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Femoral Retrotorsion as the Source of Sacroiliac Symptoms – A Case Report

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PURPOSE:

The presence of femoral retrotorsion limits the ability to functionally utilize internal rotation (IR) of the hip. Postures which require the internal rotation of the hip can place more stress on the sacroiliac (SI) area as a compensation. This case report highlights a patient's self management of the SI symptoms by avoiding the postural positions requiring internal rotation. Retrospective analysis shows a significantly higher correlation of femoral retroversion (57%) in patients with these pain descriptors versus asymptomatic patients in whom the incidence of retroversion is only 5-15% (Prather 2019). The purpose of this case report is to demonstrate that patient education is an important component of pain management for this population.

CASE DESCRIPTION:

Pt is a 42 year old female with bilateral SI/buttock pain, intermittent and present for years, but recently worsening with new job as secretary where she often sits on a stool. Symptoms are worse in the morning, with sitting and better with standing. She has tried changing shoes and chair seats without improvements. Evaluation data shown in table 1.

Pain Scale (VAS)	Ranges from 5-10/10
Modified Oswestry	17% Disability
Lumbar ROM	75% of normal in all planes
Strength (hip flexion & extension)	4+/5 bilaterally
Neuro Exam	Normal (myotomes, dermatomes, reflexes)
Sacroiliac Provocation Tests	Negative
Hip ROM	Decreased IR, hard end feel, pain at end range
Craig's Test	Retrotorsion 19° left, 25° right (Figs 1,2)
Functional Assessment	Patient was seated with exaggerated external rotation of the hip which eliminated her pain (Fig 4)

Table 1: Evaluation Data

METHODS:

Patient was managed by education to avoid IR positions of the hip. (Fig 3). Avoiding the IR positions eliminated her symptoms. Sitting in chairs and car seat required exaggeration of an external rotated hip. (Fig 4) Standing postures required her to exaggerate the turned out foot. Through education, patient realized that she often would try to correct the turned out foot.

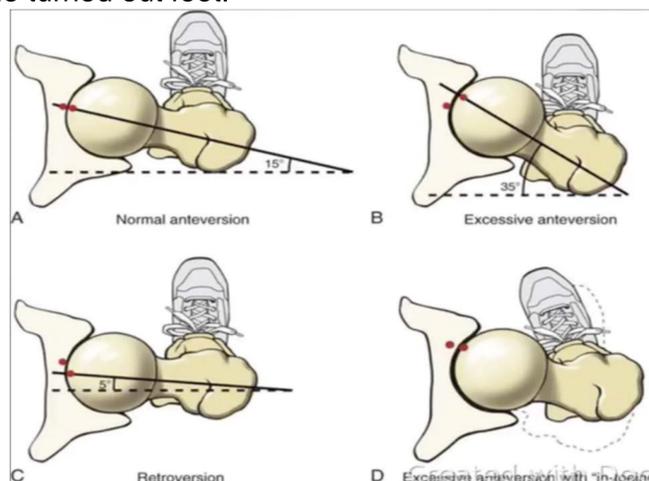


Figure 1: Femoral torsions



Figure 2: Normal Craig test

RESULTS:

Patient did acknowledge that she had to be extremely conscientious of sitting postures of hip or else she would experience hip "spasms." Discharge data showed significant improvement (Table 2)

Pain Scale (VAS)	0/10
Modified Oswestry	6%
Lumbar ROM	75-100% of normal

Table 2: Discharge Data

CONCLUSION/CLINICAL APPLICATION:

SI joint and hip mobility are integral to functioning of the pelvic/hip complex. Examination of the hip is important to isolate from pelvic/SI motion in order to assess the exact hip limitations and end-feel. Given the structural nature of a femoral torsion, mobility cannot be improved. It is imperative that patients are aware of their unique functional positions to avoid so as to limit stress directed in another region of the body. Management of a patient with a femoral torsion can be carried out exclusively through education as long as other tissues have not been injured.



Fig. 3: Poor posture with IR of hips



Fig. 4: Required posture with ER of both hips

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