Labor Analgesia for Parturient with Hereditary Multiple Osteochondromas - Case Report

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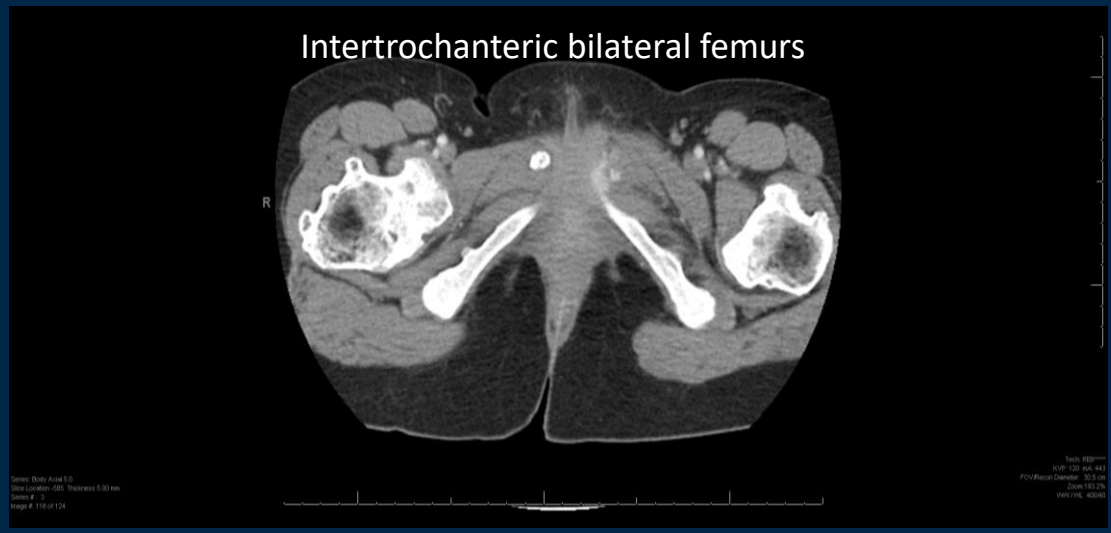
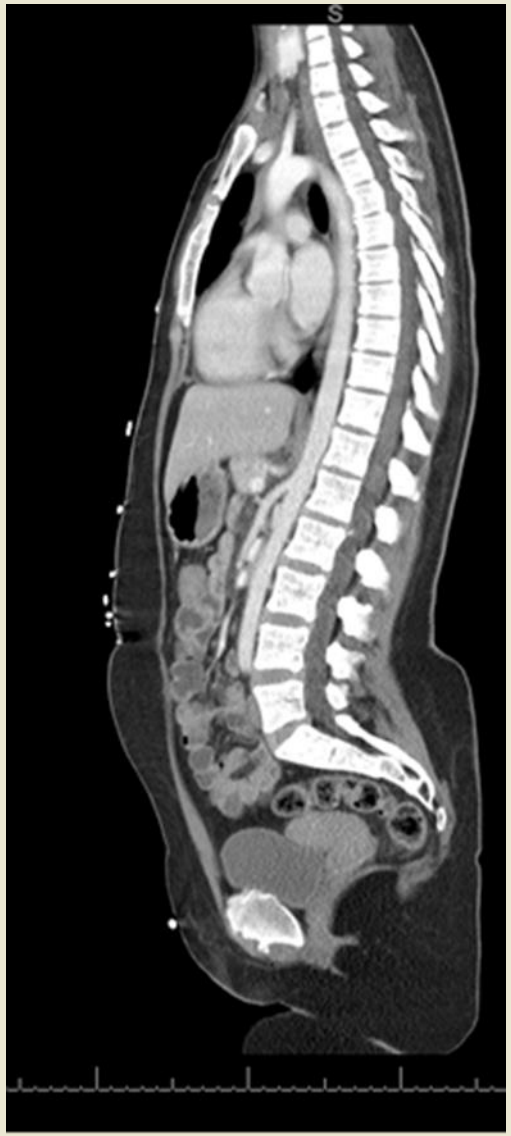
- **Introduction**: Hereditary Multiple Osteochondromas (HMO), formerly known as Multiple Hereditary Exostoses (HME), is a rare autosomal dominant disorder characterized by osteochondromas growing from bones, such as ribs, vertebrae, pelvis, and extremities.
- Characteristics of HMO include abnormal bone growth resulting in long bone shortening, restricted joint mobility, risk of fractures, vascular compression, and in 2-5% of cases, malignant transformation. Involvement of the vertebral column can lead to significant neurologic deficits.
- The diagnosis of HMO is based on radiographic findings of multiple osteochondromas and/or the presence of a pathogenic variant in the EXT1 or EXT2 genes. These genes also encode for heparin sulfate, which is involved in endothelial function. Bleeding diathesis has not been reported in HMO patients. The effects of pregnancy-related hormones on exostoses growth are not known.
- Information is limited regarding obstetric outcomes of these patients, however, it is notable the condition confers a twofold increased risk of C-Section in comparison to the general population.



Hereditary Multiple Osteochondroma (HMO)

- Case report: A 19 y/o primiparous female (BMI 28.14 kg/m2, height 162 cm, weight 74 kg, Mallampati I), with a history of multiple osteochondromas, was assessed for anesthetic management of labor.
- Past medical history included syncope, chronic pelvic pain, PTSD, and familial “bone disease” (HMO). The patient denied bleeding, easy bruising, or neurologic deficits. Her hemoglobin was 11.5 g/dL and platelets 265K. Scoliosis or mass lesions on her back were not appreciated on the physical exam.
- Prior axial CT showed extensive osseous lesions throughout the pelvis, with a small osseous lesion at L4-L5. Sagittal reconstruction shows no evidence of osseous lesions in the lumbar spinal canal. Midline approach in the lumbar region appeared free of obstruction.
- The patient was admitted in labor at 39+ weeks and received planned epidural. Due to failure of fetal descent, Cesarean Section was performed without complication.



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Conclusion: Parturients with hereditary multiple osteochondroma (HMO) present a dilemma for the anesthesiologist contemplating neuraxial anesthesia. However, neuraxial anesthesia may be used successfully in a subset of these patients.

Obligate axial imaging of the spine to assess the extent of exostoses and spinal cord involvement is recommended.

Additionally, careful positioning of insensate patients is necessary to mitigate fracture risk

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References:

1. Curr Osteoporos Rep. 2017 Jun;15(3):142–152. doi: 10.1007/s11914-017-0355-2
2. Am J Med Genet.1995 Jan 2;55(1):43-6. doi: 10.1002/ajmg.1320550113.

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