

## **A Rare Case of Bilateral Osteonecrosis of the Femoral Head in a Patient with a Severe Autism Spectrum Disorder**

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**Purpose:** The authors would like to report the peculiar case of a young male (23 years of age) affected by a severe autism spectrum disorder (ASD) who developed bilateral osteonecrosis of the femoral head (ON). Clinical presentation involved progressive weight-bearing inability, chronic bilateral increasing hip pain, and joint hypermobility (JH), in a context of marked motor stereotypes.

**Methods:** Diagnosis and staging of ON–bilateral ARCO (Association Research Circulation Osseous) grade IV were confirmed by radiographs and CT scan. A multi-disciplinary discussion was performed, balancing the need for bilateral total hip arthroplasty (THA) and concerns for the potentially higher risk of postoperative joint dislocation/complications related to the patient’s ASD. It was decided to perform bilateral THA using dual mobility implants, in order to achieve a superior joint stability. A double hip spica cast was wrapped at the end of the surgery to avoid self-harm scratching and contamination of surgical wounds.

**Results:** 12 days after the surgery, the cast was removed and the patient was initiated to a targeted rehabilitation program. The relationship between ASD and JH is well investigated in the literature; however, their connection is poorly understood. ASD and JH are also related with a bone mineral density reduction, with a higher risk of developing fractures and chronic joint pain. On the other hand, pathogenesis of ON is unclear: it involves microvascular disruption and bone tissue necrosis with a consequent marked alteration of trabecular.

**Conclusions:** Even though no direct connection between ON and ASD could be found in the literature, this peculiar case suggests further evaluation of a possible connection between these pathological conditions.