

Pictorial CME

A man with back pain

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A 50-year-old man was suffering from chronic back pain for 10 years. He underwent an MRI of the spine which revealed some changes (Fig 1, Red arrows).

Questions :

- (1) What are these radiological lesions?
- (2) What are its clinical associations?
- (3) How does this lesion evolve?
- (4) Is any other vertebral radiological sign associated with this group of diseases?

Answers :

(1) These vertebral end plate lesions are known as “Romanus” lesions.

(2) Romanus lesions are fairly specific for axial spondyloarthritis (SpA). These radiological lesions represent inflammatory changes at the site of insertion of annulus of intervertebral disc to vertebral endplate. Thus, it is a modified form of enthesitis. These are very early signs of SpA. It is usually found anteriorly on the vertebral body, but may also be present posteriorly. In the figure 1, the lesions are present posteriorly on D10-11. Very rarely, similar lesions may be found in spinal gout (usually limited to lumbar spine).

(3) These lesions represent inflammation. As the inflammation progresses, the end plate corners undergo sclerosis. Then, the appearance is called *shiny corner sign*. This sclerosis is visible in X ray, CT or MRI scans. Also, as sclerosis occurs, the vertebral body progressively undergoes squaring.

(4) Another vertebral change is Andersson sign. This represents spondylodiscitis in SpA. In this figure, an evolving Andersson lesion may be seen in D6-7 disc.



Fig 1 — MRI (T2 image) of the spine of the 50 year old patient

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