

## Ulna stress fracture in a non-athlete female: A cases report

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### Abstract

Stress fractures are usually found in sports persons indulging in repetitive stress activities. Ulna stress fracture is uncommon stress injury and occasionally reported in non-athlete population. We describe a stress fracture of Distal third ulna in a non-athlete otherwise healthy young female. The fractures healed well with conservative treatment.

**Keywords:** Stress fracture, Repetitive stress, Stress injury, Ulna

### Introduction

Stress fractures are not uncommon disorders in routine clinical practice and may present in myriad forms and types. Usually they result from repetitive stress and involve lower limbs as they are weight bearing bones. Middle third ulna, however, has been found to serve as a potential site for torsional stress.<sup>1</sup> Many of these stress fractures reported in athletes and sports related activities, their occurrence in non-athlete people is also reported sporadically.<sup>2</sup>

### Case report

A 28-year-old healthy female presented to us with complaints of pain over middle forearm region for past three weeks that was neglected as she thought of it as work related soft tissue pain. When the pain did not improve, she consulted local practitioner and was prescribed pain

medication and liniments which gave her momentary relief. She had mild swelling when palpated over the painful site over the junction of middle and distal third ulna. The radiograph of the forearm showed fracture with callus formation (Fig.1). She had no history of trauma or other systemic disorders. There was no history of any gynecological or known musculoskeletal disorder. All she was involved in was household chores. The diagnosis of stress fracture of ulna was made on basis of clinical and radiological presentation. She was given forearm functional brace to interfere minimally with her work. The fracture united well in the course of twelve weeks when the brace was discontinued. She was performing activities of daily living without any morbidity. There was no recurrence of fracture noted in the follow up of five months.



**Fig 1:** Radiograph showing stress fracture as black uni-cortical breach in the ulna diaphysis (arrow) and surrounding callus formation (star).

### Discussion

The stress fracture requires repetitive loading of bone beyond the repair period and may present in various stages. Vague pain and incidental finding of callus formation over the site is not uncommon. Sports and occupational injuries are

mostly associated with stress fractures at various locations. Endocrine causes like menstrual disorders and nutritional factors may be additional aspects in female cases but are mostly associated in sportswomen.<sup>3</sup> Non-athlete females are only sporadically reported with stress fractures. One major

contributor to the stress fracture may be vitamin D deficiency which has been found to be related to stress fracture incidences.<sup>4</sup> There are sites of these fractures prone to complication like delayed union or propagation to full fractures like cortical bone and tensile surfaces of the bone.<sup>5</sup> Clinical suspicion and early diagnosis helps promote recovery and prevent complication like operative fixations with bone grafting.<sup>6</sup> Our case was fortunate to not get displaced and splints provided by us proved beneficial in ensuring uneventful healing. Any further tests to know the bone metabolism were refused by the patient due to financial constraints. The report highlights acknowledgement of stress fractures at rare sites even in non-athlete population and appropriate management to avoid complications.

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