

Late-onset Deep Surgical Site Infection after Instrumented Spinal Surgery

Case report

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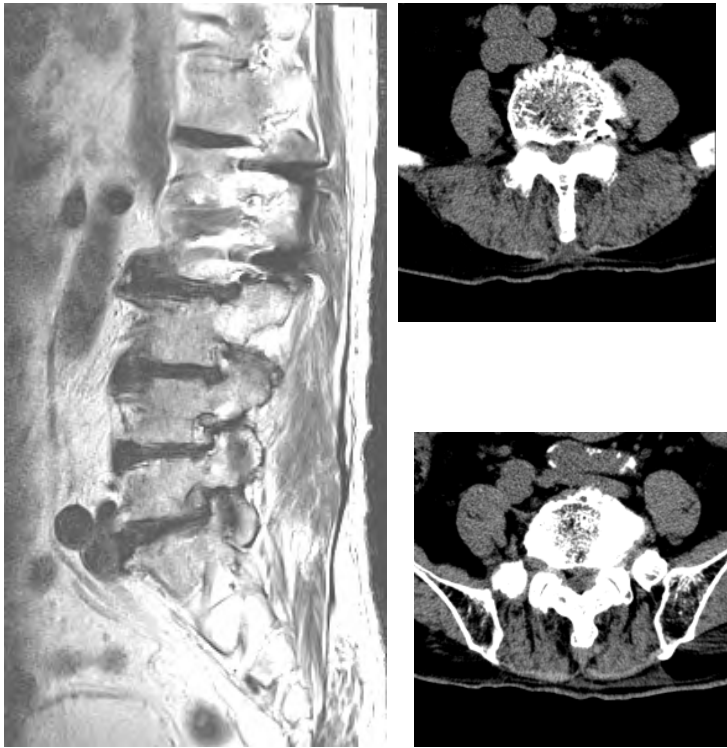
Purpose

- There are no universally accepted protocols for the treatment of late-onset deep surgical site infection after instrumented spinal surgery.
- In this case, the decision to retain or remove the implant is important.
- We report a case of late-onset deep surgical site Infection after lumbar fusion with literature review.

Materials and Methods

- The 74 year old male patient suffered from both leg pain and low back pain. The conservative treatment failed. Radiologic studies showed multilevel lumbar spinal stenosis and L4-5, L5-S1 foraminal stenosis. We did partial laminectomy L2-3, L3-4 and TLIF L4-5, L5-S1. After operation, the patient's symptoms improved.
- But at postop. 4 months, the patient complained low back pain, and mild fever. C-reactive protein increased. MRI showed L5-S1 osteomyelitis.
- We recommend revision operation. But the patient refused revision operation. So we did antibiotics therapy for 6 weeks. The patient's symptoms and CRP improved.
- But L5-S1 osteomyelitis recurred 2 weeks after stopping antibiotics. We did revision operation (debridement and interbody cage exchange).

Radiologic studies



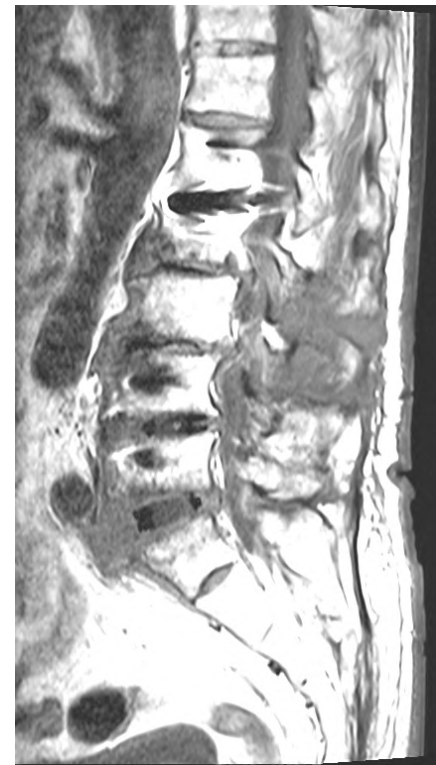
Preop. MRI, CT:
Multilevel spinal stenosis L2-3, L3-4, L4-5, L5-S1
foraminal stenosis L4-5, L5-S1
S/P fusion L1-2



Postop. 4 month
Spondylitis L5-S1



2nd admission.
Aggravated spondylitis
L5-S1



Postop.ALIF
3month. Improved
spondylitis

Results

- After the operation, we did 4 weeks IV antibiotics and additional 8 weeks oral antibiotics therapy. The patient's symptoms improved sufficiently . Postop. CRP improved. Radiologic studies showed no recurred infection.

Conclusion

- We reviewed the literatures. Treatment of infection after instrumented spinal surgery is difficult to treat with antibiotics alone when biofilm is formed on the implant.
- Main reasons for the highly increased risk of infection after spinal instrumentation : formation of **biofilms**
- **Biofilm** : a structured aggregation of bacteria encased in a self-produced matrix of extracellular polysaccharides that adheres to a surface of implant
- Acute infections can be treated with antibiotics alone.
- **In late infection, if the stability of the spine can be maintained, the implant should be removed. If not possible, a new implant should be replaced, or at least debridement should be performed.**