Original Research Article

# A case of lumbarisation of S1 and S2 vertebrae associated with early changes of ankylosing spondylitis

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## Abstract

**Aims and Objectives:** To describe MRI findings in the 14 year old female who came with complaint of bilateral hip joint pain. **Materials and Methods:** The equipment used for diagnosis is MAGNETOM AVANTO 1.5-T A Tim + Dot MR system **Results:** MRI findings of the 14 yr old female showed Bilateral Coxa Vara deformity with reduced joint space in both the hip joints and Bilateral Sacroilitis associated with Lumbarization of 1st and 2nd sacral vertebrae and Partial fusion of D1 and D2 vertebrae. **Conclusion:** In conclusion, Rare form of Lumbarization of 1st and 2nd sacral vertebrae. Bilateral Sacroilitis Bilateral CoxaVara deformity with reduced joint space in both the hip joints likely suggesting juvenile form of ankylosing spondylosis.
**Key Words:** ankylosing spondylitis.

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## INTRODUCTION

**Clinical History:** 14 years/Female Came with complaint of pain in bilateral hip joints associated with backache and bilateral knee joint pain.
No other complaints noted. Systemic examination- Normal.

**Laboratory Findings**

- Rheumatoid factor (RF) negative (hence seronegative)
- ESR( Erythrocyte Sedimentation Rate) and C-Reactive Protein values were normal.
- Spine X-ray and Bilateral hip joint X-rays were done.
- On X Ray:

1. Bilateral CoxaVara deformity.
2. Reduced Hip joint space noted on both sides.

## DISCUSSION

14 year old female, came to our department for MRI Hip Joint with complaint of bilateral hip joint pain since 2 months associated with backache and cervical and knee joint pain. Physicians were suspecting juvenile rheumatoid arthritis, however laboratory findings suggesting rheumatoid arthritis were normal.

**Patient's Xray and MRI On MRI**

- Whole spine showed lumbarisation of S1 and S2 vertebrae. Partial fusion of D1 and D2 vertebrae noted.
- Bilateral Sacroiliac joint :
- showed Altered signal intensity in subarticular surface of iliac and sacrum bones on both the sides exhibits hypointense on T1 and heterogenously hyperintense on PDFS likely indicating marrow oedema with irregularity noted at subarticular surface of both iliac bones likely manifesting Sacroilitis.
- Minimal joint effusion noted along right Sacro-iliac joint.

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- Adjacent muscles and fat planes appear normal.
- MRI Bilateral Hip joint =
- Deformity of the hip where the angle formed between the head and neck of the femur and its shaft (Mikulicz angle) is decreased…Coxa Vara deformity.

Reduced Hip joint space noted on both sides however the contour of both the femoral heads and cartilage appear normal.


Figure 1:

Figure 2:


Figure 3:

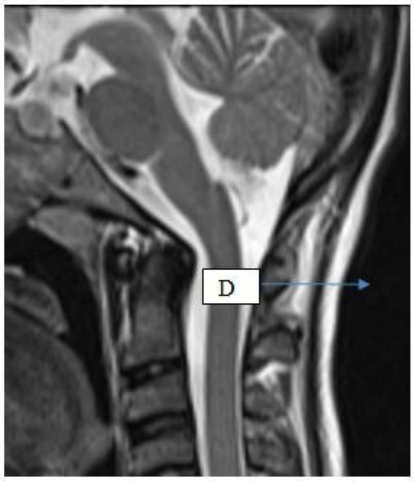


Figure 4:

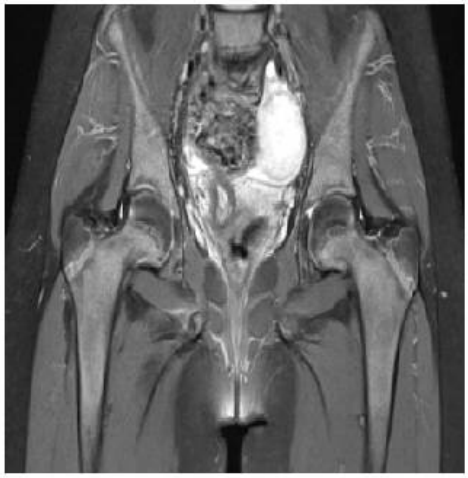

Figure 5:

**Figure 1:** X-ray pelvis: Irregular subarticular surfaces of bilateral sacroiliac joints. Decreased hip joint spaces bilaterally with coxavara deformity

**Figure 2:** MRI whole spine: (T2WI)=Lumbarization of S1 and S2 vertebrae noted.

**Figure 3:** MRI Saggital T2WI: Partial Fusion of D1 and D2 vertebrae.

**Figure 4:** MRI Cervical Spine Saggital T2WI sequence: Subtle clivus odontoid angulation with angulation of caudal portion of medulla oblongata and proximal portion of spinal cord.

**Figure 5:** MRI Bilateral Hip joint Proton Density Sequence Coronal View:

## CONCLUSION

Lumbarization of S1 and S2 are very rare form of spinal malformation. In a H/O negative Rheumatoid factor (RF) and MRI findings of Sacroilitis. features suggesting changes of early Ankylosing Spondylitis. The coxaVara deformity and reduced hip joint space likely suggestive of associated Findings.

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