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Severe vertebral erosion by chronic contained rupture of an abdominal aortic aneurysm

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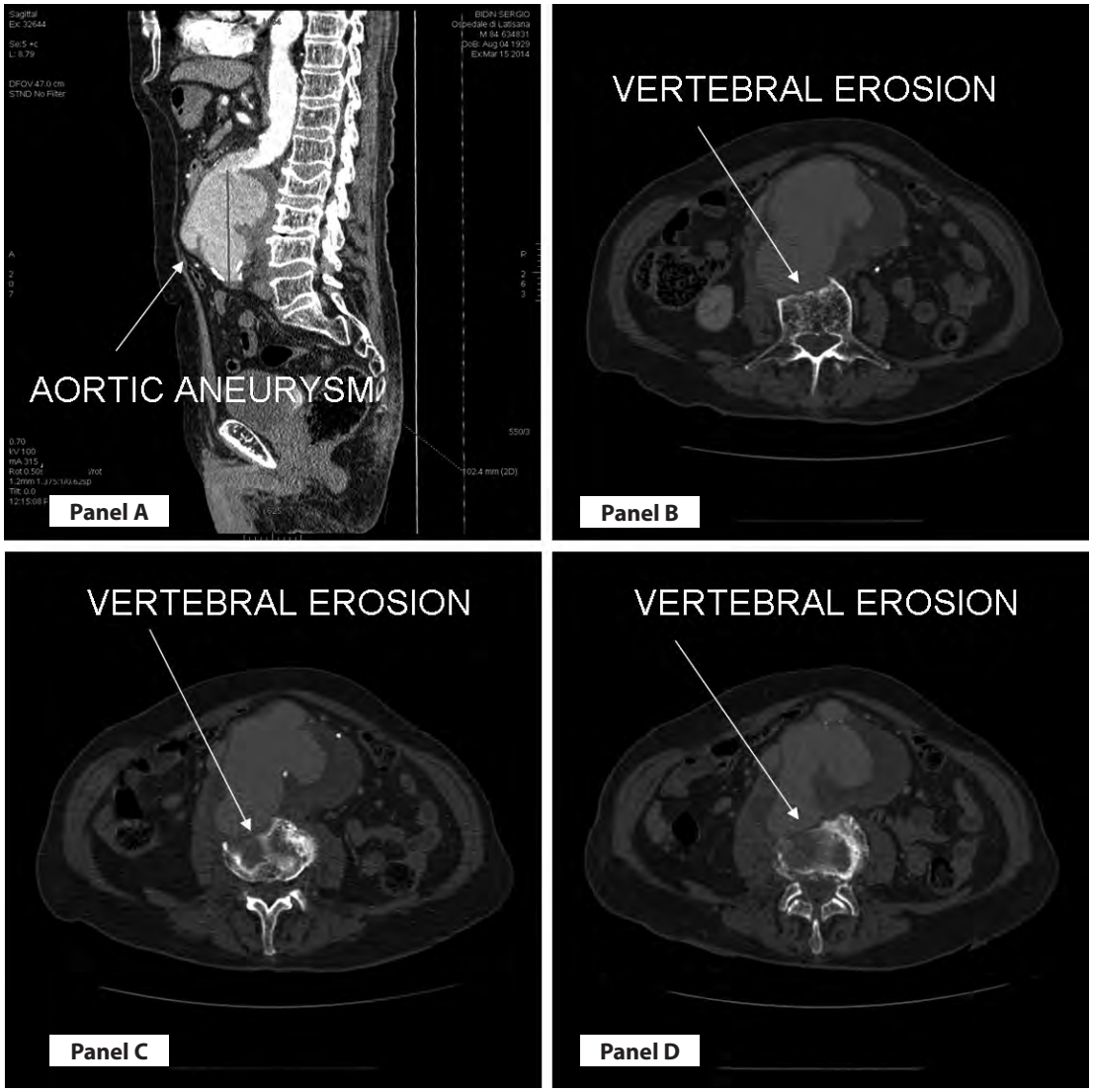

An 85-year-old man, with a history of smoking and hypertension, was admitted to the emergency room for severe back pain. The back pain had been progressive and disabling over the preceding 6 months. Moving his spine was very painful, and abdominal examination revealed a pulsatile, abdominal mass. Ultrasonography of the abdomen showed a giant aortic aneurysm. Abdominal computed tomography (CT) with intravenous administration of contrast revealed a chronic contained rupture of an abdominal aortic aneurysm (Panel A). Chronic contained rupture was suggested by the non-circular shape of the aneurysm in the transverse CT planes (Panel B, C, D), and by the presence of calcifications in the middle of the "aneurysm" (Panel C). Multiple severe vertebral erosions were detected in the anterior part of the lumbar vertebrae (Panel B, C, D). The patient rejected any hypothesis of treatment. It is well known that aortic aneurysm should be included in the differential diagnosis of chronic back pain. The great majority of chronic low back pain is related to vertebral degenerative pathology, but other possible reasons, even unusual, have to been considered, such as abdominal pathology (pancreatic for instance) and aortic abdominal aneurysms, with or without chronic contained rupture. Vertebral body erosion due to a primary chronic ruptured aortic aneurysm is an uncommon but important cause of low back pain. Vertebral erosion happens in approximately 3% of cases (1). A contained rupture of an abdominal aortic aneurysm is established progressively by haematoma expansion on the posterior aneurysm wall that triggers vertebral erosion. The specific mechanism for the vertebral erosion is not clear, and there are several hypotheses implicating arterial pulse, aneurysm or haematoma infection, inflammatory processes, or simply an unspecific reason (2, 3). Open or endovascular surgery and subsequent lumbar arthrodesis are generally performed in these cases.

Key words: Abdominal aortic aneurysm ▪ Vertebral erosion.

Conflict of interest: The author declares that he has no conflict of interest.

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