International Journal of Orthopaedics Sciences

E-ISSN: 2395-1958
P-ISSN: 2706-6630
IJOS 2023; 9(1): 07-09

https://www.orthopaper.com
Received: 09-10-2022
Accepted: 12-12-2022

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Case of revision spine surgery in instability following previous surgery with implant failure

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DOI: https://doi.org/10.22271/ortho.2023.v9.i1a.3267

Abstract
Revision lumbar spine surgeries are technically challenging with inconstant outcome results. Successful intervention requires a detailed history and physical examination and carefully chosen diagnostic tests. Preoperative planning is paramount in these cases. The decision-making process should address the timing of the surgery, surgical approach, level of inter body fusion required, correction of sagittal imbalance, type of osteotomy, location of the osteotomy, and the end of the construct.

Keywords: Revision, lumbar spine, preoperative evaluation, intraoperative strategies, postoperative management

Introduction

Patient details

- Case of 55 year old and obese female presented to us in 2021.
- C/o- Backache and pain in both thigh and gluteal region since 3 years
- She was operated twice before she presented to us.

First surgery (Outside operated)

- In 2000, patient develops difficulty in walking and severe back ache.
- She then consulted a private hospital in Ahmedabad where she was operated for spine surgery in 2000 at L4-S1 level (proper documentation not present with patient).

Second Surgery (outside)

- In 2010 patient gradually developed difficulty in walking and back pain.
- She was operated for L5-S1 anterolisthesis in 2014 at private hospital.
- L4-L5 decompression and L5-S1 stabilization was done

Fig 1

History of present illness

- Patient came to us with chief complaint of severe back pain which referred to both thigh and gluteal region since 3 years.
- Neurology:
- SLR- terminally painful
- Power normal in both lower limb
- Sensation,tone and reflex normal in both lower limb
- Bowel bladder normal

X-ray

- Patient having Grade II anterolisthesis of L5 over S1.
- Both S1 screws were broken.

Retrolisthesis develops at L3-L4 and L4-L5 level

Fig 2: Retrolisthesis develops at L3-L4 and L4-L5 level

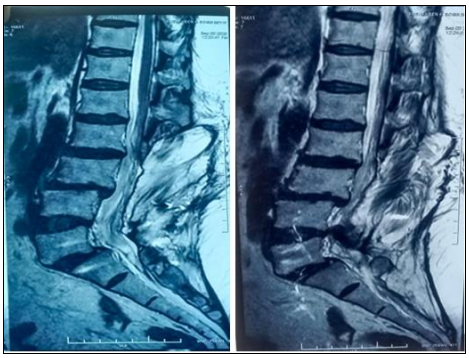


Fig 3: MRI

Fig 4: CT Scan

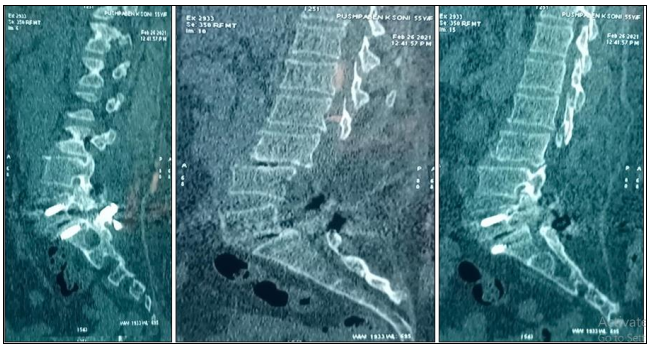


Fig 5: CT Scan

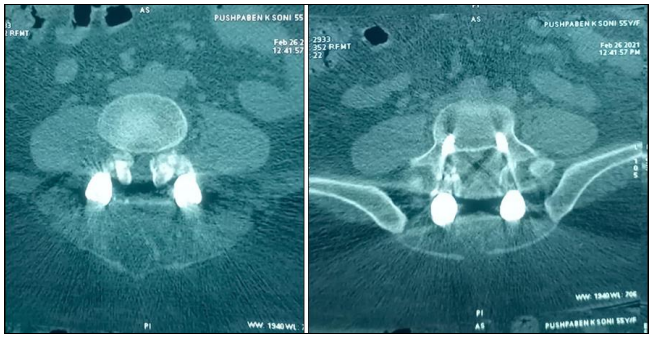


Fig 6: CT Scan

Surgical Plan

- Remove all four screws including both broken S1 screws.
- Posterior instrumentation of L2 to S1 by using pedicle screws.
- Posterior decompression at L3-S1 level.
- TLIF at L3-L4 level

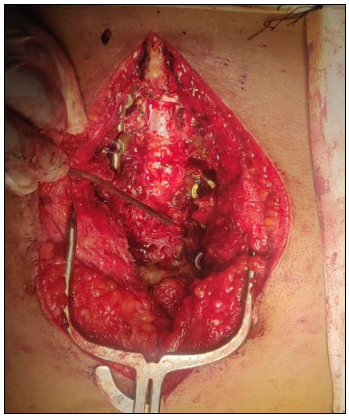
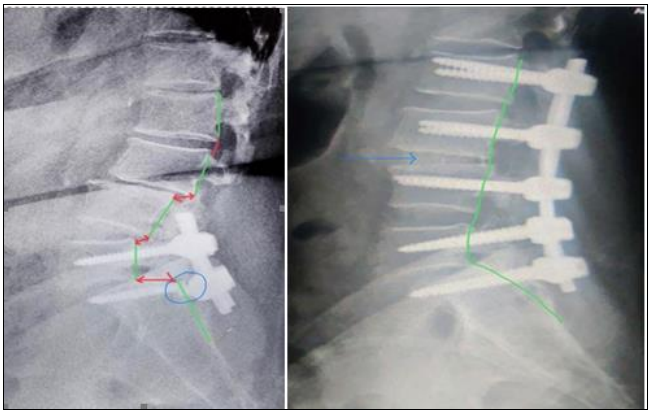


Fig 7: Spinal cord is completely free from L3 to S1 level

Fig 8: Removal of both broken S1 screw by using hollow mill.

Pre op Post op Xray

Pre op Post op Xray



Pre OP Xray Post OP Xray

Conclusion

Post OP Neurology

Patient has experienced 80% decrease in radicular pain.

SLRT – Bilateral full and free.

Revision spine surgery has resulted in a better outcome, patient is able to walk and has been able to resume job.

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How to Cite This Article

Patel ZM, Hadiya H, Sureja H, Rastogi P. Case of revision spine surgery in instability following previous surgery with implant failure. International Journal of Orthopaedics Sciences. 2023;9(1):07-09.