

Worsening Sacral Pain in Pregnancy Secondary to a Tarlov Cyst: A Case Report

Kevin Song, DO¹
Chun Maung, DO²
Hannah Park, DO³
Charles Kim, MD⁴
NYU Langone Health
Rusk Rehabilitation

Physical Medicine & Rehabilitation



INTRODUCTION

- Tarlov cysts are cerebrospinal fluid-filled perineural lesions, typically found incidentally in the sacral spine [1].
- Smaller cysts are usually asymptomatic, larger cysts can cause symptoms of back pain, leg weakness, or bowel/bladder dysfunction [1].
- Treatment is initially conservative. Symptomatic cysts can be managed with CT-guided aspiration (with or without fibrin glue injection), cyst fenestration, nerve root imbrication, and epidural steroid injections [2,3].
- Here is the first reported case of a Tarlov cyst-induced sacral pain being exacerbated during pregnancy.

CASE PRESENTATION

39-year old female with history of bilateral salpingectomy presented with 1 year of right-sided sacral pain that acutely worsened with the progression of pregnancy.

- Initial presentation, she was 16-weeks gestation and described a constant sharp pain that radiated from her sacrum to bilateral anterior pelvis. Also reported intermittent tingling in the right sacral and vaginal areas.
- Physical exam was pertinent for tenderness over the right buttock in the S2-S3 dermatomes and percussion tenderness at the sacrum. She had no radicular symptoms.
- Sacral MRI obtained at the onset of her pain revealed a right S3 Tarlov cyst measuring 3.7 x 2.0 x 4.4cm with mass effect on the S2-S3 nerve root and terminal cauda equina.

FIGURES

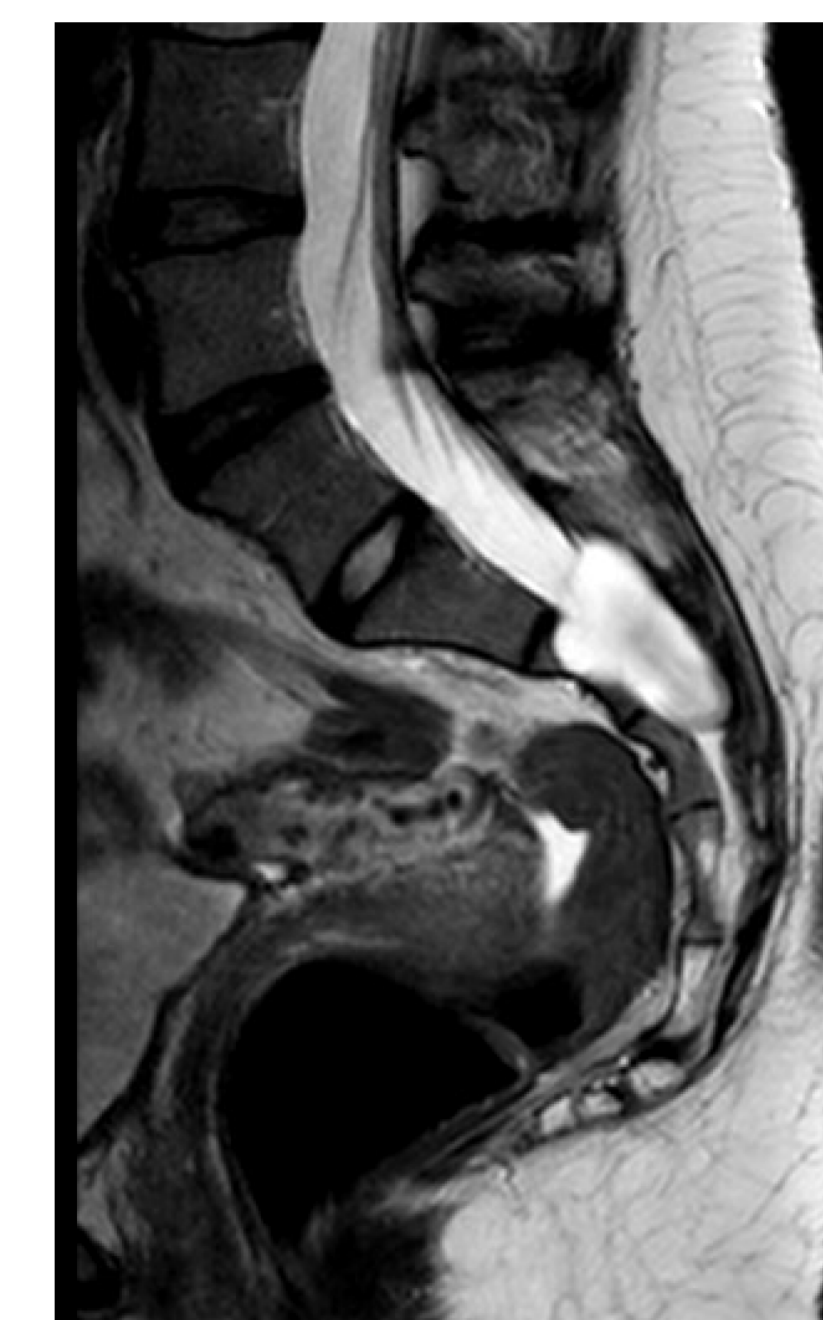


Figure 1. Sagittal view of Tarlov Cyst on MRI.

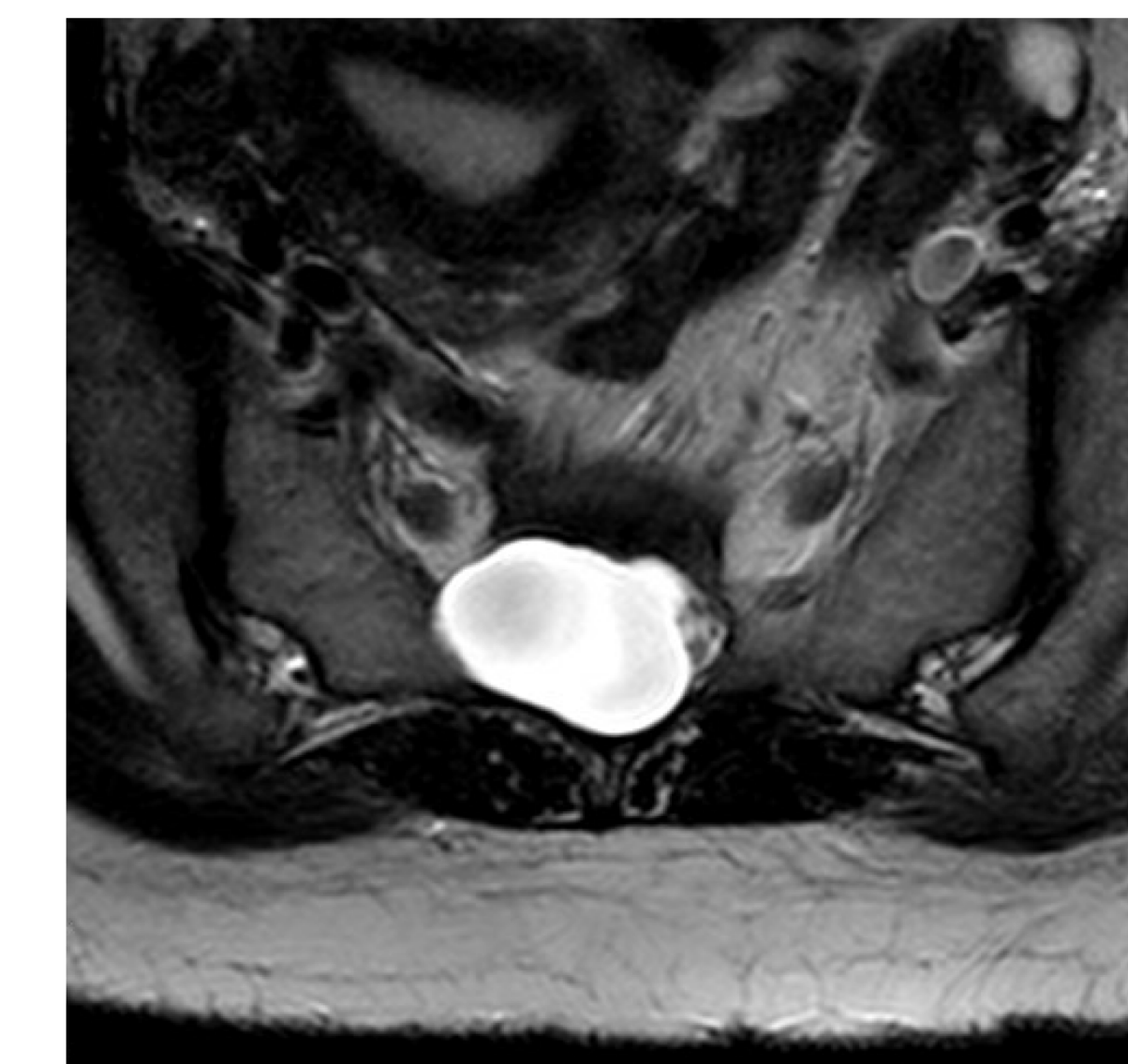


Figure 2. Axial view of Tarlov Cyst on MRI

RESULTS

- This Tarlov cyst was believed to be the source of her back pain that was exacerbated from her pregnancy.
- Conservative treatment was initiated with physical therapy, a maternity belt for pelvic support, gentle massages, and icing therapy.
- Steroid injections were deferred on initial evaluation due to potential fetal complications.
- Her symptoms significantly improved with conservative management at both 1 and 3 month follow-up.
- Plan was to re-evaluate patient's symptoms post-partum and to closely follow up with her obstetrician.

DISCUSSION

- Though no research directly links Tarlov cyst complications with pregnancy, we hypothesized that hormonal changes, such as increased relaxin, fluid retention, and growing uterine size may have contributed to increased nerve root irritation and compression [4].
- Pregnancy presents a unique challenge of limitations to interventional procedures, therefore non-invasive strategies such as targeted physical therapy, postural support, and cold modalities are recommended.

CONCLUSIONS

- This case highlights the importance of multidisciplinary care in managing an unique presentation of Tarlov cyst-associated pain during pregnancy while prioritizing fetal safety.

REFERENCES

1. Lucantoni, C., Than, K. D., Wang, A. C., Valdivia-Valdivia, J. M., Maher, C. O., La Marca, F., & Park, P. (2011). Tarlov cysts: a controversial lesion of the sacral spine. *Neurosurgical focus*, 31(6), E14. <https://doi.org/10.3171/2011.9.FOCUS11221>
2. Tracz, J., Judy, B. F., Jiang, K. J., Caraway, C. A., Yang, W., De Macena Sobreira, N. L., Khan, M., & Witham, T. F. (2024). Interventional approaches to symptomatic Tarlov cysts: a 15-year institutional experience. *Journal of neurointerventional surgery*, 16(7), 737–741. <https://doi.org/10.1136/jnis-2023-020564>
3. Elkins, N., Hunt, J., & Scott, K. M. (2017). Neurogenic Pelvic Pain. *Physical medicine and rehabilitation clinics of North America*, 28(3), 551–569. <https://doi.org/10.1016/j.pmr.2017.03.007>
4. Kristiansson, P., Svärdsudd, K., & von Schoultz, B. (1996). Serum relaxin, symphyseal pain, and back pain during pregnancy. *American journal of obstetrics and gynecology*, 175(5), 1342–1347. [https://doi.org/10.1016/s0002-9378\(96\)70052-2](https://doi.org/10.1016/s0002-9378(96)70052-2)