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A Rare Presentation of Monckeberg's Disease

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Abstract: Monckeberg's disease, also known as medial calcific arteriosclerosis, is a rare vascular condition characterized by calcification of the tunica media of arteries, most commonly affecting the lower extremities. The exact cause remains unknown. Although often asymptomatic, advanced disease can result in serious complications such as ischemia, tissue necrosis, and gangrene. We report a case of a 74-year-old female who presented with spontaneous pain and swelling of the lower limb. Despite a previous history of deep vein thrombosis and anticoagulant therapy, imaging findings suggested Monckeberg's disease. This case highlights the importance of considering this rare condition in patients presenting with lower limb swelling to ensure early diagnosis and prevent complications.

Keywords: *Monckeberg's Disease, Lower Limb Extremities, Calcific Atherosclerosis.*

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I. INTRODUCTION

Monckeberg's disease is a rare, non-inflammatory vascular disorder characterized by calcification of the tunica media of muscular arteries. It primarily affects medium- to large-sized arteries, especially in the lower extremities. Unlike atherosclerosis, it does not usually cause significant luminal narrowing but leads to arterial stiffness. The disease is often underdiagnosed due to its nonspecific clinical presentation. Early recognition is essential to prevent severe complications such as ischemia and gangrene. This disease is most commonly increases with age, diabetes mellitus, chronic kidney disease, hypertension and dyslipidemia. In this case, patient presented with complaints of Bilateral lower limb pain and swelling was noted with no comorbidity in this patient and was diagnosed at a later stages of the disease. Although atherosclerotic peripheral arterial disease is common cause of limb ischemia we should also consider the fewer cases like monckeberg's disease with thorough investigation even in the patients with no comorbidity and comorbidity by at least taking plain radiography of the affected limb and ultrasonography.

II. CASE PRESENTATION

A 74 year old female patient presented to the PDU medical hospital emergency with chief complaints of pain and swelling over the bilateral lower limb and the presentation of this patient was sudden in onset pain which was approximated to over 15 days which was mainly confined to the bilateral leg, ankle and foot (Right > Left) . The intensity of pain was severe over right ankle and foot region and mild over the remaining region. The pain was non radiation type and non progressive and the pain had no aggravating or relieving factors.

The patient was self medicated with analgesics after which patient visited clinic after which the patient was started with T. Aspirin(75mg), T. Clopidogrel(75mg), T. Atorvastatin(40) for about 6 months .

- *Patient had no Comorbidities.*

Clinical examination showed tenderness and edema over right foot without any local rise of temperature, blackening, redness, pus discharge, previous scar due to trauma or surgery, ulcer formation, or any gross deformities and on palpation pulses of distal arteries were having reduced volume as compared to that of the proximal arteries and tenderness was noted in right foot without any local rise of temperature, redness, tissue loss, sensory defects.

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Laboratory investigation were within the normal limits and Plain radiography was done which shows calcification of large arteries and even the smaller arteries of bilateral lower limb and ultrasonography shows right and left superficial femoral artery reduced volume and monophasic flow with marked atherosclerotic changes. The Popliteal arteries showing reduced volume with biphasic flow and Anterior tibial artery, posterior tibial artery and dorsalis pedis artery marked atherosclerotic changes with absent flow.

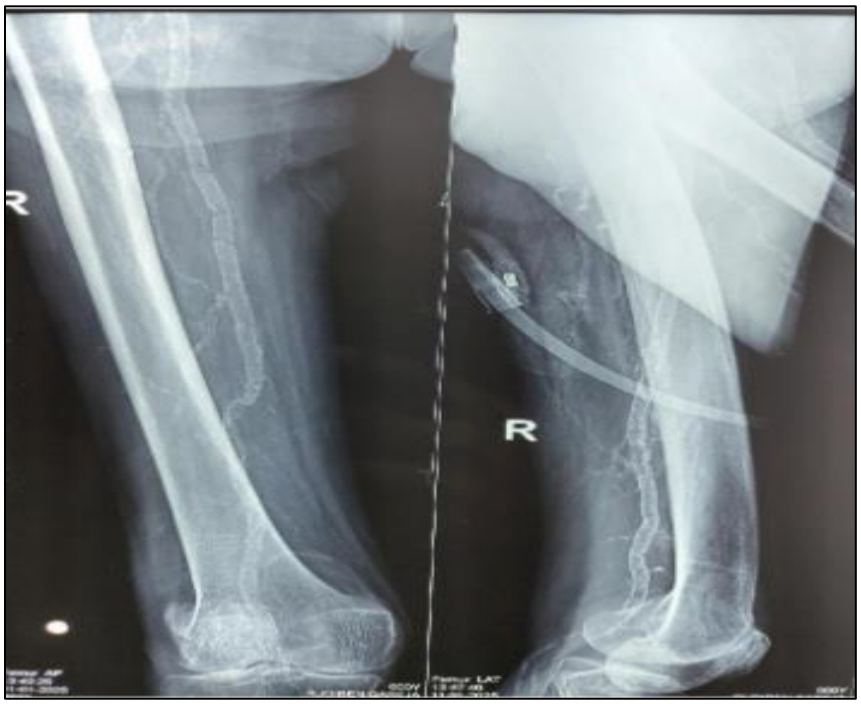

Fig 1. Plain Radiograph of Bilateral Lower Limbs Showing Diffuse Arterial Calcification of Femoral Artery.

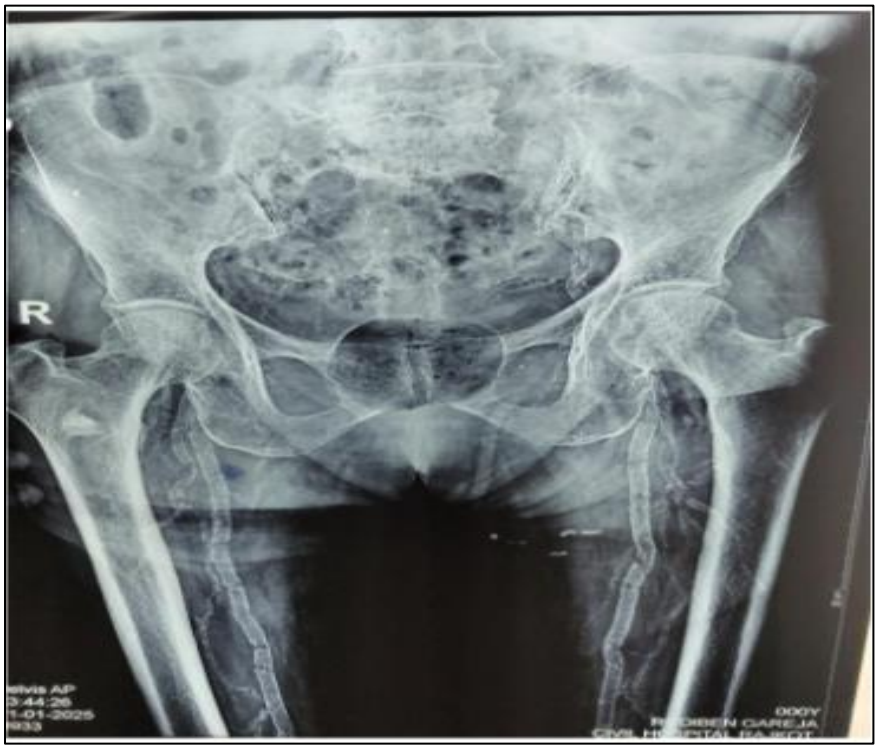

Fig 2. Radiograph of the Bilateral Lower Limb Demonstrating Linear Arterial (“pipe-stem”) Calcification of Femoral and Profunda Femoris.

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Management of this patient was done with bed rest, antibiotics and warfarin therapy.

III. DISCUSSION

Monckeberg's disease is commonly detected incidentally on imaging due to its characteristic medial arterial calcification. Although it does not typically obstruct blood flow, advanced disease may compromise tissue perfusion, especially when associated with infection or other vascular conditions. Risk factors include advanced age, diabetes, chronic kidney disease, and long-term anticoagulant therapy. Differentiating this condition from atherosclerosis and thrombotic disorders is important to guide appropriate management.

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