CASE DISCUSSIONS
REPAIR
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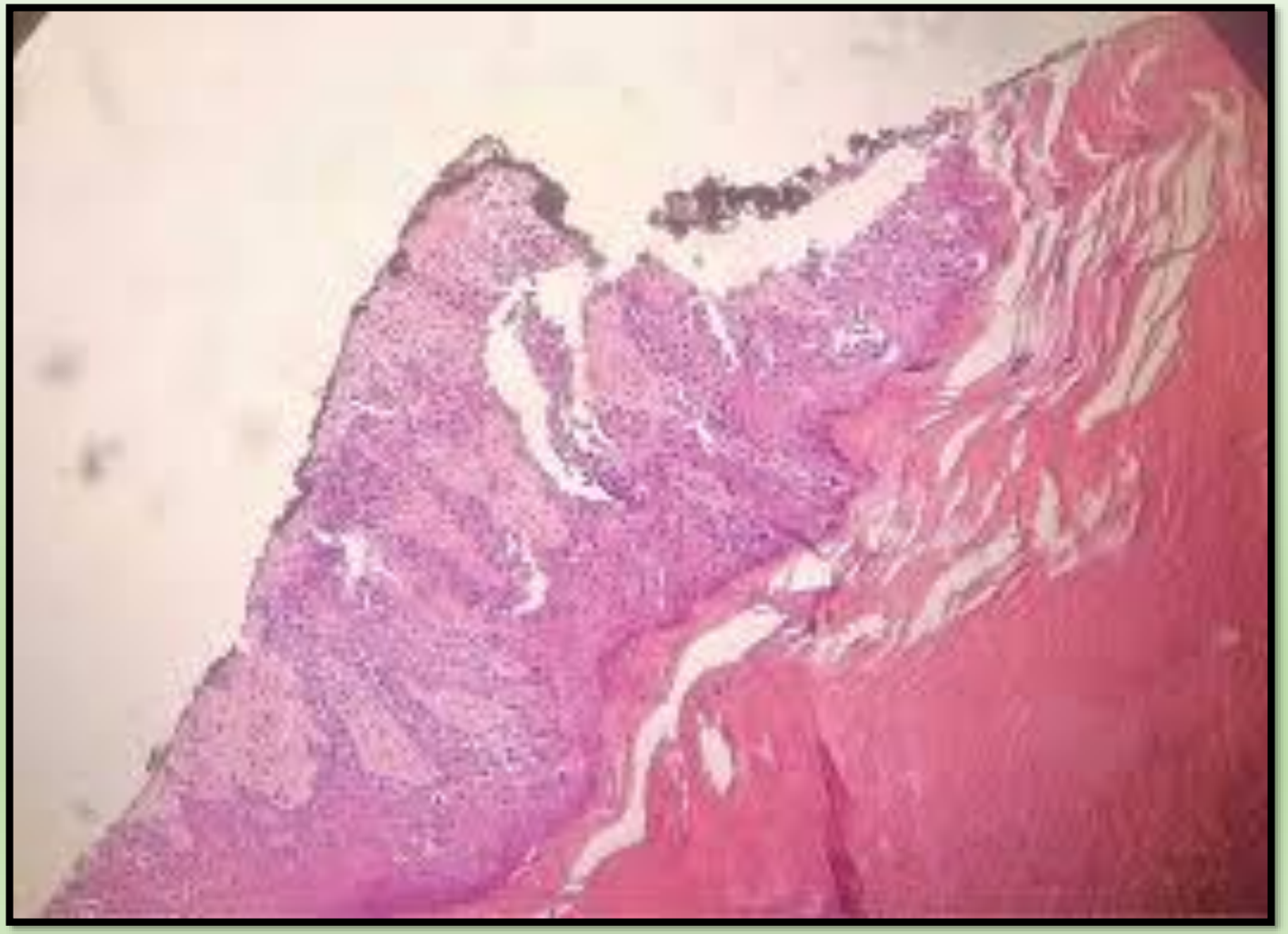
CASE 4

A 60-year-old diabetic patient presents with a non-healing foot ulcers. The wound is 5 cm in diameter, with a foul odor and purulent discharge. The patient has a history of peripheral vascular disease. Gross pictures shown.

GROSS APPEARANCE ON PHYSICAL EXAMINATION

MICROSCOPIC EXAMINATION AFTER DEBRIDEMENT:



DISCUSSION POINTS:

1. What are the factors that impair wound healing in this patient?
2. How does diabetes affect the inflammatory response and wound healing?
3. What are the potential treatment options for this patient?

What are the factors that impair wound healing in this patient?

- Diabetes, which affects blood flow, neuropathy, and cellular function
- Peripheral vascular disease, which reduces blood supply to the wound
- Infection (indicated by purulent discharge and foul odor)
- Possibly poor nutrition or inadequate wound care

How does diabetes affect the inflammatory response and wound healing?

Diabetes impairs wound healing by:

- **Reducing blood flow and oxygen delivery to tissues**
- **Impairing neutrophil and macrophage function, leading to persistent infection**
- **Altering the balance of cytokines and growth factors necessary for healing**
- **Increasing the risk of neuropathy, which reduces sensation and increases the risk of further injury**

What are the potential treatment options for this patient?

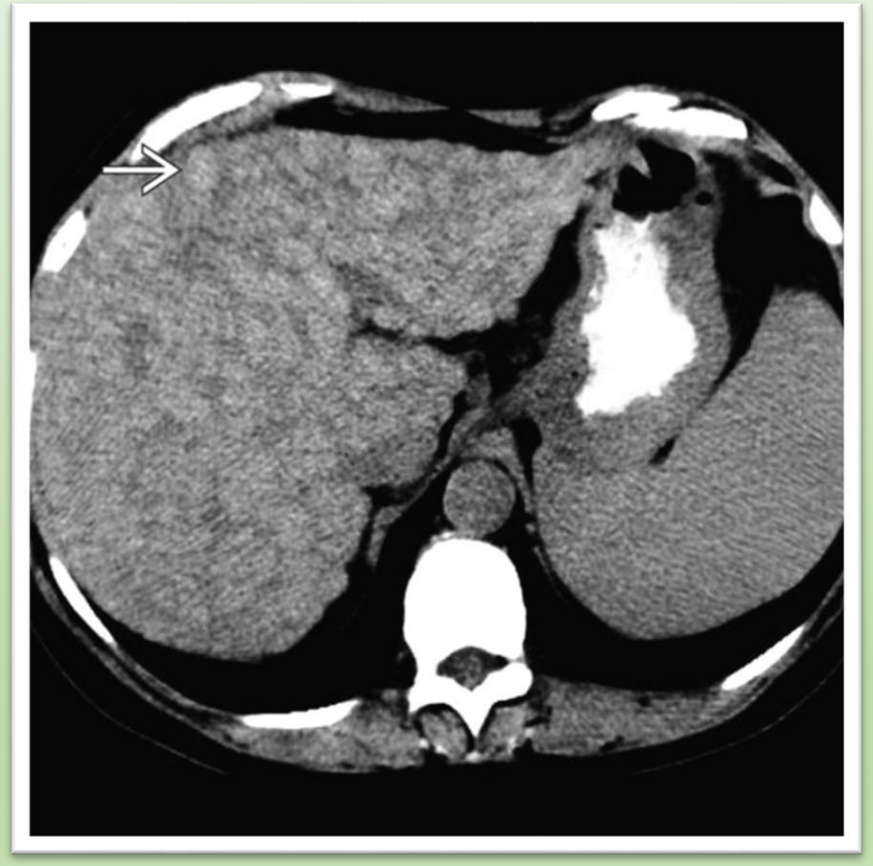
Potential treatment options include:

- **Debridement to remove dead tissue and promote healing**
- **Antibiotics to treat infection**
- **Offloading pressure from the affected area**
- **Improving glycemic control**
- **Advanced wound care therapies (e.g., negative pressure wound therapy, growth factors)…”diabetic foot clinics”**
- **Revascularization procedures to improve blood flow**
- **Last resort: Amputation**

CASE 5:

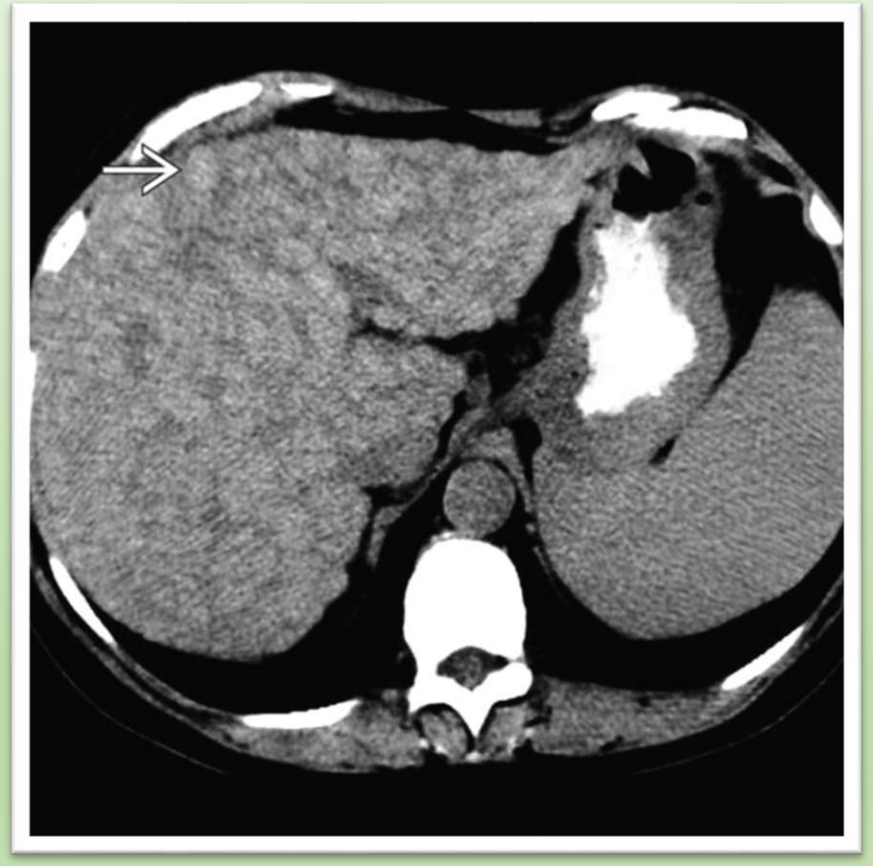
A 55-year-old male with a history of chronic hepatitis C infection presents with abdominal distension, peripheral edema, and jaundice. Laboratory tests reveal elevated liver enzymes, low albumin levels, and a prolonged INR. Imaging studies show a nodular liver with signs of portal hypertension (CT and biopsies shown)

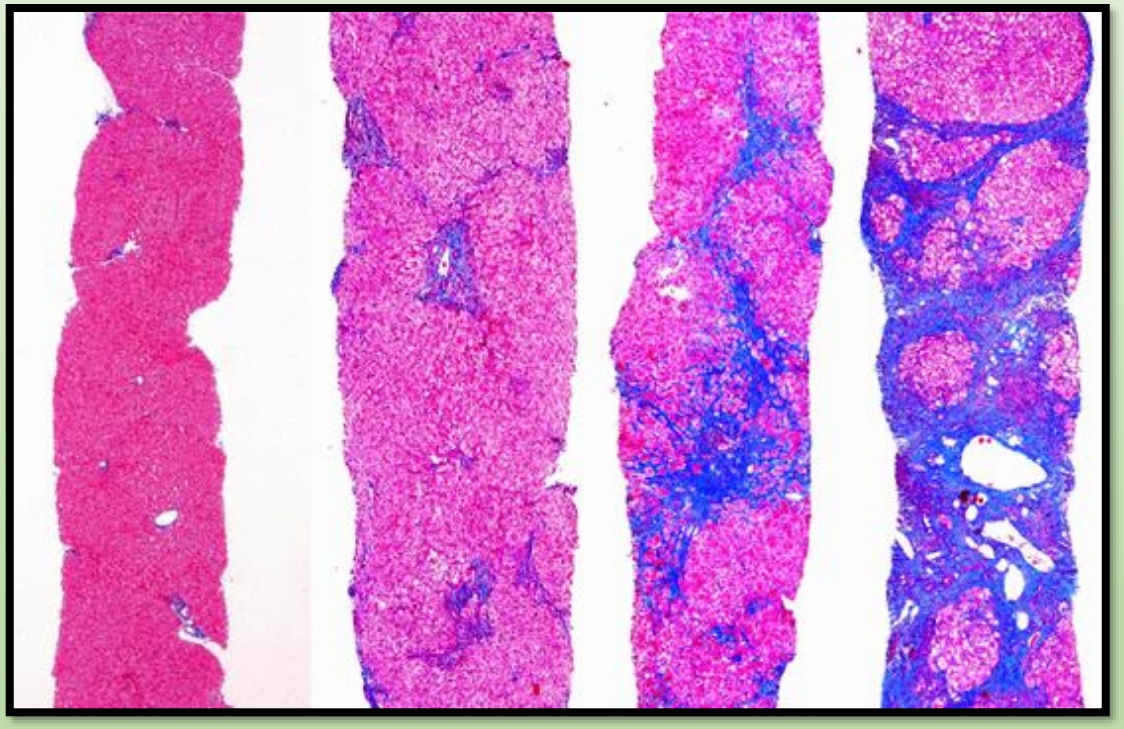
CT scan



Needle biopsy

CIRRHOSIS (IMAGING AND TISSUE APPEARANCE)





What is the pathogenesis of cirrhosis (Fibrosis) in this patient?

- **Cirrhosis in this patient is caused by chronic hepatitis C infection, leading to:**
  - **Persistent inflammation and hepatocyte injury**
  - **Activation of hepatic stellate cells, which produce excess extracellular matrix proteins (e.g., collagen)**
  - **Fibrosis and scarring, leading to distortion of the liver architecture and impaired liver function**

How does cirrhosis (Fibrosis) lead to the patient's symptoms?

Cirrhosis leads to:

- **Portal hypertension, causing splenomegaly, varices, and ascites (abdominal distension)**
- **Decreased albumin production, leading to hypoalbuminemia and peripheral edema**
- **Impaired bilirubin metabolism, causing jaundice**
- **Coagulopathy due to decreased production of clotting factors, leading to a prolonged INR**

What are the potential complications of cirrhosis?

Potential complications include: All can be fatal…..

- **Variceal bleeding**
- **Hepatic encephalopathy**
- **Ascites and spontaneous bacterial peritonitis**
- **Hepatocellular carcinoma**
- **Liver failure**

GOOD LUCK