# Case 14522

Eurorad

## Oppenheimer ossicle - a tricky rare variant!

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**ISSN:** 1563-4086
**Section:** Neuroradiology
**Area of Interest:** Neuroradiology spine
**Procedure:** Normal variants
**Procedure:** Education
**Imaging Technique:** CT
**Imaging Technique:** CT-High Resolution
**Special Focus:** Congenital Trauma Case Type: Anatomy and Functional Imaging
**Authors:** Dr. Suvinay Saxena1, Dr. Karthik K 2, Dr. Drushi Patel3
**Patient:** 37 years, male

**Clinical History:**

37-year-old male patient presented with low back ache. The patient had a past history of trivial trauma. The patient did not complain of radiating pain or any neurodeficit.

**Imaging Findings:**

CT scan axial and sagittal (bone algorithm) and volume rendered images reveal evidence of a well corticated bony fragment at the level of the left inferior articular facet between L4-L5 vertebral bodies, located posterio-medially to the facetal joint. No evident cortical break, wedging or abnormal soft tissue component is noted. Sacralisation of L5 is observed.

**Discussion:**

Non-union at the tip of the articular process is a rare variation which is seen in 1–7% of lumbar spines. [1, 2]

In approximately 95% of cases, inferior articular processes are involved. Although it can be observed in multiple levels, single-level predominance is common. In 80% of cases, this variation is seen bilaterally. [3, 4]

The L2 (45%), L3 (45%), L1, and L4 are the most common segments involved. L5 segment involvement is very rare. The variation is more prevalent in males than females. [5]

Oppenheimer’s ossicles range between 0–2 mm in size. They tend to be round, oval, or triangular and have smooth corticated margins at the site of separation.

The most significant clinical finding of these ossicles is lower back pain. This pain is caused by stenosis of the spinal canal. Particularly if the ossicles are bilateral, the diameter of the spinal canal is narrowed and the ossicles tend to compress the spinal cord.

In our case, the bony fragment does not seem to cause significant narrowing of the central or lateral spinal canal or

cause significant compression over the exiting nerve roots to cause back pain.
**Differential Diagnosis List:** Oppenheimer’s ossicle, Fracture of the articular process, Dislocation

**Final Diagnosis:** Oppenheimer’s ossicle

**References:**

Ba?ara I, Altay C, Gezer S, Balc? A. (2015) Evaluation of an unusual ossicle by multi-detector computed tomography: Oppenheimer's ossicle. Acta Orthop Traumatol Turc 49(3):331–333 (PMID:26200415)
Famer HL (1936) Accessory articulary processes in the lumbar spine. AJR 36:763
Oppenheimer A. (1942) Supernumerary ossicle at the isthmus of neural arch. Radiology. Radiographics 39:98
Bailey W. (1939) Persistent vertebral processes. Radiology 42:85.
Hipps HE (1939) Fissure formation in articular processes of the lumbar vertebrae. J Bone Joint Surg 21:289.

# Figure 1

**a**

**Description:** CT sagittal view demonstrates a well-corticated bony fragment at the posterio-inferior aspect of L4-L5 facetal joint. **Origin:** Suvinay S, Department of radiodiagnosis, GIC-PGIR, Ahmedabad, India.

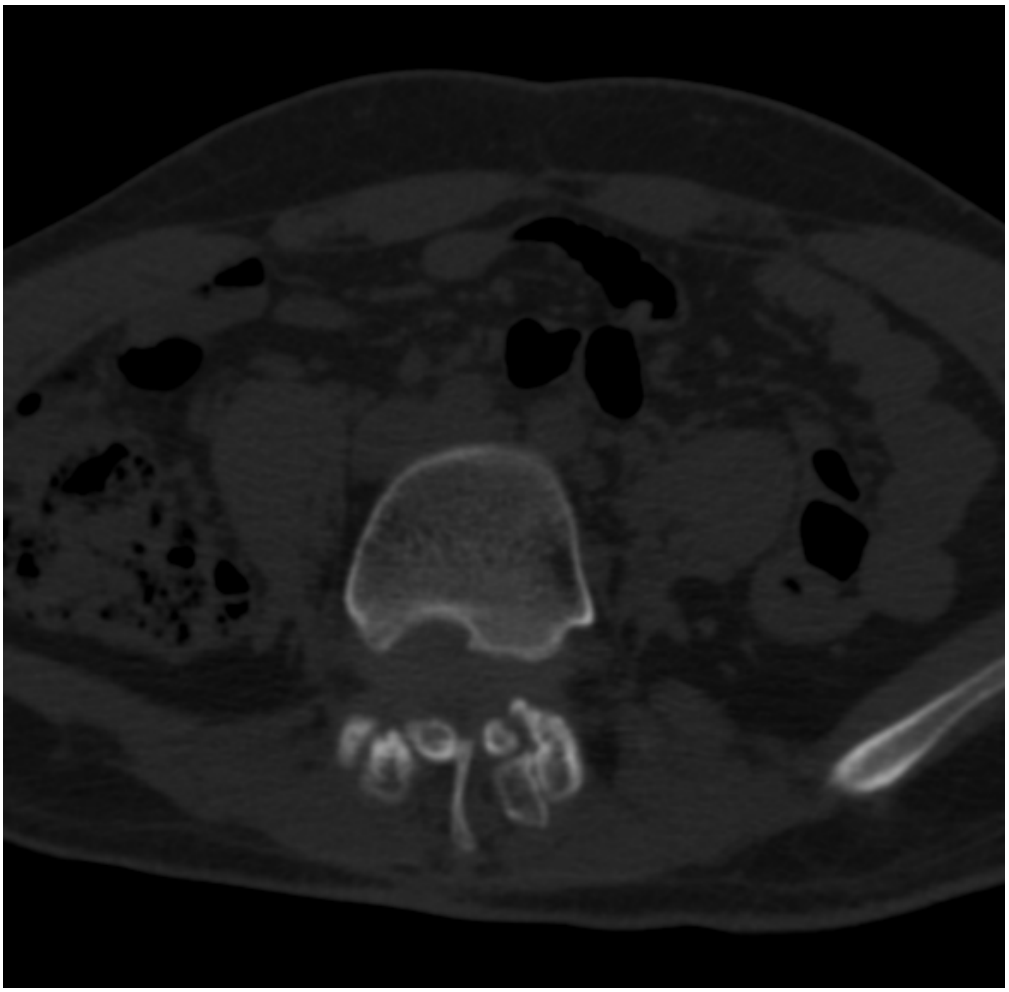
## Figure 2

**a**

**Description:** CT sagittal view demonstrates sacralisation of L5. Also no cortical break or wedging is noted. No abnormal soft tissue component is seen. **Origin:** Suvinay S, Department of Radiodiagnosis, GIC-PGIR, Ahmedabad,

## Figure 3

**a**



**Description:** Well-corticated bony fragment along inferior articular facet on left side. **Origin:** Dr. Suvinay S, Department of radiodiagnosis, GIC-PGIR, Ahmedabad,India.

## Figure 4

**a**

**Description:** 3D VR images clearly demonstrate the ossicle at the level of left inferior articular facet.

**Origin:** Dr.Suvinay S, Department of Radiodiagnosis, GIC-PGIR, Ahmedabad, India.