

Diabetic Myonecrosis in India's Growing Diabetic Population: A Case for Clinical Vigilance

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Background

Diabetes mellitus continues to pose a significant and escalating public health burden in India. India ranks top among the countries with the highest prevalence of Type 2 Diabetes. Poor glycemic control, delayed diagnosis, and limited healthcare access contribute to increased incidence of complications. Diabetic Myonecrosis (DMN) is a rare, underdiagnosed complication. It is frequently misinterpreted due to its nonspecific presentation, particularly in patients with multiple comorbidities. It presents as sudden, localized muscle pain and swelling, often mimicking infection or vascular pathology. The underlying mechanism is believed to involve microvascular ischemia and reperfusion injury in the setting of advanced diabetic microangiopathy.

Case description

We report a 69-year-old housewife with a complex medical history.

History includes long-standing Type 2 Diabetes Mellitus on insulin, CAD (s/p CABG 2010), primary hypertension, Hypothyroidism, Dyslipidemia, and PAD (s/p left SFA stenting in 2022).

She presented with acute onset of pain and swelling in the right thigh of two weeks duration.

On examination, right thigh had tenderness and induration without signs of erythema or systemic infection.

Empirical treatment was initiated with IV antibiotics, analgesics, and anti-edema therapy.

Course in Hospital

- CT angiography showed diffuse atherosclerotic changes; the right SFA had marked wall calcification but preserved luminal contrast opacification.
- CT confirmed significant soft tissue and muscle edema, without evidence of abscess or arterial occlusion.

- Daily dressing was done and serial monitoring of inflammatory markers.

- Due to persistently elevated inflammatory markers despite antibiotics, MRI of the right thigh was performed.
- Bilateral lower limb venous Doppler ultrasound ruled out DVT.

- The clinical picture, in conjunction with imaging findings and absence of infection, supported the diagnosis of Diabetic Myonecrosis.

- The patient was successfully managed with conservative measures, including optimized glycemic control, analgesia, and supportive care.

- She achieved gradual improvement following this regimen.

Investigations

MRI of the Right Thigh: Consistent with Diabetic Myonecrosis



Imaging demonstrated a moderately sized (3.2cmx2.2cmx8.9cm), ill-defined hypo enhancing area within the vastus lateralis and vastus intermedius muscles. Findings were consistent with Diabetic Myonecrosis.

Associated anterior compartment myositis and diffuse cellulitis were noted, but no focal fluid collection or abscess was present.

CT Angiography: Diffuse atherosclerotic changes; SFA flow preserved.

Venous Doppler: Ruled out Deep Vein Thrombosis (DVT).

Inflammatory Markers: Persistently elevated despite antibiotic therapy.

Discussion

DMN is believed to result from microvascular ischemia and reperfusion injury in the context of advanced diabetic microangiopathy.

This case underscores the importance of early recognition of diabetic myonecrosis, particularly in patients with longstanding diabetes and multiple comorbidities.

Increased clinical awareness and appropriate imaging (MRI) can prevent misdiagnosis.

Correct diagnosis facilitates effective conservative management and prevents unnecessary surgical interventions.

Conclusion

This case highlights that DMN must be a key differential in a diabetic patient or in every diabetic patients presenting with acute, non-infectious limb pain and swelling.

References

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