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Post-Operative Spondylodiscitis in a Patient at Mohammed VI University Hospital/Marrakech (Morocco)

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Abstract **Case Report**

Post-operative infections complicate 1 to 10% of spine surgeries and frequently cause disabling chronic painful after-effects. This is the leading cause of re-operation in the first month post-operatively. This is a 47-year-old female patient who underwent spinal surgery and then became superinfected, presenting for back pain in a febrile and general conservation context in whom the clinical examination noted cauda equina syndrome. The paraclinical assessment allowed us to isolate the staphylococcus aureus and an imaging study concluded to post-operative spondylodiscitis. Faced with this picture, an emergency surgical indication was made and the postoperative outcomes were satisfactory. In short, cauda equina syndrome remains a surgical emergency.

Keywords: Spondylodiscitis, Operative.

INTRODUCTION

The role of MRI is very important in the early diagnosis of postoperative spondylodiscitis. The time of superinfection after spine surgery at 15 years has not been described in the literature.

Patient

This is a 47-year-old patient operated on for vertebral fracture 15 years ago, then 9 months later, the removal of osteosynthesis material was carried out, indicated for material superinfection complicating sepsis; referred from a provincial hospital center for lower back pain 15 days ago, exacerbated 1 week ago in a febrile context and preservation of general condition; in whom the clinical examination mainly noted a lumbar spinal syndrome, an incomplete cauda equina syndrome made up of: lumbar back pain, a motor deficit in dorsiflexion of the left foot rated at one fifth, the osteotendinous reflexes were normal and the reflexes plantar skin was indifferent; Furthermore, he has a lumbar scar.

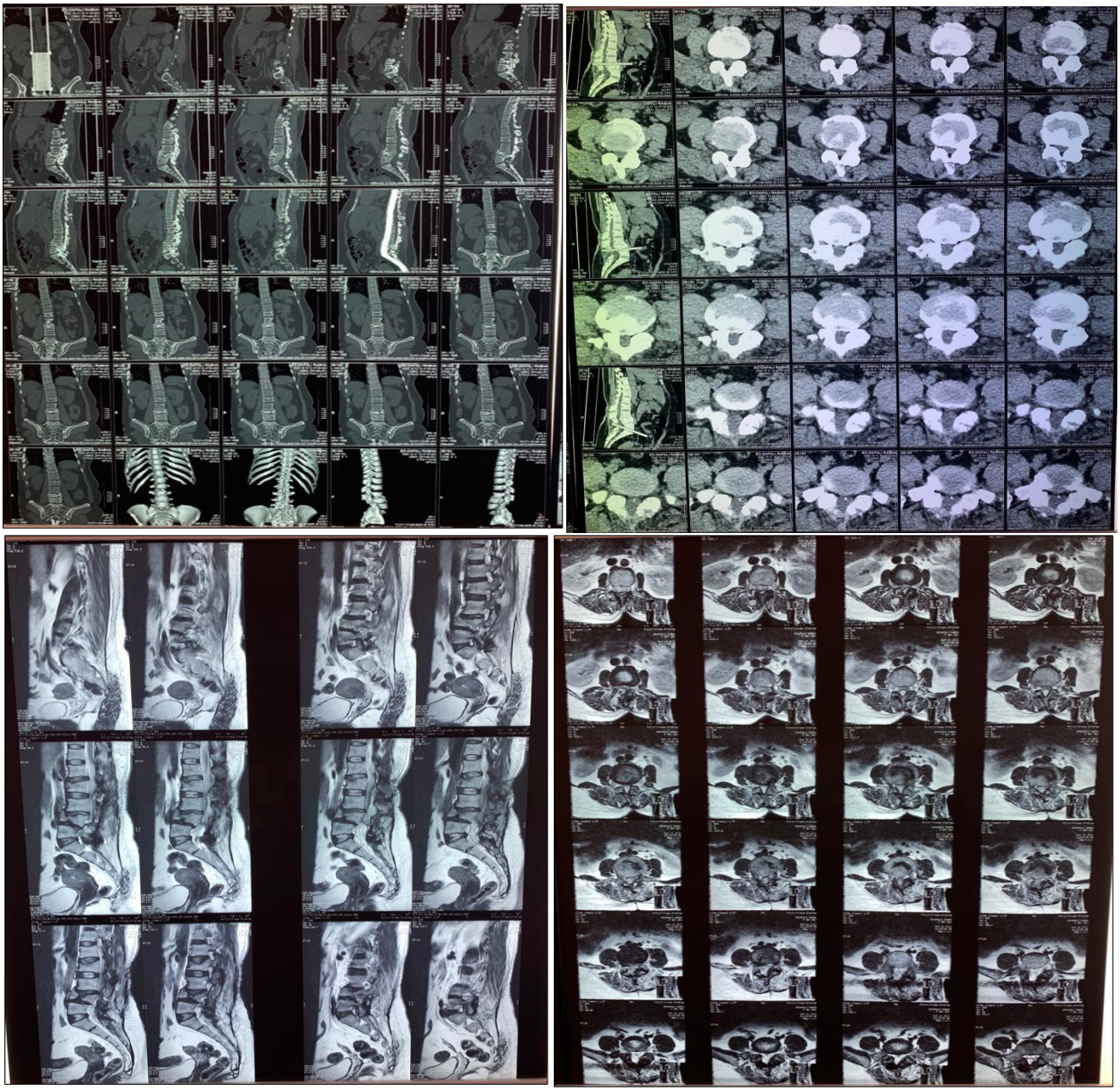
Positive Infection Assessment

A microbiological examination isolating staphylococcus aures, a very high C reactive protein with hyperleukocytosis.

A lumbar MRI concluded that there was an intra-dural extra-medullary collection extended posteriorly next to L2, L3, and L4 communicating through the right lamina of L3 with a collection of posterior paravertebral soft parts and compressing the root of the cauda equina. next to L4. Subsequent compression of the CV of L4.

A Lumbar CT concluding in a biconcave compression fracture of the L4 vertebral body, with discreet recession of the posterior wall, anterior compression fracture of the L2 vertebral body, without recession of the posterior wall.

Figure 1: Standard radiography



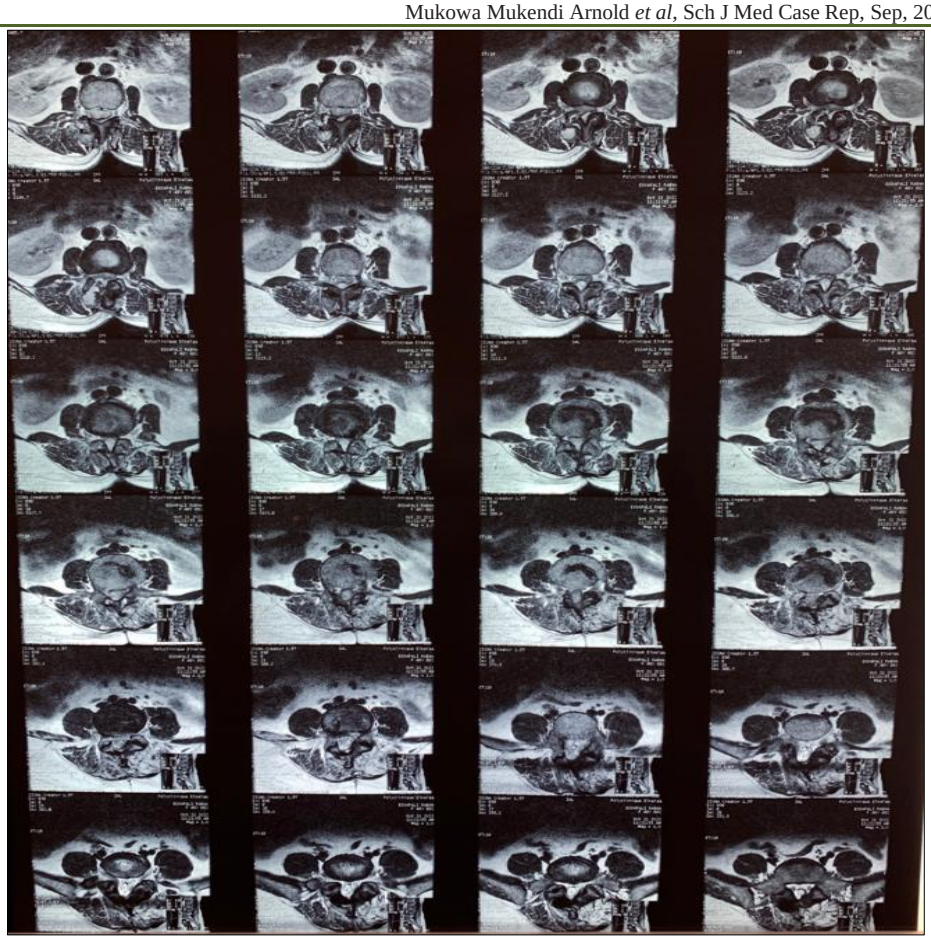


Figure 2: CT Lumbar Spine

A drainage evacuation was carried out, the postoperative consequences of which were simple. The patient was put on third generation cephalosporin (cefotaxime)

MRI Control

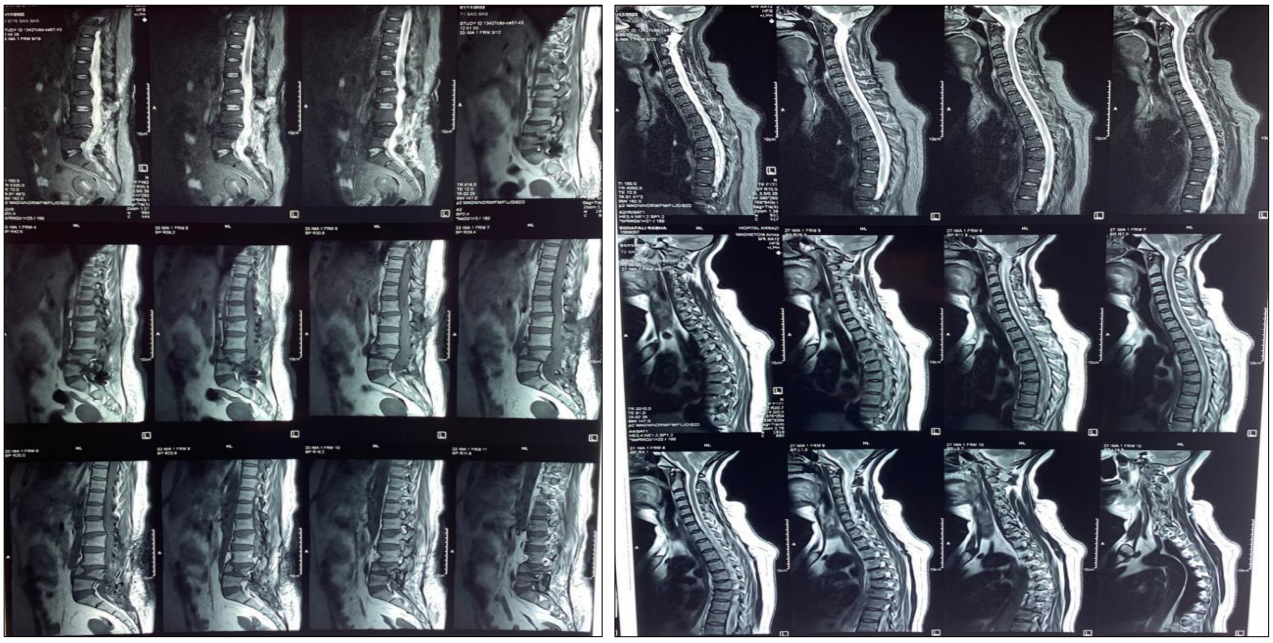


Figure 3

DISCUSSION

Regarding germs, In post-operative spondylodicity, S. aureus is the most common species (17 to 34%) ahead of coagulase negative staphylococci (13 to 29%) and P. aeruginosa (6 to 11 %), which is the case in our observation, staphylococcus aureus was isolated on microbiological examination.

Spondylodiscitis after a procedure on the spine has been reported after all types of procedures, in particular after treatment of herniated disc and/or laminectomy, arthrodesis, intervention to stabilize the spine, lumpectomy, chemonucleolysis or even lumbar puncture; which is the case in our observation.

The patient also presented with the clinical manifestations described: fever, spinal pain and spinal stiffness. Cauda equina syndrome was the telltale sign and indicated surgery.

The typical appearance of spondylodiscitis reported on MRI, whatever its etiology, combines disc T2 hypersignal, T1 hyposignal and T2 hypersignal of the 2 adjacent vertebrae, and thickening of the paravertebral and/or intra-canal soft tissues.

MRI is recognized as the most sensitive technique in this indication and must be used as first intention, always associated with standard radiographs centered on the affected segment. It should be performed as soon as the diagnosis of SPD is considered. Which was the case in this observation, patient referred with an X-ray and CT not being in favor of postoperative spondylodiscitis, the MRI allowed us to objectify the signs.

In spondylodiscitis secondary to an intra-discal procedure, the first-line treatment will be either a 3rd generation cephalosporin (cefotaxime) combined with fosfomycin, intravenously.

CONCLUSION

The current study confirmed the need to adopt a standard structured approach at the institutional level, to sequentially and systematically evaluate patients with spondylodiscitis. The role of MRI is very important in the early diagnosis of postoperative spondylodiscitis. Cauda equina syndrome is a surgical emergency.

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