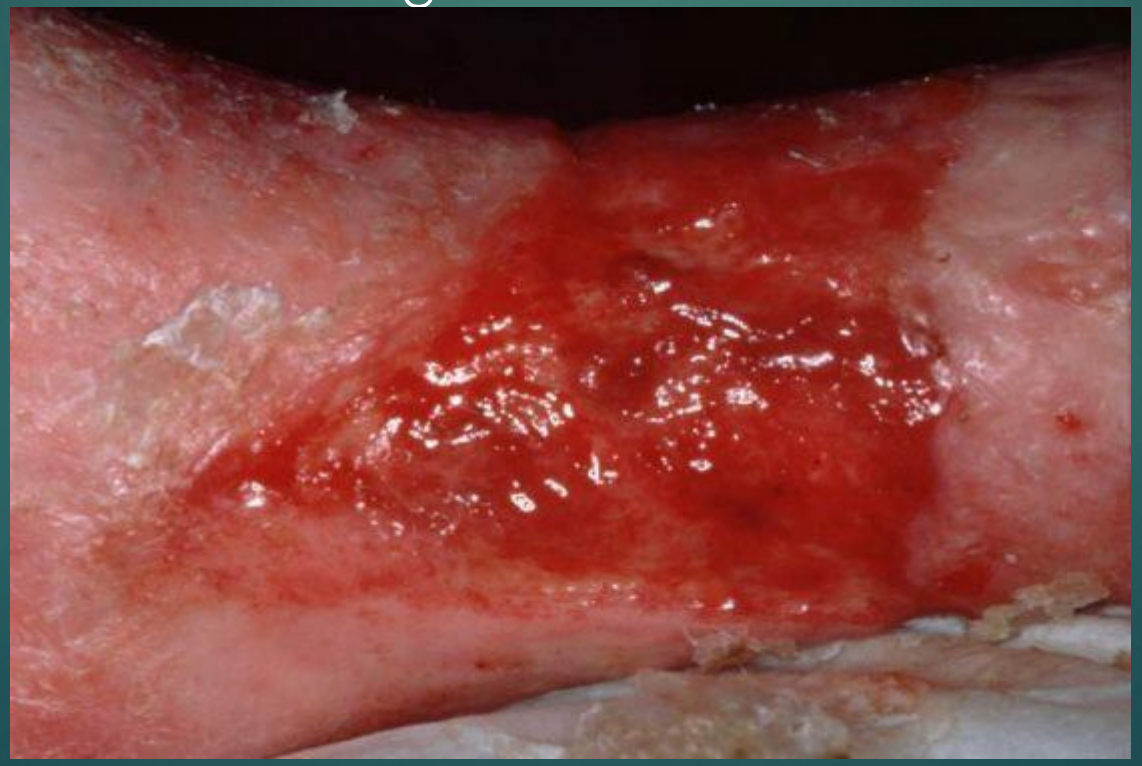

بسم الله الرحمن الرحيم

Leg ulcer in RA

DR AREZOU GHASSEMBAGLOU ,RHEUMATOLOGIST

- A 71-year-old woman presented to the rheumatology clinic with a painful ulcer of the right lower leg.
- She reported worsening fatigue over the previous 6 months and had lost about half a stone in weight over this time.
- She was known to have RF-positive rheumatoid arthritis, diagnosed 40 years previously.
- Her disease had been difficult to control and she had undergone multiple joint replacements and spinal stabilization.
- She had leg ulcers in the past but was concerned that this ulcer was not healing, was intensely painful, and often bled.

- On examination, there was a large circumferential ulcer on the medial aspect of the right lower leg, extending upwards from the ankle . The ulcer was oozing blood.



- Investigations showed the following:
- ◆ Hb 9.5 g/L; WBC 6.59 × 109/L (neutrophils 4.81, lymphocytes 0.92); platelets 231 × 109/L; MCV 83.8 fL
- ◆ Sodium 139 mmol/L; potassium 4.1 mmol/L
- ◆ Urea 9.3 mg/dL; creatinine 1 MG/DL
- ◆ CRP 54 g/L; ESR 46

- What are the possible causes of leg ulcers in patients with RA?

2. What is the approach to management of RA leg ulcers?

. What are the possible causes of leg ulcers in patients with RA?

Patients with RA are predisposed to the development of chronic leg ulcers, aetiology of which is commonly multifactorial.

- Venous insufficiency,
- vasculitis,
- and impaired arterial circulation are the most common precipitating factors.
- Pyoderma gangrenosum is a rarer cause;
- local malignant change and infection are reasons why there might be a delay in healing.

- Systemic rheumatoid vasculitis often presents as a cutaneous vasculitis with enlarging leg ulcers.
- Vasculitic ulcers are characteristically deep and painful, and are typically found in the areas of the medial and lateral malleoli.
- They are caused by a necrotizing vasculitis of medium-sized arteries which is histologically similar to that seen in PAN

Venous ulcers

- commonly occur on the medial side of the leg.
- often associated with varicose eczema and local oedema.
- The surrounding skin is thickened with hyperkeratosis and progression to chronic lipodermatosclerosis.
- In contrast to vasculitic ulcers, venous ulcers are painless unless infected.
- Venous ulceration is due to chronic venous insufficiency
- largely a downstream effect of venous hypertension.

- Risk factors :
- varicose veins,
- deep vein thrombosis,
- previous trauma
- surgery,
- advanced age,
- and immobility.
- In addition, chronic glucocorticoid use in RA patients further promotes ulceration by increasing skin fragility.

Arterial ulcer

- Arterial ulcers are usually found on the feet, particularly at pressure points such as the heel and toes.
- ulcers appear 'punched out' with a well-defined border, characteristically painful.
- The patient usually have other features of arterial insufficiency including pale cool feet and leg pain on exertion or elevation.
- Arterial ulcers occur as a result of arterial insufficiency caused by atherosclerosis of the lower-limb arteries.
- Patients will have an impaired ankle–brachial pressure index (ABPI) on clinical assessment

pyoderma gangrenosum

- often progress quickly and may start at the site of a minor tissue injury,
- often first appearing as a small red papule or nodule.
- Breakdown skin then results in the formation of painful ulcers.
- Classically, they have a well-defined border and are violet or blue in colour.
- As the lesions enlarge, the edge may be undermined and the surrounding skin can become indurated.
- Several ulcers may occur at the same time.

- the painful non-healing ulcer in a patient with long-standing seropositive RA raises the possibility of underlying rheumatoid vasculitis.
- The additional constitutional symptoms of fatigue and weight loss are typical.
- Rheumatoid vasculitis usually occurs in long-standing RA after the inflammatory arthritis has subsided and patients are left with widespread joint destruction.

- Patients are usually positive for rheumatoid factor and have rheuma toid nodules.
- The onset of vasculitis is usually associated with constitutional symptoms.
- symptoms such as fatigue, myalgia, and weight loss are non- specific and may be difficult to interpret in these debilitated patients.

What is the approach to management of RA leg ulcers?

If there is no clinical evidence for a systemic vasculitis, ulcers should be managed in the same way as for any other patient with a leg ulcer.

This may include moist saline dressings to help debride layers of slough from granulation tissue.

In patients with exudative ulcers, occlusive hydrocolloid dressings are helpful.

If there is no arterial insufficiency, compression bandages or stockings can help alleviate swelling due to venous stasis.

If an ulcer fails to respond to these conservative measures, underlying rheumatoid vasculitis should be considered.

Since treatment involves aggressive immunosuppression, the diagnosis is best first confirmed by biopsy of the lesion.

- 3. What different types of rheumatoid vasculitis occur?
- 4. What are the principles of treatment of rheumatoid vasculitis?
- 5. Discuss the role of cyclophosphamide therapy for rheumatoid vasculitis

What different types of rheumatoid vasculitis occur?

- Rheumatoid vasculitis affects a range of blood vessel types
- . These include medium- sized muscular arteries, arterioles, and venules
- Like other forms of systemic vasculitis, there is destructive inflammation of the vessel wall, which leads to vessel occlusion, tissue ischaemia, and necrosis.
- Many of the serious clinical manifestations are caused by a medium-sized vasculitis.

However, sequelae of small-vessel involvement (e.g. purpura and petechiae) also occur.

- Rheumatoid vasculitis can affect several organs, with skin, peripheral nerves, eyes, and heart most commonly involved.

- Deep cutaneous vasculitis is the most common and can also cause digital ischaemia and gangrene.

- Peripheral nerve involvement is the result of a vasculitic neuropathy character ized by inflammation of the vasa nervorum which results in infarction of peripheral nerve fibres.
- both mononeuritis multiplex and distal sensory or sensorimotor neuropathy can occur.
- Vasculitic neuropathy is typically rapid in onset and usually manifests as anaesthesia.
- If treated promptly, most patients have a gradual, although partial, return of nerve function.

- Ocular manifestations of rheumatoid vasculitis include scleritis and peripheral ulcerative keratitis (PUK).
- While anterior scleritis is readily diagnosed on clinical examination, posterior scleritis is more subtle, and the symptoms of visual blurring and ocular tenderness are important clues.
- Both forms of scleritis are intensely painful.

- PUK is characterized by the development of ulceration near the corneoscleral junction.
- Patients with PUK may develop the ‘corneal melt’ syndrome, caused by corneal keratolysis and subsequent perforation of the globe. This is a devastating complication as patients often abruptly lose vision in the affected eye.

- Pericarditis is usually the earliest presentation of the cardiac manifestations of rheumatoid vasculitis.
- Arrhythmias can also occur, although it is often difficult to attribute these directly to vasculitis as patients often have other relevant comorbidities.
- Acute coronary syndromes resulting directly from coronary arteritis are unusual.

What are the principles of treatment of rheumatoid vasculitis?

Treatment should be guided by the type and severity of the organ damage.

- Skin ulcer and systemic RV:
- GC plus rituximab or cyclophosphamaid

- Skin ulcer without systemic RV:
- GC: 0.5- 1mg/kg (solitary ulcer or less <1cm)
- Multiple ulcer >1cm and rapidly progressive:initial IV GC without combination but if not effective start cyclophosphamaid with GC or ritoximab

- reatment is guided by monitoring clinical response as well as inflammatory markers (CRP, ESR) and markers of organ function (e.g. urea, creatinine).
- Treatment is continued until disease remission is achieved.

Discuss the role of cyclophosphamide therapy for rheumatoid vasculitis

- Cyclophosphamide is an established treatment of primary systemic vasculitides such as WG .
- it is accepted as a first-line treatment.
- Of note, a small case series of rheumatoid vasculitis patients reported disease remission in all patients following daily oral cyclophosphamide therapy.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