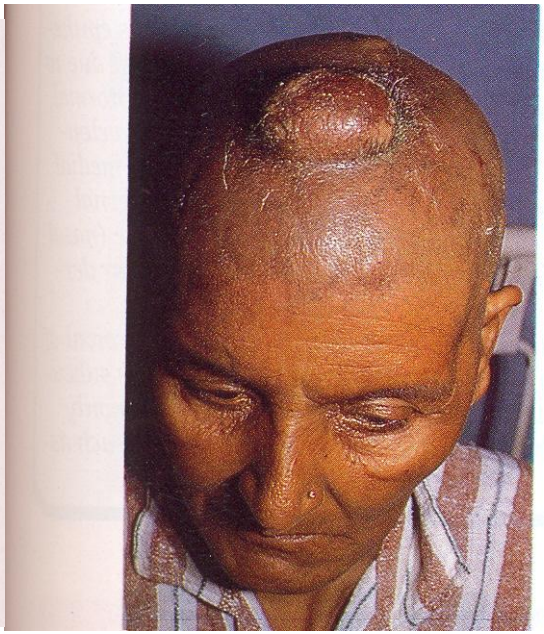
Rx : complete excision – (un infected cyst)

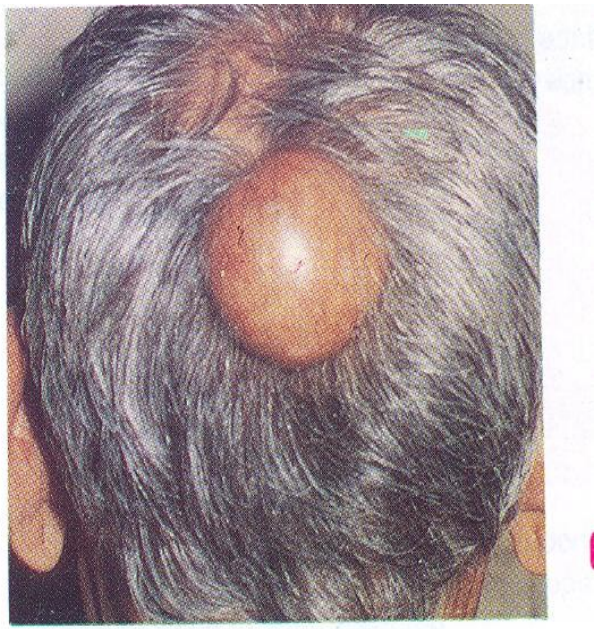
(infected s/c) if its infected and contain pus 2 stages:

1-drainage "drain the pus and give antibiotics wait for 4-8 weeks,

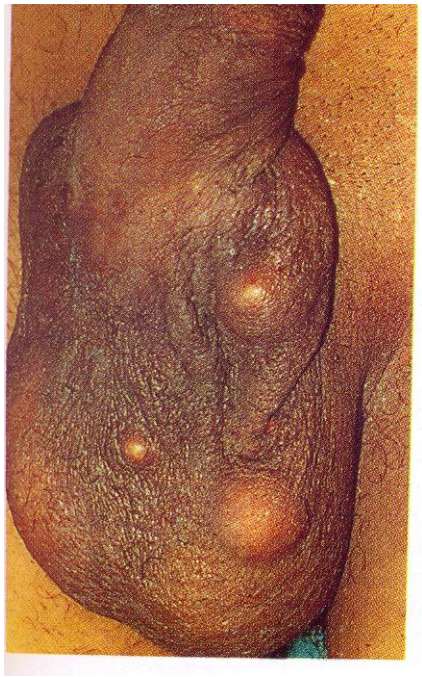
2-followed by excesion- after drainage and antibiotics once the inflammation subside , go and excise the cyst with its capsule so it doesn't have recurrence ". b\c at this time capsule is adherent you can't completely excise it.

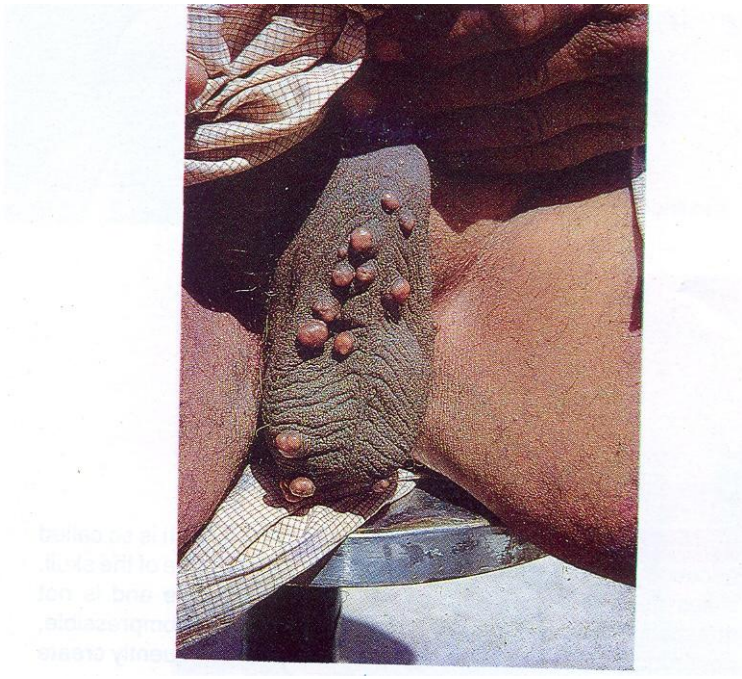




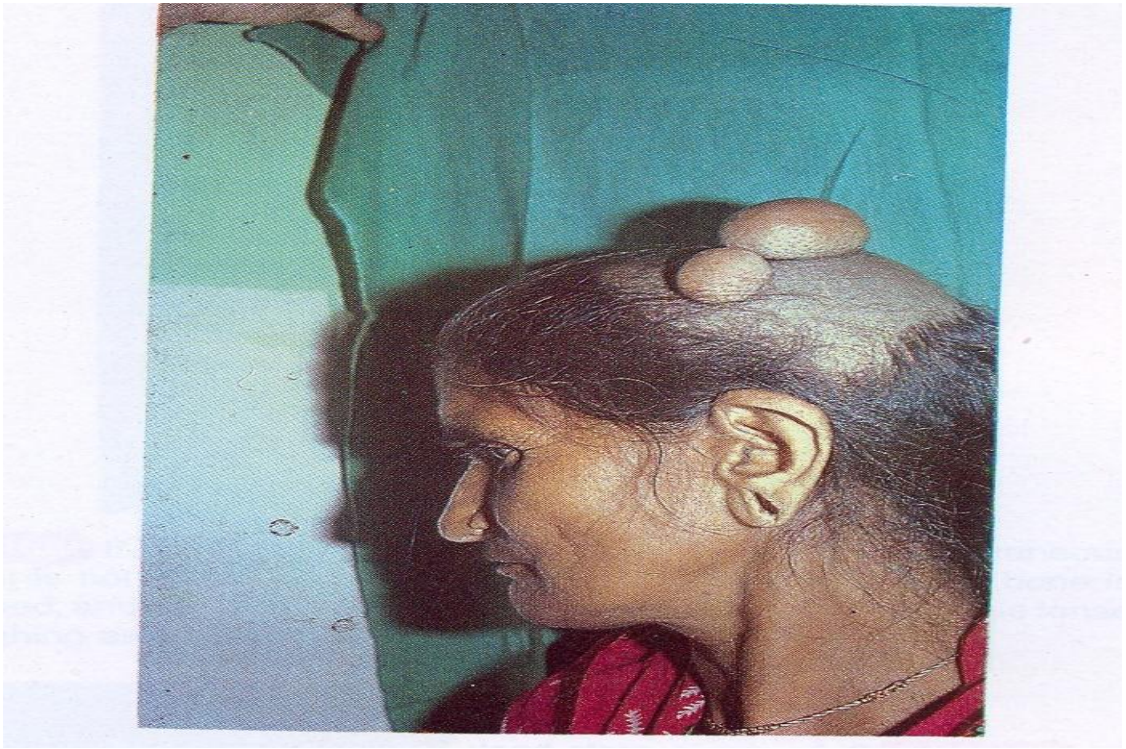


- Sebaceous cyst in the skull imagine this is female, every time she will have a lot of trauma, bleeding, ulceration and infection therefore its advisable to excise

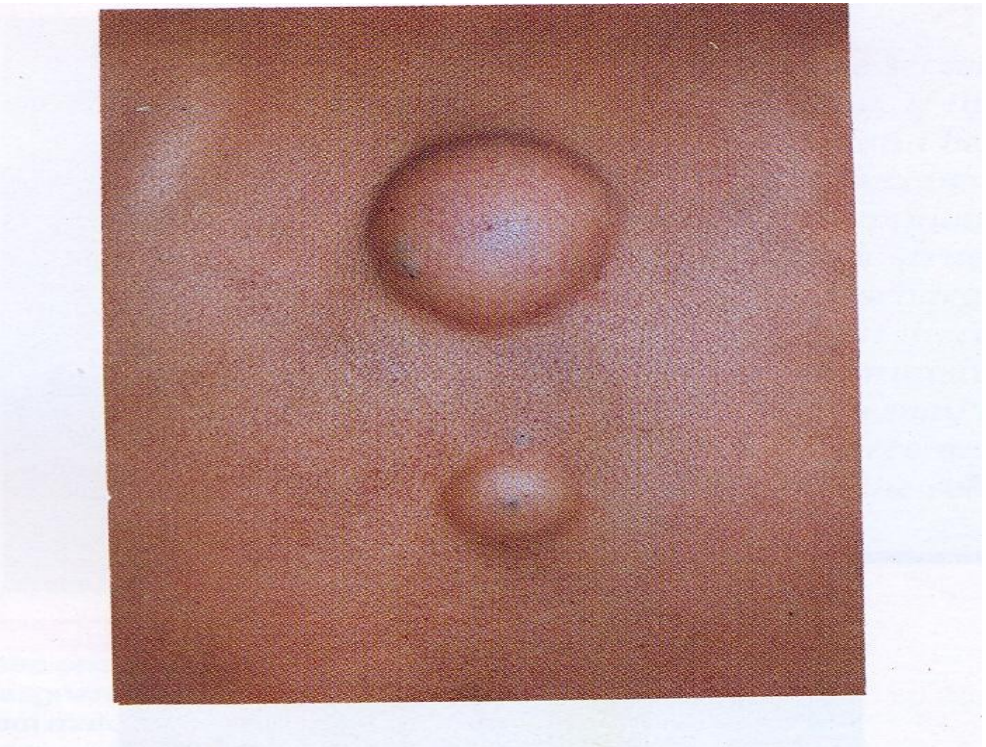




- Multiple in the scrotum it can be in the valva as well and in the back



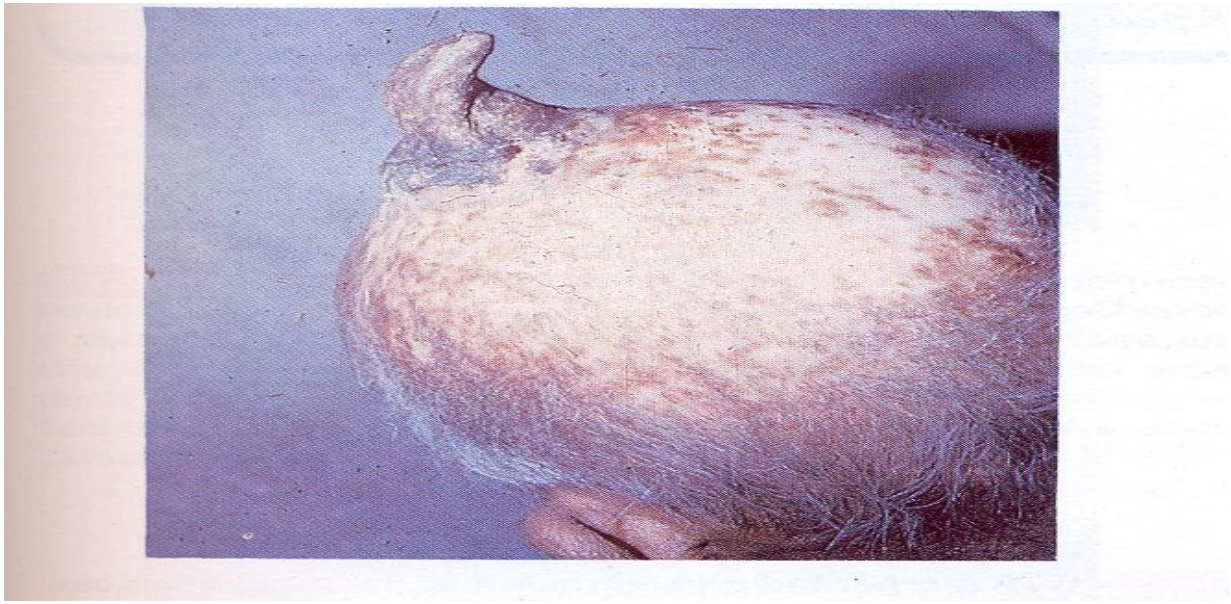
- Multiple Sebaceous cyst in the scalp



- This pic. shows the pathognomonic feature “punctum” black head spot at the center of the swelling

The 2 feautres for Sebaceous cyst:

- Adherent to skin
- punctum



- Sepuctious horn when the sepum keeps secreting and rise up, the pt was elderly neglecting him self never wash it keep raising up and drying and become very hard like a horn ““قرن

Subcutaneous Lumps

Cystic swellings:

congenital
dermoid cyst “most imp
“ abcess “most imp “
cystic hygroma
haemangioma

Aquired
parasetic
haematoma

Solid swellings “most imp “
commonly benign:
shwanoma, neurofibroma,lipoma

(rarely malignant rarely this tumor changes to malignancy)

Dermoid cyst

Clinically four varaieties:

1. Sequestration dermoid.
2. Implantation drmoid.
3. Tubulo-dermoid.
4. Terato-dermoid.

Sequestration dermoid

sequestration mean insequestration of endoderm into mesoderm

*It is a true congenital cyst c.f. implantation d.

*Ectodermal tissue burried in mesoderm forming a *cyst lined by squamous epith.and contains paste-like desquamated epith.

When compar it with the omplNTATION DERMOID WHICH IS aquired !

- Why dermoid cyst develop? Ectodermal tissue burried inside so it proliferate inside

Common at lines of Embryonic fusion sites: it occure during embryonic life at the fusion lines

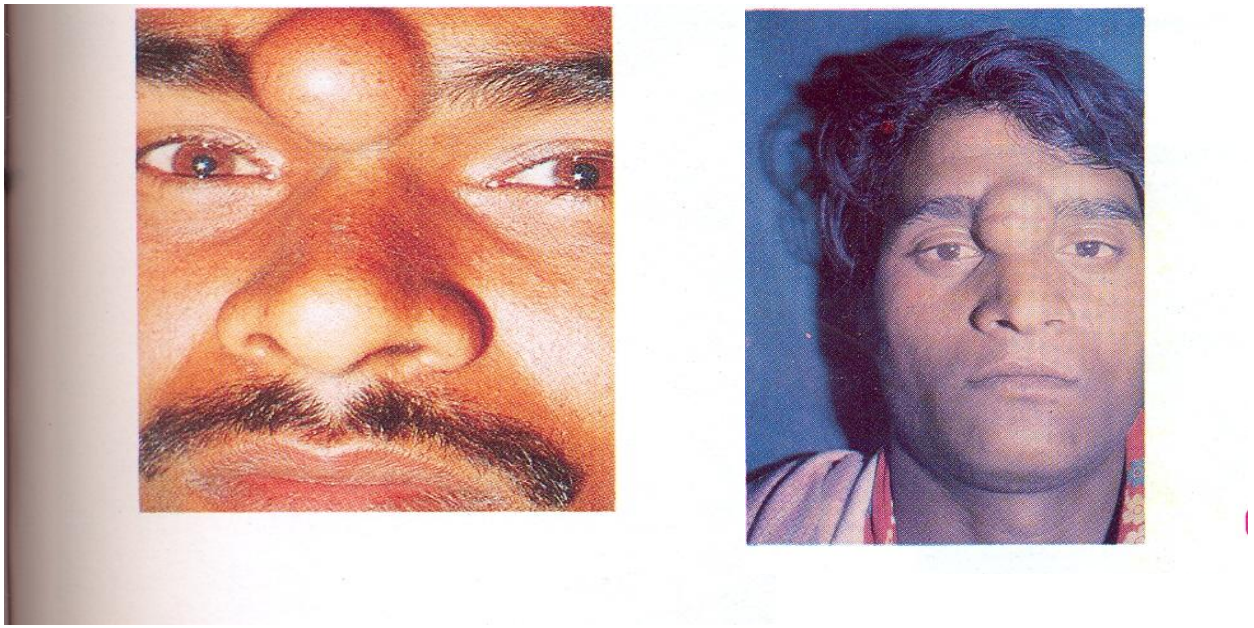
- Midline: neck & root of nose.
- Scalp.
- Inner or outer angles of eyes.

In acquired one when a pt have a puncture , some of the epithelium is drawing in so it will go into swelling.

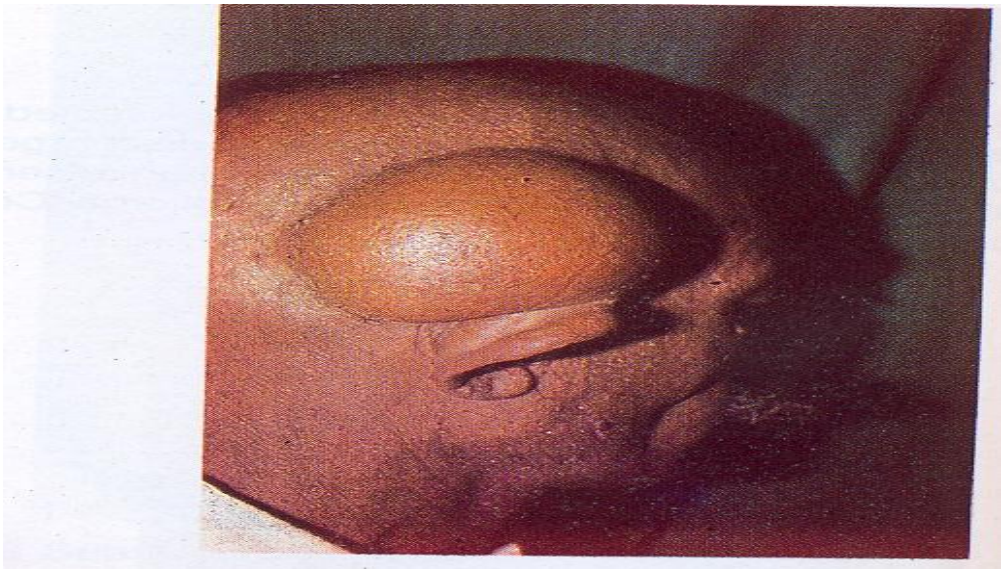
Sequestration dermoid cont;

Clinical features:

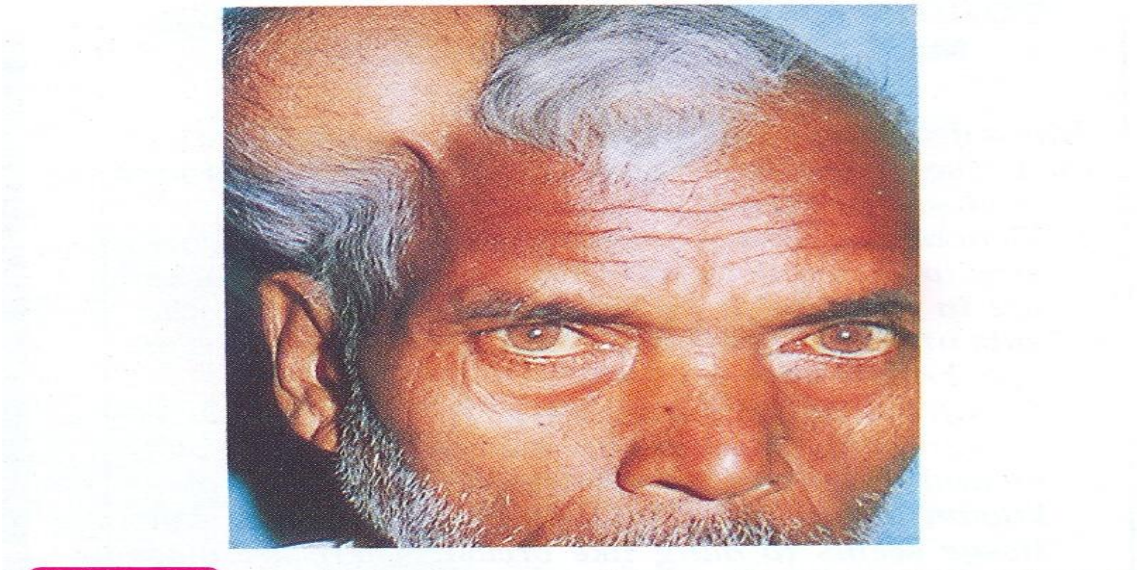
- Painless, spherical,cystic mass.
- Smooth surface.
- Not attached to skin cf. unlike seb. cyst
- No punctum cf. seb. cyst.
- Not compressible cf. memingocele."if its compressible you have to think that there maybe communication with the brain b\c they are the line fusion or if he have cough impulse (when cough it pulge more) you think of communication with the brain"
- Cough impulse & bone indentation (scalp)
- Transillumination test + ve . "may or may not be +ve depending if its not infected →+ve, but If its infected → –ve."



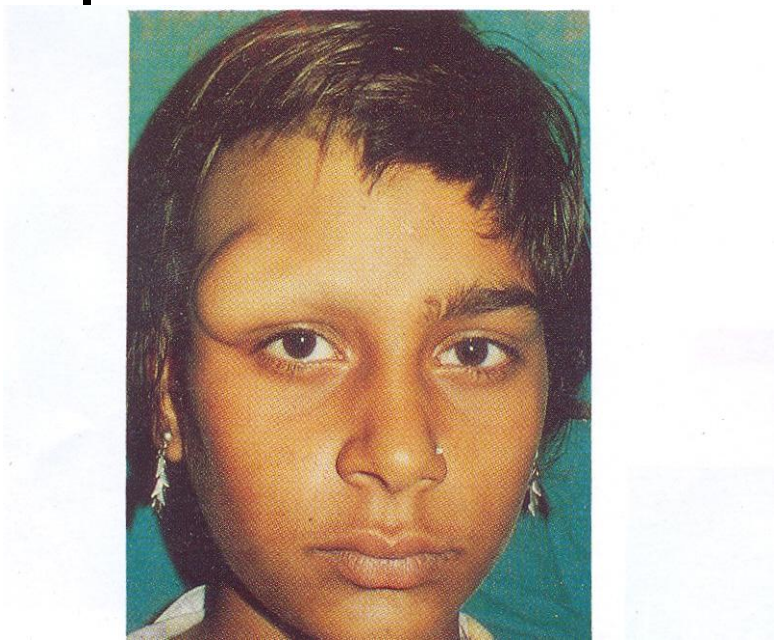
- Ex. Of pt dermoid cyst at roof of the nose, this type of swelling that you have to check for compressibility and cough impulse if its +ve may be communicating with the brain dura

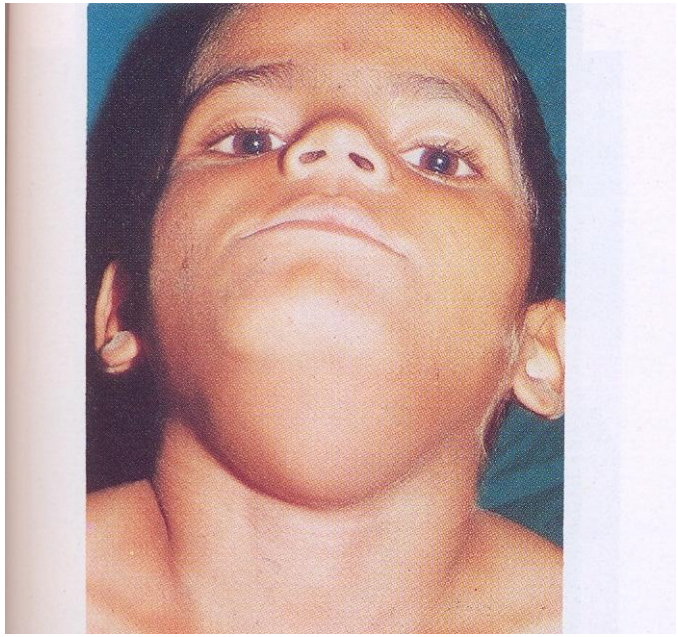


- This is at the line of fusion of embryonic bones



- External angular dermoid>>
- “Pt may have external or internal angular dermoid”





- Commonly it arise in young ppl b/c its congenital, it may arise even shortly after birth

Tubulo-dermoid

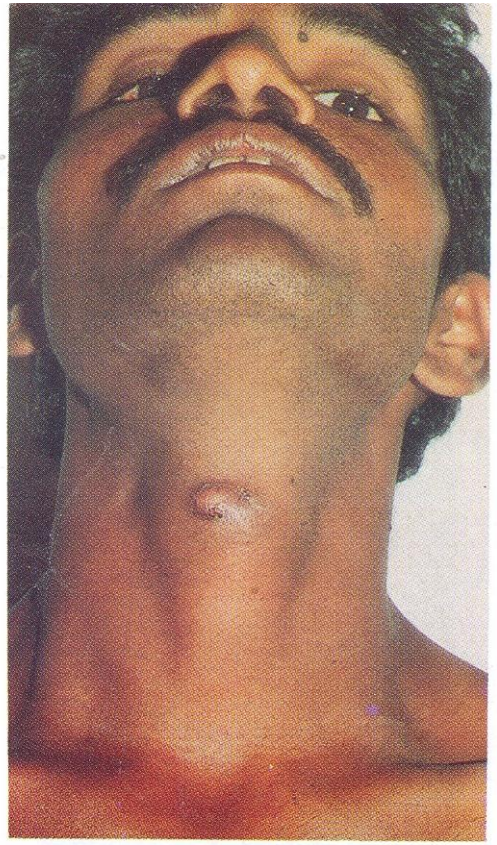
Cystic swelling arising from the non-obliterated part of congenital duct or tube which fills up by secretions of lining epith.

Examples

- Thyrpglossal cyst (remnant of thyroglossl duct). The thyroid was at the base of the tongue then it descends into its position with stalk this obliterate, but if it remain its lined by epithelial tissue so it may keep secreting it and may develop something called thyroglossal cyst
- Post-anal dermoid (remnant of neuro-enteric canal).

The rest of ex. Are not in the SC tissue

- Epindymal cys tin brain (rem. Of neuro-ectoderm canal).



- Thyroglossal cyst
- Characteristically it moves with protruding the tongue b\c it was attached to the base of the tongue at the site where thyroid start to develop and descend

Teratomatous dermoid

not SC

Cystic swelling arising from the totipotent cells with ectodermal preponderance.

- Ovary ;Ovarian cyst.
- Testes :Teratoma
- Mediastinum.
- Retroperetoneum.
- Pre-sacral area.

They usually contain derivatives of mesoderm

(cartilage, bone, hair, cheasy material).

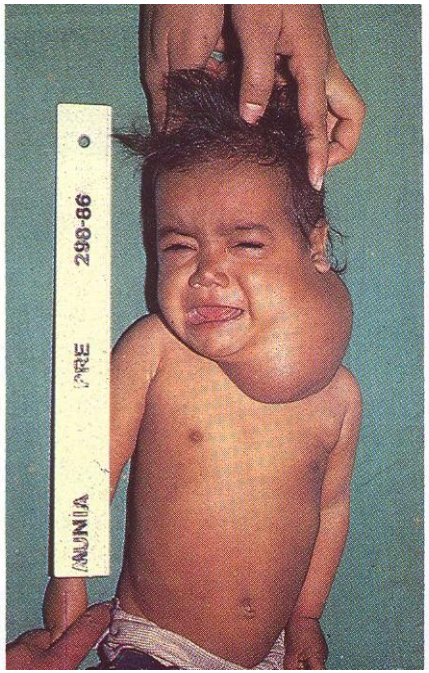
Cystic hygroma

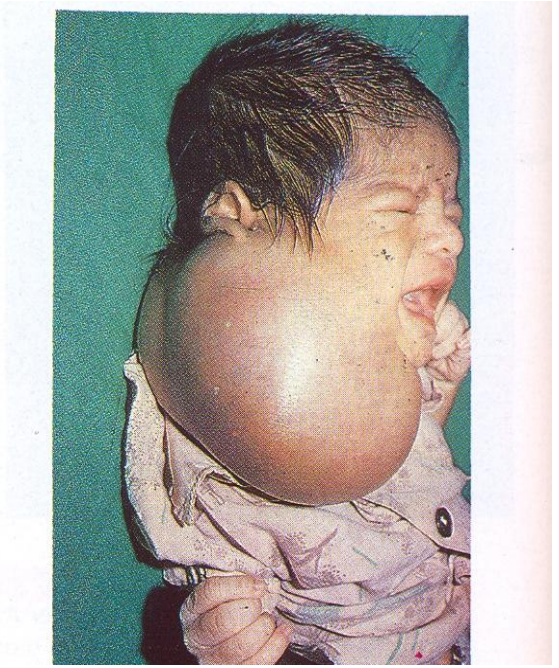
A congenital malformation affecting lymphatic channels. Arising from lymphatic channel multiple fluid filled cavity of lymphoid tissue

*Appears early, multilocular,filled with clear fluid (transillumination + ve "since its lymph tissue and lymph is clear").

*Lined by columnar epith.

*Common in : neck, axilla, groin, medistinum and tongue.





- Ex of cystic hygroma arising in the neck
- Some times its so severe

Branchial cyst

A congenital cyst in persistent cervical sinus.

*Below angle of mandible, behined mid s.mastoid.m

*Tense,distinct edges, +ve flyctuation and –ve transillumination. ”b\c it contain cholestrol crystals”

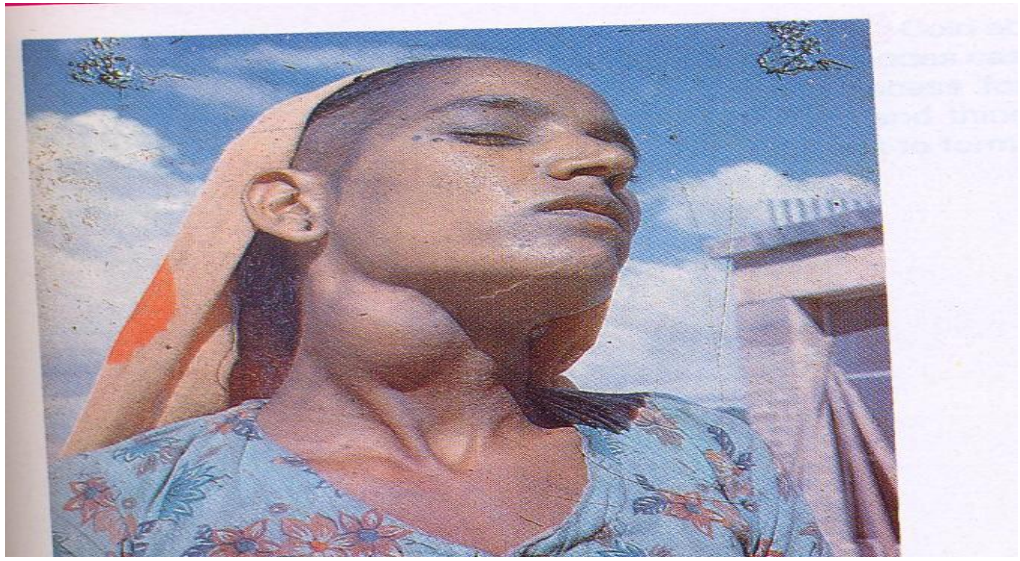
*Contains cholestrol crystals (diagnostic) if you susspect brachial cyst aspirat fluid and send it for chemistry they will look to cholestrol crystals .

Differential diagnosis of branchial cyst in the neck:

cold abcsess,dermoid c,plunging ranula,cystic hyg.,

carotid body tumour,lymph node,sub.mand.s.gland.

- Some time it may get infected with abcess formation and sometime it may open to the surface forming branchial sinus



- Ex. Of branchial cyst and this is the typical location around the neck

Ganglion

It a cystic swelling of synovial membrane of tendon or capsule in small joints that explain some of the feautures of ganglion:.

- myxomatous degeneration.

- may be communacating with the joint if its arising from capsule of joint this maybe a cause of recurrunce if someone excize his ganglion and has recurrance

Common sites:

* dorsum of wrist

* dorsum of foot and ankle.

*palmar aspect of wrist & fingers.

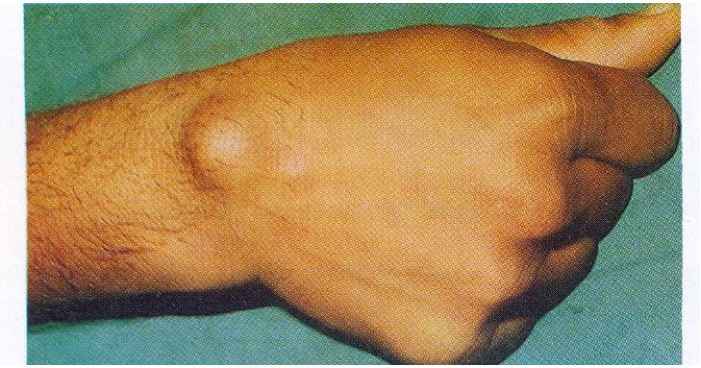
Ganglion cont;

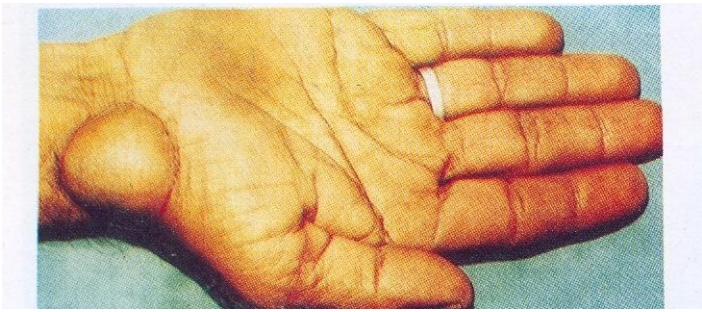
Clinically:

- Slowly growing lump.
- Common in females.
- Spherical, firm, cystic swelling.
- Mobile across tendon axis but limited along longitudinal axis.

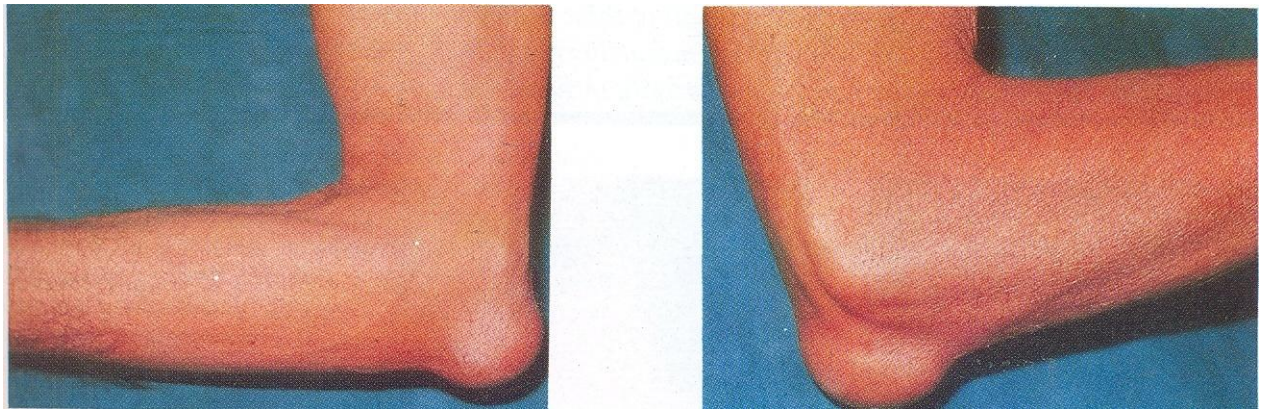
Rx:

excision





- At the back of the wrist and it could be in the lower part
- In this pt (1) you have to be careful b\c during excision you may injure the radial artery you have to put in mind that its very close to the radial artery



- This is not ganglion this is Bursitis
- This is an elbow of some body always putting his elbow on the disk →repeated friction they will have some source of Bursitis with fluid collection
- this is called students elbow
- If it happens to the knee patellar bursa its called housemaid knees

Lipoma

- It is a benign tumour of adipose tissue.
- The most common benign tumour in subcutaneous tissue.
- It's a Tumor of mature adipose tissue
- Common in trunk,neck and limbs but also it can be in the cavity
- like retroperitoneum and the thigh as well .
- Encapsulated v.s. diffuse.
- Rare to find pure lipoma most of the time May be mixed with neural
- tissue, vascular tissue and fibrous tissue e.g: fibrolipoma , neurolipoma , haemangio-lipoma.
- Dercum"s diseas (refer to pt with multiple lipomatosis).

lipoma cont,

clinical features:

- Painless ,soft and lobulated lump.
- Well defined edges and skin is free.
- Slipping sign positive. “when press it it slips away”
- Freely mobile.
- Fluctuation test is negative. “Some says that its psuedopositive but its not fluctuating at all b\c it contains fat tissue”
- Tranillumination test is negative.

Lipoma cont,

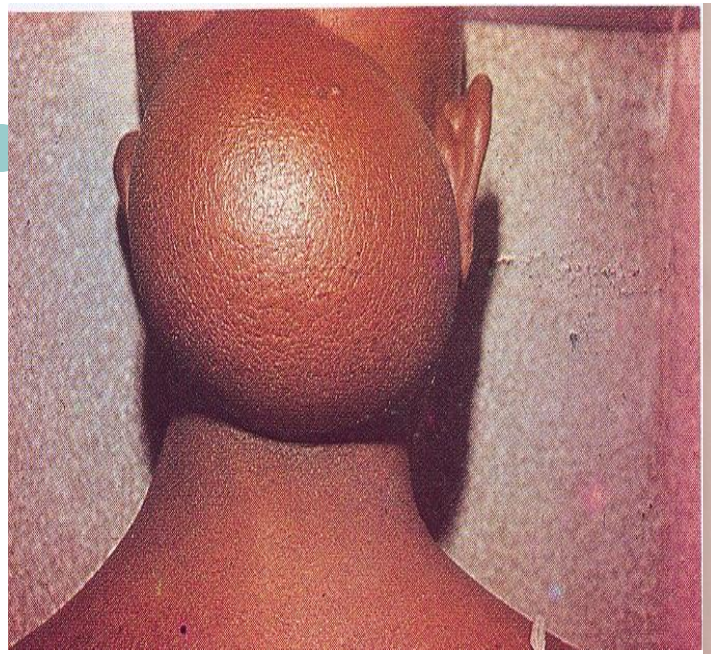
complication:

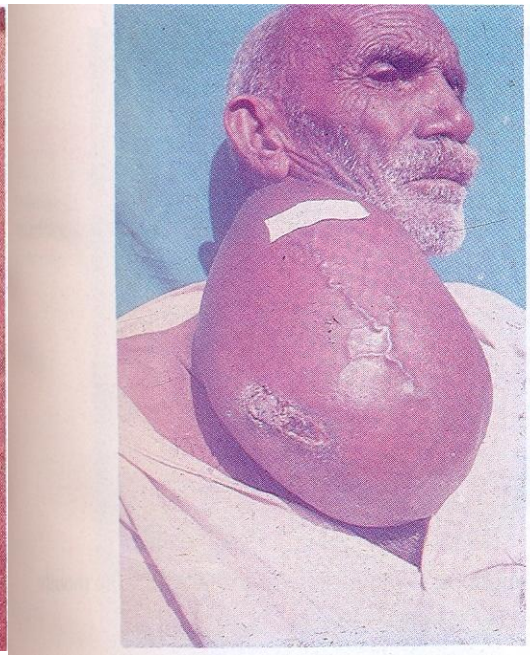
necrosis, calcification, haemorrhage, infection ,and rarely malignancy.

Treatment:

- Small asymptomatic – re-assurance but nothing to be done
- Symptomatic :

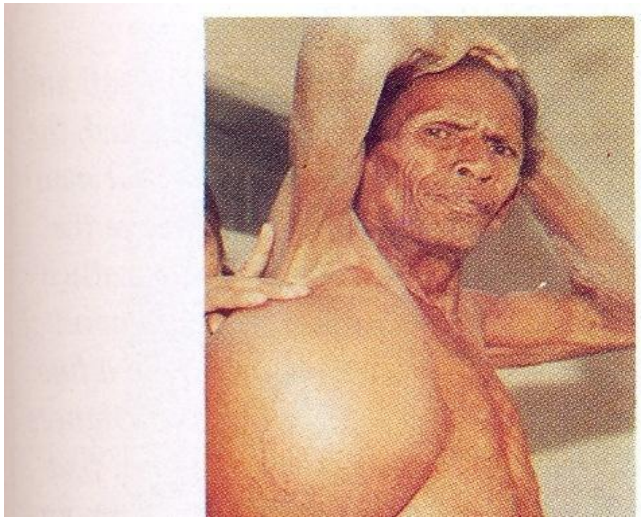
  - surgical excesion “if its encapsulated”
  - liposuction “if its diffuse”



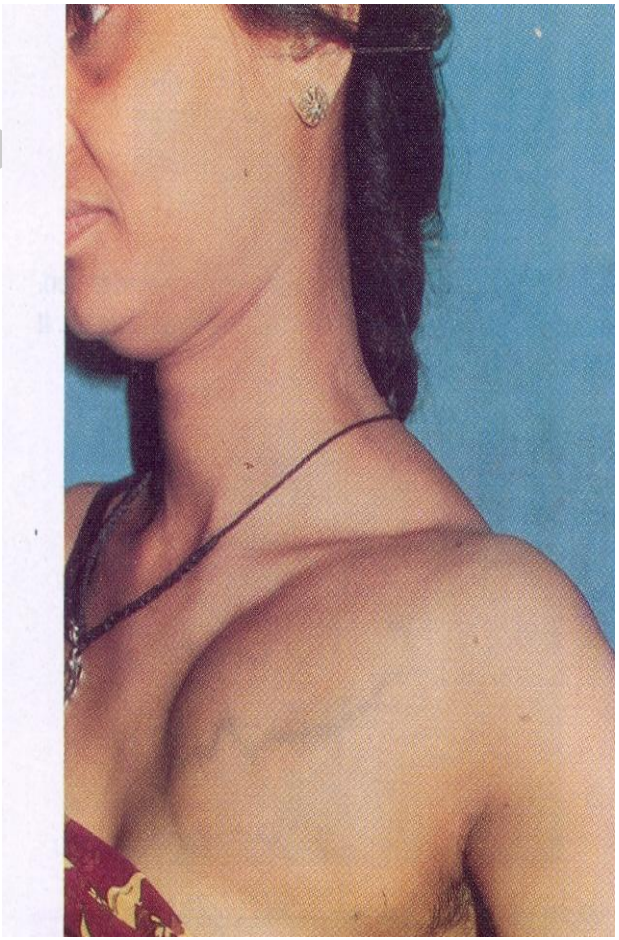


- Hanging lipoma neglected for years

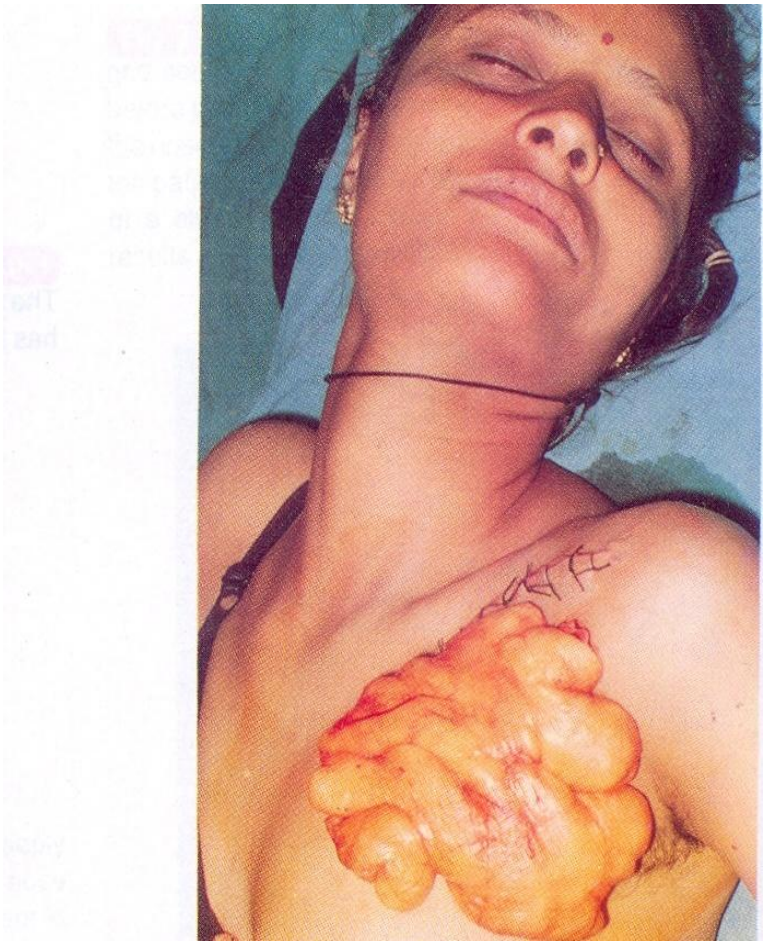
- Huge lipoma at back of the neck



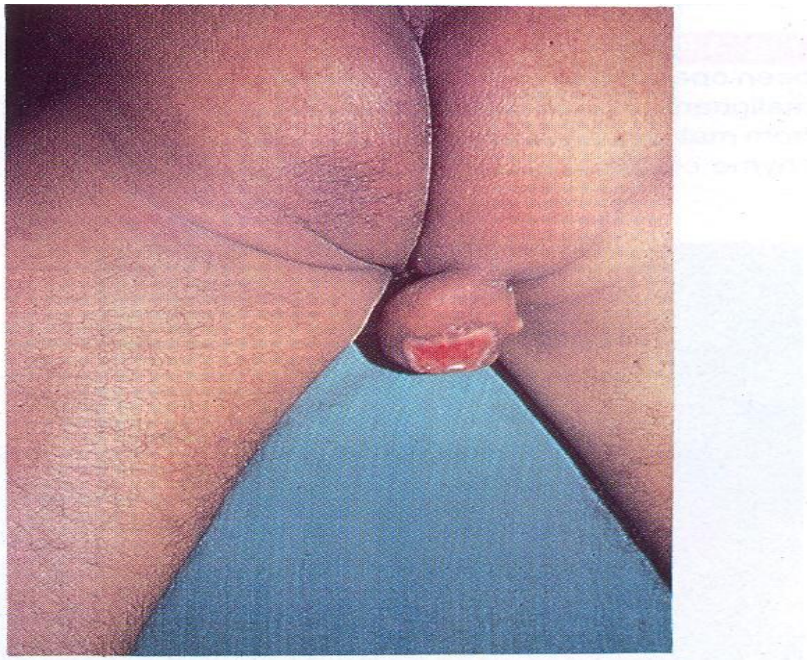
- Lipoma at the axilla



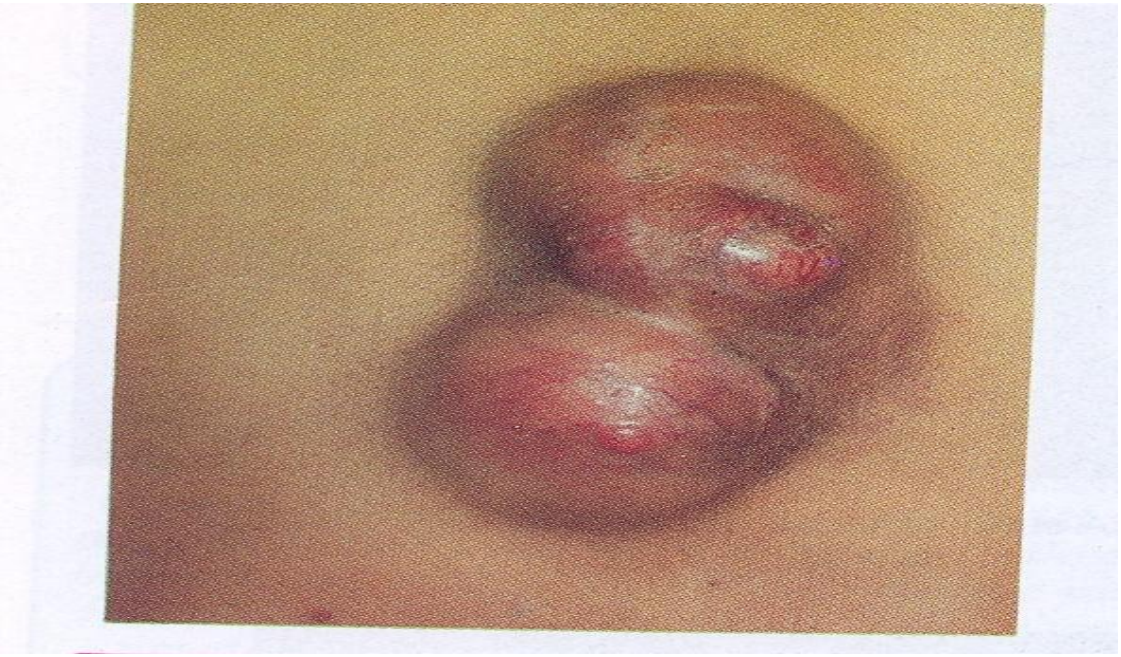
- Lipoma above the breast



- This is how it looks like when its excised
- This is lobulated fat



- Lipoma in the perinum and its hanging, every time he sit it keeps rubbing therefore he has some source of traumatize and ulcerating



- Liposarcoma which could develop de novo or secondary

NEUROFIBROMA

Tumour of nerve connective tissue (not neurons)

Types:

- Localised or solitary NF.
- Generalized multiple neurofibromatosis (Von-Recklinghausen”s disease)

The rest are very rare

- Plexiform NF
- Elephantiasis NF
- Cutaneous NF

Neurofibroma cont;

clinical features of N.F:

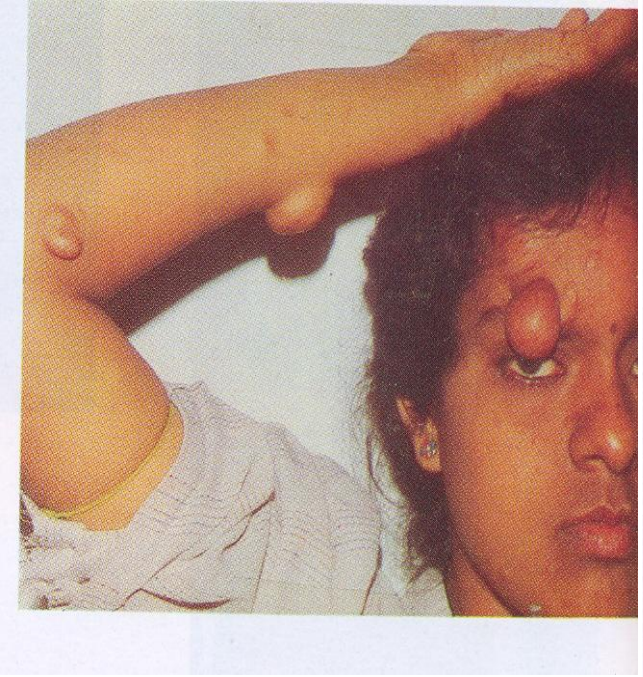
- Encapsulated, rounded or elliptical swelling.
- Smooth, firm with well defined edges.
- Tenderness and parasthesia may be present ”b\c it could press the nerve” .
- Mobility may be deminished along nerve-axis.

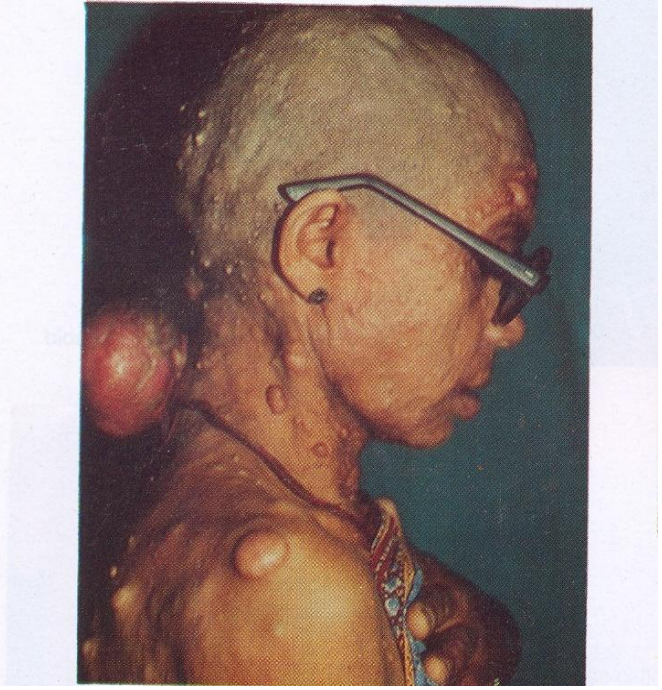
Rx:

excision

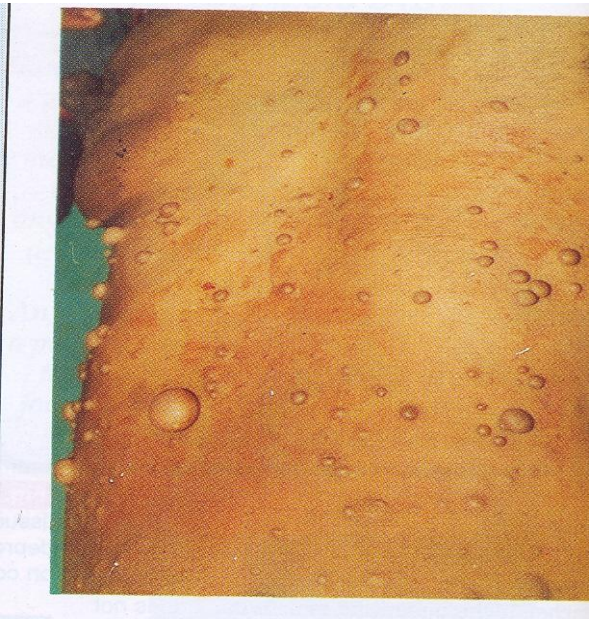
Multiple neurofibromatosis (V-R dsease)

- Inhereted as an autosomal dominant disease.
- More common in males.
- Multiple tumours- with Cafe-au-leit spots.
- Peripheral and cranial nerves may be affected.
- May be associated with other tumors (eg, endocrine).





- Pt with multiple neurofibromatosis over his body



- Brown area are called **Cafe-au-leit spots**