



## Letter to the Editor

## Letter to the Editor: Total Hip Arthroplasty in a Patient With Facioscapulohumeral Dystrophy

We are writing to share our thoughts on the case report recently published in your journal about a patient with facioscapulohumeral dystrophy (FSHD) who underwent total hip arthroplasty (THA) [1]. The authors' careful consideration of the patient's unique circumstances and their successful surgical approach are commendable. On the other hand, the report provides a valuable opportunity to emphasize the unique features of patients with FSHD and important biomechanical considerations different from a standard THA. These were not mentioned in the report, and we believe following critical points would be beneficial for readers.

Pelvic muscles are often affected in FSHD [2], particularly the hip extensors, which can result in a hyperlordotic lumbar spine and altered gait [3,4]. We previously reported a case to show how severe the extent of this hyperlordosis can be with surprising flexibility [5]. This can affect the patient's standing posture and may require modifications during the surgery to accommodate the altered biomechanics [6–8]. The pelvis may be anteriorly tilted during gait as part of weakness [2]. However, it is worth noting that the sitting posture of FSHD patients is usually similar to that of normal individuals because the deformity is often flexible. Additionally, in patients with higher FSHD scores [9,10], there may be abductor weakness as well [11]. It is clear that these may lead to instability. These considerations are critical when planning the surgical approach for THA for FSHD patients to ensure optimal outcomes. Postoperative rehabilitation is a further challenge in FSHD patients after THA. FSHD commonly affects periscapular muscles, which may be treated with scapulothoracic arthrodesis to an extent [12,13], as well as biceps and triceps muscles [14] which may complicate the usage of walking aids. Personalized walking aids can be made to overcome this problem. Foot drop is also another common pathology in these patients [15] which may represent an additional problem for ambulation.

In our view, increasing the constraint of the implant would enhance the safety of THA in patients with FSHD. One reliable option to consider is the use of tripolar cup designs, which have demonstrated lower rates of dislocation and instability in various patient populations [16]. The optimal position of components of THA depends on the physical status and anatomical properties of the hip joint of the patient. Lewinnek's safe zones, 40° inclination and 20° anteversion, [17] may not suffice in these patients. If seated and erect sacral slope angles have a difference of less than 10°, anteversion may need to be increased. Optimal angular position is dependent on the patient's characteristics, and recent technological advancements may help in determining this position. Utilizing robot-assisted surgery and preoperative planning, which provide

detailed insights on dynamic impingement and dislocation analysis to determine the optimal patient-specific implant position, may further improve outcomes beyond those of standard arthroplasty patients. In summary, we believe that this case report will be of great interest to healthcare professionals involved in the treatment of patients with neuromuscular disorders, as well as those who specialize in THA.

## Conflicts of interest

The authors declare there are no conflicts of interest.

For full disclosure statements refer to <https://doi.org/10.1016/j.artd.2023.101173>.

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