

Advanced hip joint degeneration associated with femoroacetabular impingement in a retired chiropractor

Peter C. Emary, DC, MSc¹
John A. Taylor, DC, DACBR²

Femoroacetabular impingement is a relatively new clinical entity only recently described in the orthopedic literature. In this report, we document a severe case of hip joint osteoarthritis associated with cam-type impingement in a retired chiropractor.

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KEY WORDS: chiropractic, femoroacetabular impingement, osteoarthritis, hip joint

Case Presentation

A 67-year-old retired chiropractor (of 42 years) presented with a chief complaint of chronic and worsening right-sided hip pain of five years' duration. The pain was described as a deep "burning" sensation in the right buttocks that occasionally referred to behind the right knee. Daily activities such as prolonged standing, getting in and out of a car, climbing stairs, and right side-lying were provocative. Lying supine with a pillow behind the right knee and

Le conflit fémoro-acétabulaire est une entité clinique relativement nouvelle, récemment décrite dans les revues orthopédiques. Dans ce rapport, nous documentons un cas grave d'arthrose de l'articulation de la hanche associée à un conflit de type à came chez un chiropraticien à la retraite.

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MOTS CLÉS : chiropratique, conflit fémoro-acétabulaire, arthrose, articulation de la hanche

or taking over-the-counter pain medication (Acetaminophen, Tylenol) were palliative. While still working as a chiropractor, the pain was also exacerbated when flexing the right hip to perform a 'side-posture' lumbar spinal adjustment, particularly if using a "shin to knee" contact.¹ The patient had been retired from clinical practice for two years at the time of presentation. His hip pain had become increasingly debilitating over the past 12 months and was now graded with a severity of eight out of a possible 10.

¹ Private Practice, Cambridge, Ontario

² Chiropractic Department, D'Youville College, Buffalo, NY

Corresponding author: Peter C. Emary
201C Preston Parkway, Cambridge, Ontario Canada N3H 5E8
e-mail: pccemary@hotmail.com

The patient has consented to having his personal health information including radiographs published.
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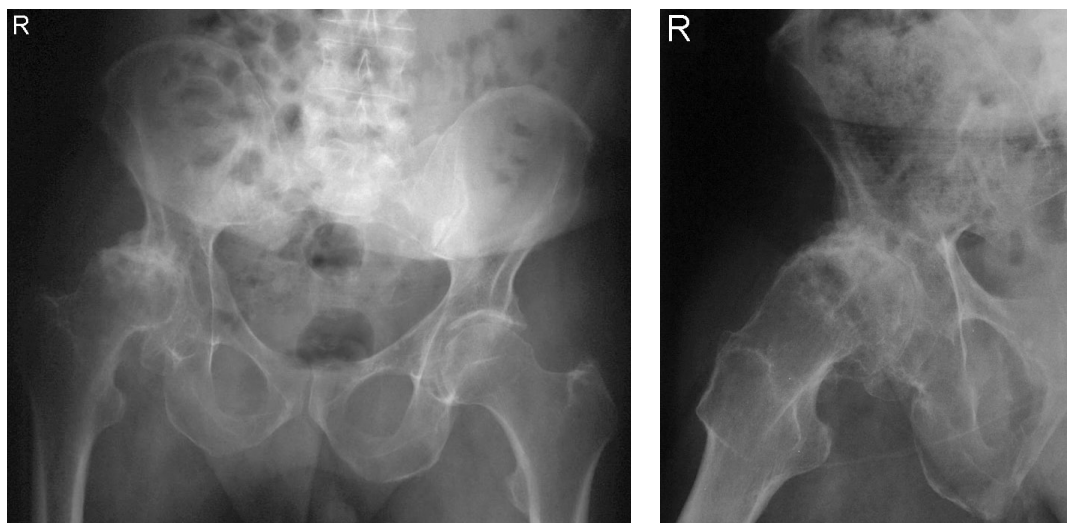


Figure 1.

a) Anteroposterior pelvis and b) frog-leg projection of the right hip reveal complete obliteration of the hip joint space with associated subchondral sclerosis, osteophyte formation, and subchondral cyst formation. Superolateral subluxation of the femoral head is also present. Both femoral head/neck junctions reveal a prominence on the lateral surface consistent with a “pistol grip” deformity typical of cam-type FAI. The left hip joint exhibits only minimal degenerative changes compared with the right.

On examination, he walked with a noticeable limp. Range of motion testing of his right hip joint revealed pain and limited mobility in all ranges, but there was severe pain and 80% restriction with flexion, adduction, and internal rotation. The combination of those three movements (i.e. Hip Impingement Test²) provoked his hip complaint. Moving the right hip joint into extension, abduction, and external rotation provided some relief. Anteroposterior (Figure 1a) and right frog-leg (Figure 1b) radiographic projections revealed bilateral cam-type (or ‘pistol-grip’) femoral deformities^{2,3} with severe advanced degenerative joint disease of the right hip. Based on these findings, the patient was diagnosed with right anterior hip joint impingement with severe underlying osteoarthritis. Table 1 lists the key imaging features^{2,3} and etiologies⁴ for cam-type femoroacetabular impingement (FAI) syndrome.

FAI is a relatively new clinical entity only recently described in the orthopedic literature and has been implicated as an important contributor to hip pain in adults and idiopathic osteoarthritis of the hip later in life.²⁻⁵ Notably, however, not all patients with radiographic evidence of

FAI will present with clinical symptoms or develop progressive hip joint degeneration.^{2,6,7} Further, the prevalence and the incidence rates of FAI with or without hip joint osteoarthritis in practising and/or retired chiropractors are unknown. The patient in this case was referred for orthopedic surgical consultation and underwent successful total right hip joint arthroplasty four months later. For

Table 1.

Key imaging features and etiologies of cam-type FAI.

Key imaging features
<ul style="list-style-type: none"> Asphericity of the femoral head with osseous ‘bump’ formation at the anterolateral femoral head-neck junction Morphology of the proximal femur resembles a pistol handle (i.e. ‘pistol-grip’) Alpha angle measures $> 55^\circ$ Decreased or absent femoral head-neck offset
Known etiologies: malunion of a femoral neck fracture, slipped capital femoral epiphysis, developmental dysplasia of the hip, or Legg-Calvé-Perthes’ disease

more information and additional examples of FAI, visit Radiopaedia.org.⁸

Key Messages

- Cam-type deformities of the femoral neck often have a ‘pistol-grip’ appearance
- FAI has been associated with hip pain in young adults and osteoarthritis of the hip joint later in life

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