

MORE THAN A FINGER: PERIPHERAL MANIFESTATIONS OF SYSTEMIC PATHOLOGY

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Norman Browse- Introduction to The symptoms and signs of surgical disease

- “Make early physical contact with the patient in the examination by holding their hand and counting the pulse.
- The physical contact that is essential for the clinical examination forges a bond between you and the patient.
- It is an extraordinary privilege granted to you by the patient and must never be abused.”



General examination of the hands

- **Temperature** Observe the temperature of the hands—but remember that it will be affected by the air and room temperatures.
- **Moisture** Are the patient's palms sweating excessively?
- **Colour** Pallor of the skin of the hands, especially in the skin creases of the palm and in the nail beds, suggests anaemia. Reddish-blue hands occur in polycythaemia.
- The fingers may be **stained** with nicotine.
- **Callosities** The position of any callosities
- may reflect the patient's occupation.



Nails- clues to underlying disease

- Look at the colour and the shape of the nails.
- *Bitten nails* may indicate nervousness and anxiety.
- *Pits and furrows* are associated with skin diseases such as psoriasis.

Splinter haemorrhages under the nails
are caused by small arterial emboli

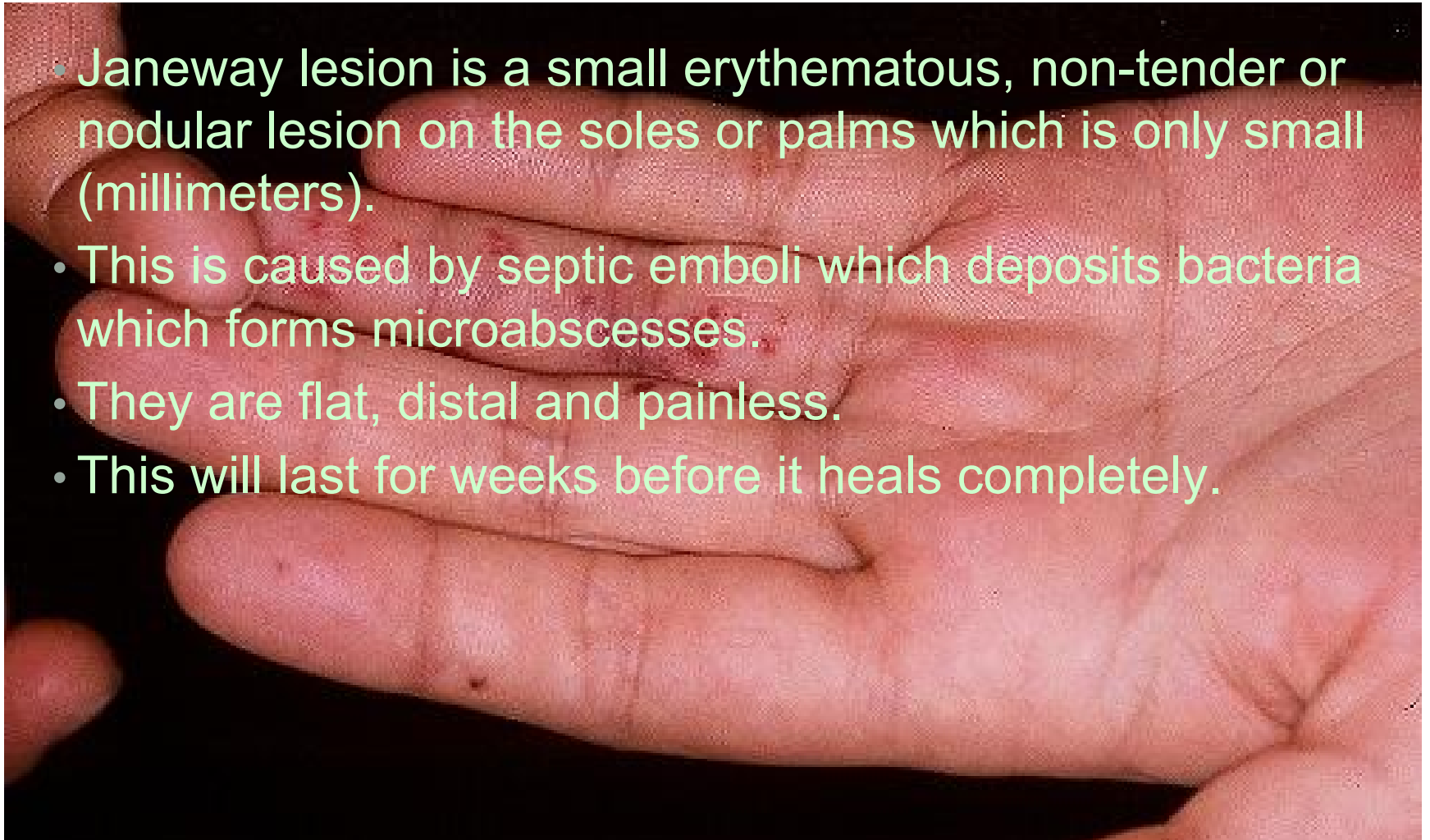


Janeway lesions (special features of endocarditis)



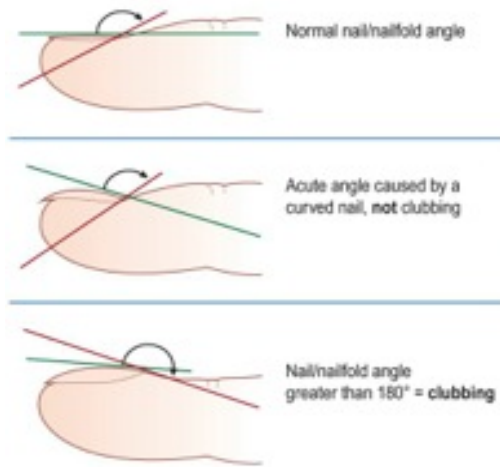
Janeway lesions (special features of endocarditis)

- Janeway lesion is a small erythematous, non-tender or nodular lesion on the soles or palms which is only small (millimeters).
- This is caused by septic emboli which deposits bacteria which forms microabscesses.
- They are flat, distal and painless.
- This will last for weeks before it heals completely.



Koilonychia- spoon shaped nails





(a) Normal and abnormal nail/nailfold angles.



(d) Clubbing of all the fingers. Note the swelling of the terminal phalanges.



(b) A normal finger.



(c) A nail/nailfold angle of greater than 180° denotes clubbing.

Your patient has clubbing, what are the possible causes

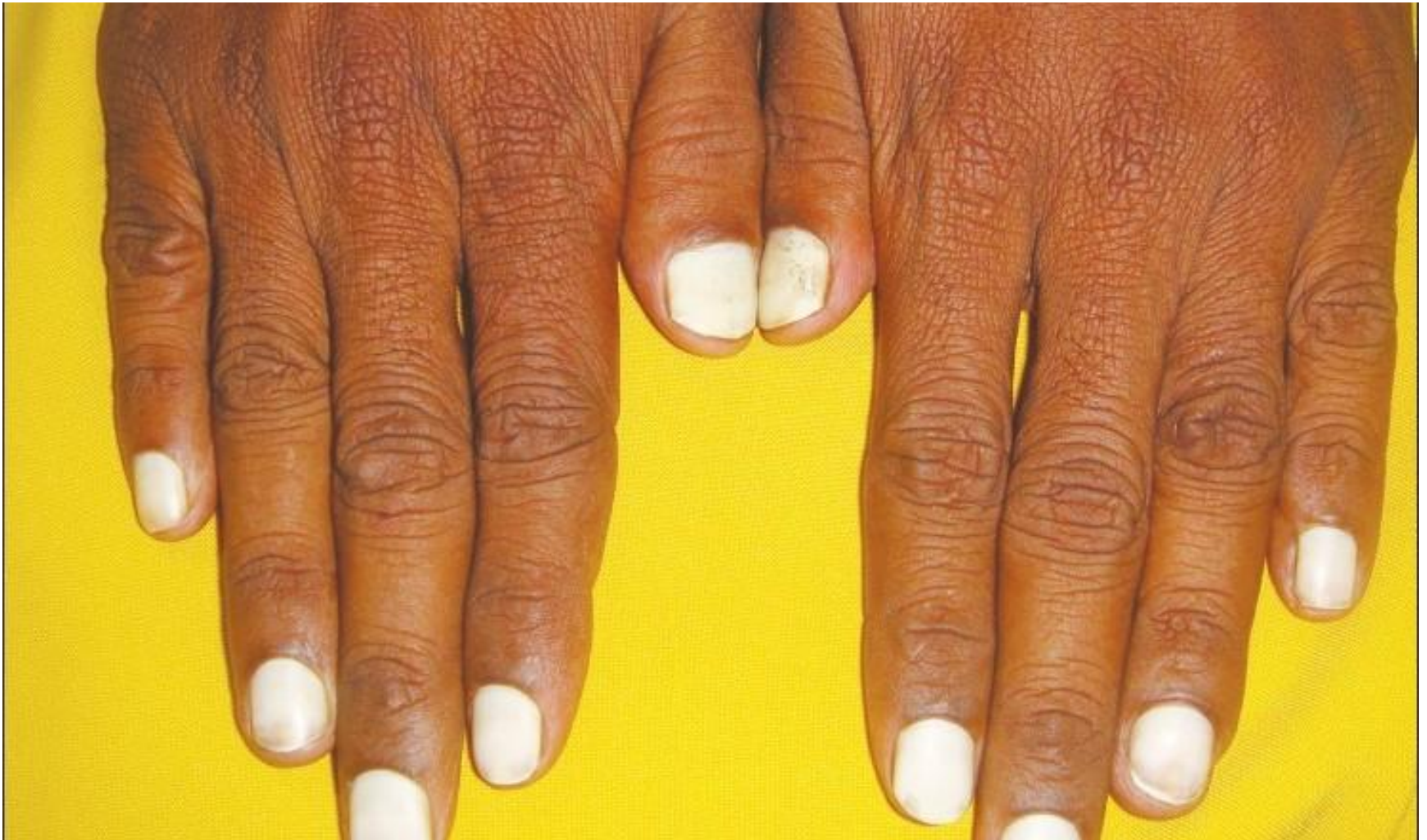
Appearance



Definition

- The pathological process leading to finger clubbing is poorly understood. Nevertheless, it is a common sign in chest disease and is most frequently seen as:-
 - a paraneoplastic syndrome
 - in chronic chest sepsis
 - in chronic cyanotic conditions. **Lung cancer** is the most common pulmonary cause, and **congenital cyanotic heart disease** – in which a right to left shunt exists – is the most common cardiac cause.

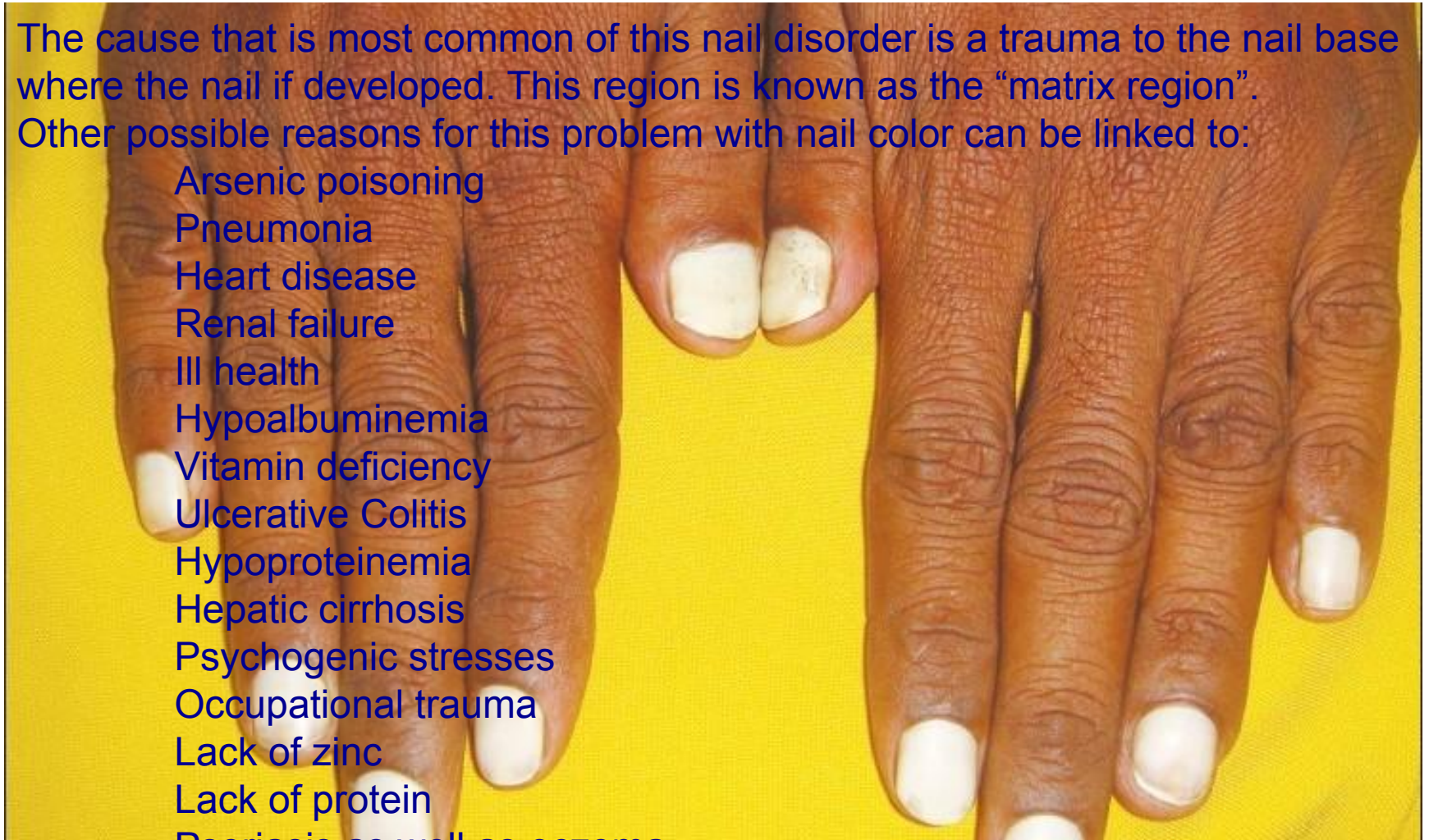
Leuconychia- white nails



Leuconychia- white nails

The cause that is most common of this nail disorder is a trauma to the nail base where the nail is developed. This region is known as the “matrix region”. Other possible reasons for this problem with nail color can be linked to:


- Arsenic poisoning
- Pneumonia
- Heart disease
- Renal failure
- Ill health
- Hypoalbuminemia
- Vitamin deficiency
- Ulcerative Colitis
- Hypoproteinemia
- Hepatic cirrhosis
- Psychogenic stresses
- Occupational trauma
- Lack of zinc
- Lack of protein
- Psoriasis as well as eczema



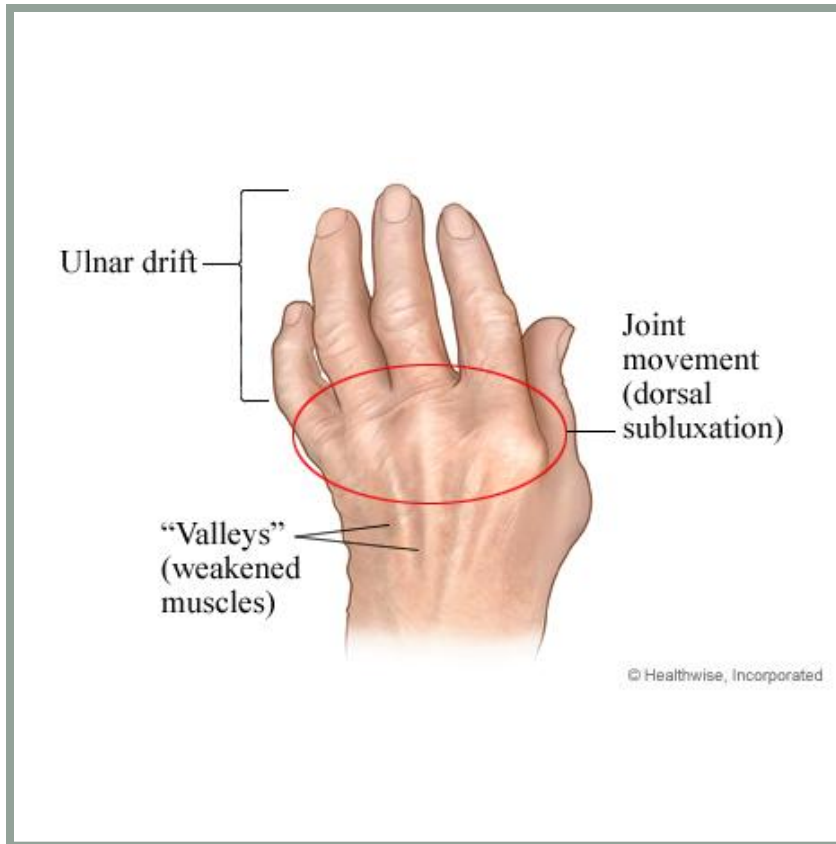
Palmar erythema- reddish discoloration



Palmar erythema- reddish discoloration

- 
- Palmar erythema is common in people with rheumatoid arthritis
 - around 30% of pregnant women get to experience the same.
 - Palmar erythema is also being associated with liver cirrhosis where about 23% of patients experience the reddening of the palm of the hands.
 - Women taking oral contraceptive pills are also seen with palmar erythema which is being linked to the high levels of estrogen as an effect of the oral contraceptive pills.

Peripheral signs of systemic disease- rheumatological disease



Peripheral signs of systemic disease- rheumatological disease



Less common connective disease manifestations

Scleroderma or CREST syndrome

- Calcinosis
- Raynaud's
- Esophageal dysmotility
- Sclerodactyly
- Telangiectasia



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Gout and gouty tophi

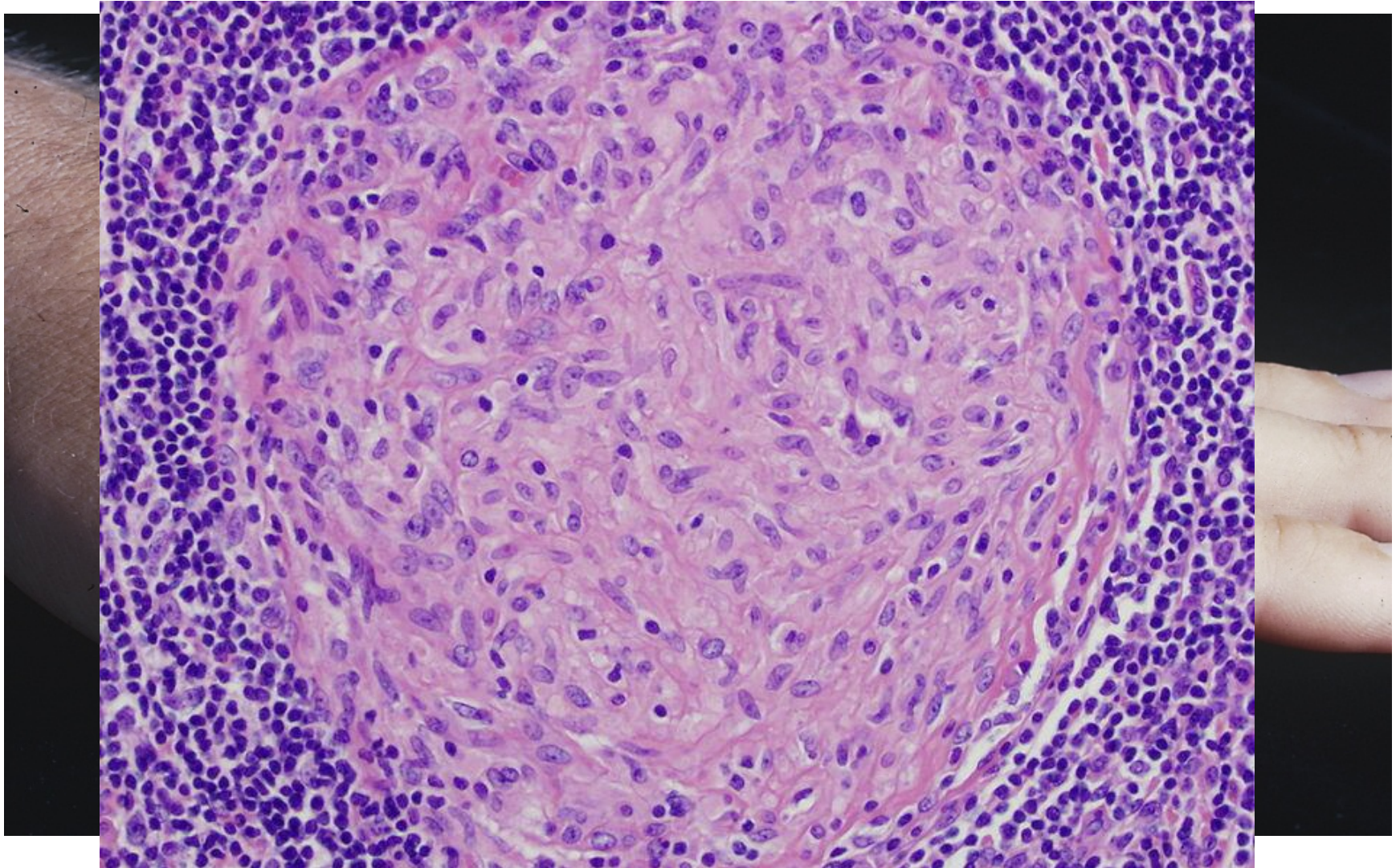
- Gout is a medical condition characterised by recurrent attacks of acute inflammatory arthritis (a red hot swollen joint)
- MTP hallux most commonly affected
- May also present as tophi kidney stones or urate nephropathy
- Cause- elevated blood [Urate]



A small raised erythematous lesion appeared on the dorsum of the hand of a man who worked in a petshop



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Mycobacteria grown on solid medium (37°C)



Mycobacterium marinum

- “atypical” mycobacterium
- Grows in fresh water
- Typically starts as a single nodule; can progress to multiple ascending nodules
- Treatment: surgical excision; clarithromycin, tetracyclines, rifampin, ethambutol

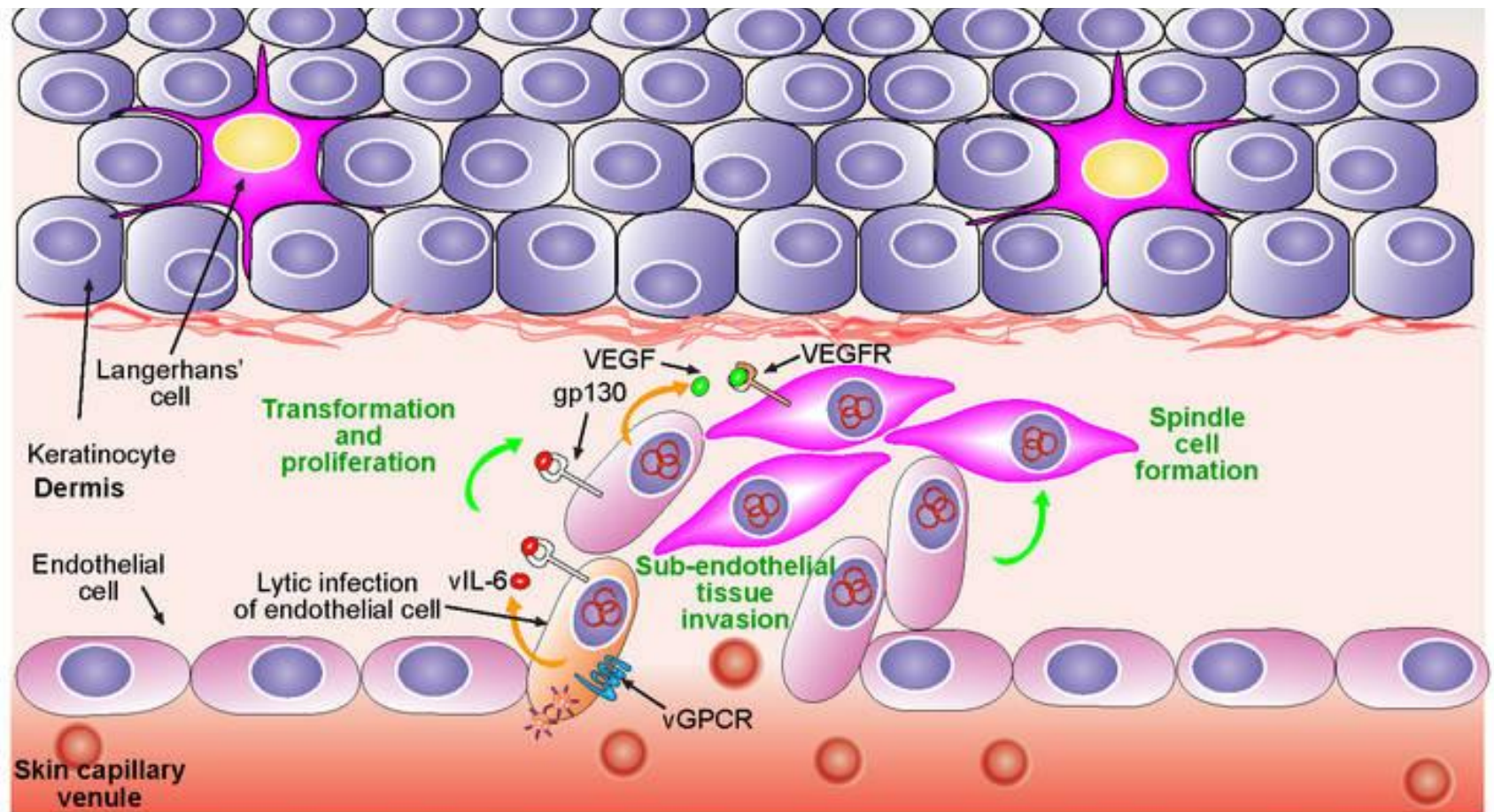
Kaposi's sarcoma in an AIDS patient



The finding of one KS lesion merits a more thorough search for other signs



The underlying basis of KS



Infection of endothelial cells leads to their transformation and proliferation. Invasion of the subendothelial cell layer, such as the dermis of the skin, occurs. Proliferation is mainly driven by cytokine stimulation of latently infected cells in a paracrine manner. Viral cytokines such as vIL-6, a homologue molecule of human IL-6, stimulates the production of VEGF. Viral IL-6, produced by latent and latently infected cells, is able to stimulate the gp130 chain of the IL-6 receptor and results in modulation

Summary

- Be thorough with overall examination of the hands (and feet)
- Signs may be a manifestation of systemic disease or infection
- Look further afield for clues, if something unusual is identified
- Keep a friendly general physician 'at hand'

