

Editorial Commentary: Modified False-Profile View—Two Birds With One Stone?



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Abstract: Pathology in the hip is most commonly described using radiographic parameters. Accurately delineating this pathology is paramount in proper diagnosis and care. The anterior center-edge angle measures the anterior coverage of the acetabulum, which has implications in treating the hip. The modified false-profile view will allow visualization of not only the anterior coverage of the femoral head but also the patient's alpha angle. As such, the modified false-profile view could replace both the standard false-profile view and the 45° Dunn view, essentially reducing by 1 the number of images required to evaluate patients presenting with hip symptoms. A disadvantage is that hip instability may be more difficult to identify radiographically.

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An orthopaedic surgeon's day would not be complete without a patient either refusing radiographs or complaining about the number of radiographs required for the practitioner to properly assess the patient's injury. The ability to minimize the number of radiographs to limit patient radiation and still receive the sought-after information is something all busy practitioners should strive to achieve.

Wong et al.¹ recently noted that 2 radiographs (anteroposterior pelvis and 45° Dunn views) were not inferior to a 5-view series (anteroposterior pelvis and hip, false-profile, 45° Dunn, and frog-leg views) of the hip in identifying cam morphology. Although the idea of obtaining only 2 radiographs is enticing, in my practice this leaves too many details of the acetabular morphology to question. I read the article "Assessment of Acetabular Morphology Utilizing the Acetabular Anterior Center Edge Angle of Modified False-Profile Radiographs" written by Murphy, Atkins, Kobayashi, Anderson, Maak, Nechyporenko, and Aoki² with great interest. This article makes a strong case for eliminating the 45° Dunn view in my practice. The article shows that the modified false-profile view is very similar to the

standard false-profile view in relation to the measure of the anterior center-edge angle. For individuals who are not familiar with the modified false-profile view, it is a hip radiograph first described by Atkins et al.³ It is the same as the false-profile view in all regards except the patient internally rotates the indicated leg 35° to allow better visualization of the 1- to 2-o'clock position of the femoral head-neck junction.³

Sometimes things are too good to be true, so critical analysis is warranted. First, it is important to understand why many practitioners obtain the usual 2 images of the hip that a modified false-profile view attempts to replace. The modified false-profile view attempts to look at both the anterior coverage of the acetabulum (false-profile view) and the offset of the femoral head-neck junction (Dunn or frog-leg view).

The false-profile view is valuable in assessing the anterior and posterior joint space for subtle arthritis, instability (position of the femoral head between the anterior and posterior acetabulum), and anterior coverage of the femoral head. Compared with the standard false-profile view, the modified false-profile view, as shown by Murphy et al.,² accurately assesses the anterior center-edge angle. In my opinion, the increased internal rotation of the leg may make some patients who have anterior instability of the hip due to increased femoral version, ligamentous laxity, or capsular deficiency more difficult to identify on the false-profile view. With the modified false profile view, the increased internal rotation of the leg brings the femoral head into

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contact with a more posterior portion of the acetabulum and this is a more stable position for the hip. This is one of the reasons patients with increased femoral version tend to walk with an in-toe gait.⁴⁻⁶

My preferred radiograph to visualize the classic cam lesion is the 45° Dunn view. This is because this image more consistently captures the area most commonly affected by cam morphology, which allows the practitioner to more consistently visualize the area of maximal deformity.⁷ The modified false-profile view with the leg internally rotated 35° has consistently shown that it, too, looks at the area of the femoral neck between the 1- and 2-o'clock positions,² which is this area where cam lesions are most consistently located.⁸ Up to 20% of patients will complain of hip pain on the contralateral side; the Dunn view has the advantage of showing the cam lesion in both hips, whereas the modified false-profile view will look at only 1 hip.^{9,10}

My opinion is that the modified false-profile view can be a very informative radiograph that allows practitioners to decrease radiographic burden and still obtain the information we require; however, there may be greater difficulty identifying imaging signs of hip instability with this radiograph. The weaknesses discussed are of value to understand because the clinician should be very careful when treating patients with abnormal rotation profiles, high Beighton scores, and previous arthroscopy who have symptoms or signs of hip instability; a thorough history and physical examination should be performed and the findings should be interpreted appropriately to avoid misdiagnosis.

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