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LETTER TO THE EDITOR

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"Patellar tooth" sign revisited—An incidental CT finding

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Dear editor,

Degenerative changes are common around the knee as it is major weight bearing region with intricate biomechanics and strong muscle forces around. Patella being a sesamoid bone within quadriceps tendon helps in many ways to supplement biomechanical efforts of muscle function and coordination during normal and extraordinary knee movements. Degenerative quadriceps tendon changes over time result in enthesophyte formation and vertical ridging at its superior patellar insertion site. The dentate or irregular surfaces more vividly seen on skyline knee radiographs are described as patella "tooth" sign and corresponding findings are validated in cadaveric studies also [1]. This seemingly harmless radiological sign may be ominous as it has been associated with quadriceps and less commonly patellar tendon ruptures in many cases [2,3].

A 35-year-old male patient with knee injury was seen with radiographs suggestive of fracture of proximal tibia plateau. The computerized tomogram (CT) scan was advised to better assess the fracture pattern as a standard practice in the preoperative planning of intra-articular fractures. The CT scan helped to identify the fracture pattern vividly in axial and three-dimensional reconstruction images. He was planned for appropriate surgical intervention. There were also noted multiple tooth like projections over the superior patella surfaces (Fig. 1). Axial scans showed irregular and thickened anterior patellar surface (Fig. 2). These were striking and not related to the current problem. These images were correlated later with radiographs that also showed increased sclerosis of anterior patella surface suggestive of long standing stress. The images were characteristic of degenerative changes of quadriceps tendon over insertion site. As the traumatic knee could not undergo skyline view, the radiographic vertical ridging that constitute the characteristic "patella tooth" sign could not be seen. But, CT scan features and history of off and on anterior knee pain prior to injury were suggestive of the presentation being the well described "patella

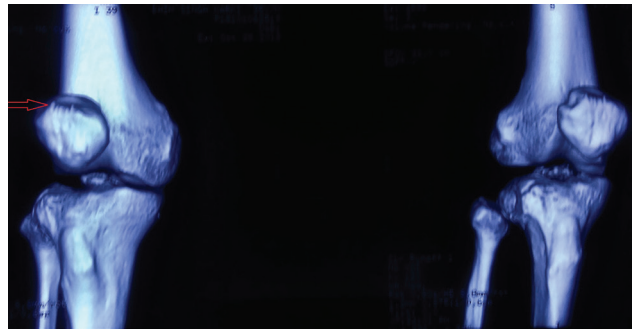


Figure 1. The CT scan images showing multiple tooth-like projections over superior patella (arrow).

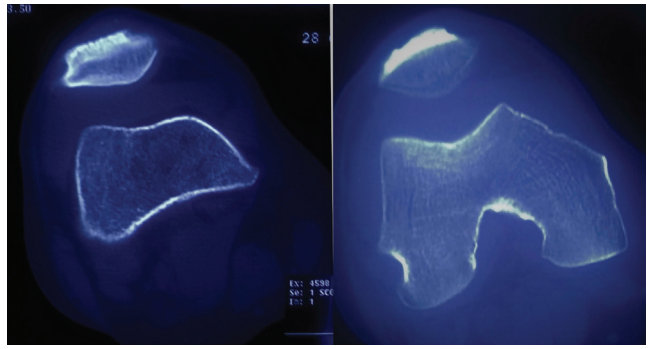


Figure 2. The axial images showing irregular and thickened patellar outer surface suggestive of (a) long standing stress reaction and (b) sclerosis.

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tooth" sign. A proper rehabilitation referral was done on our part for further management of the patient following the uneventful fracture fixation with respect to the corresponding tendon problem leading to individualized physiotherapy regimen.

"Patella tooth" sign is described in literature, but still is uncommon radiological finding [4]. As an incidental finding on CT scan for an unrelated condition, these uncommon entities should be recognized by radiologist and treating physician. A periodic evaluation to rule out impending degenerative quadriceps tendon rupture even in younger age can be avoided by prohibitive and preventive measures. This short anecdotal case snippet, thus, has educative potential for the identification of an uncommon radiological sign and its clinical implications.

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