



Hip microinstability: fact or fiction?

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Hip instability, also termed “microinstability”, awareness has increased recently, but it still remains a debated subject. The absence of general agreement comes partly from the fact that the hip is typically thought of as a very stable joint due to its high bony conformity and thick tissue envelope, the difficulty of examining the hip within its deep soft tissue envelop and the fact that patients infrequently complain of true instability [21]. Those who have pain related to hip instability generally complain of deep pain around the hip joint, groin, or inguinal crease [11, 23]. Uncommonly some can complain of a sense of apprehension, or giving way with specific activities [21].

It has been previously established that the hip does not simply rotate in its socket but also exhibits translational movements as well [1, 2, 6, 13, 16, 22]. Recently, biomechanical models have shown that capsular laxity increases femoral head rotation and translation [8–10]. Some light has also been shed on the capsule-labrum relationship; a recent biomechanical study has shown that a labral insufficiency will create more femoral head translation when the capsule is lax and its effect is less important when the capsule is intact [10]. The clinical implications of these newer findings remain to be elucidated but there is growing recognition that instability can lead to further degenerative changes of the hip joint [1, 14, 16]. One reason that could explain this phenomenon is that motion of the femoral head relative to the acetabulum puts stress on the capsule and labrum, injuring these structures. Those injuries would then increase translation of the femoral head in the acetabulum and an increasing amount of stress is placed on the labrum and capsule. This could perpetuate a spiral of instability and eventual degenerative changes within the hip joint. [21]

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The only available classification actually divides instability according to its etiology: bony abnormalities or hip dysplasia, connective tissues disorders, post-traumatic, microtraumatic, iatrogenic and idiopathic [4]. The multitude of different causes demonstrate its coexistence with other pathologies and can therefore confound the clinician. While there are some clinical or radiological signs that have been proposed [3, 7, 17, 18, 25], there are none that currently are pathognomonic or agreed upon, so the diagnosis depends on clinical experience and acumen. As such, the diagnosis can be relatively simple in patients with obvious bony anomalies or can also be very subtle in cases where no bony anomalies are found [11]. There is most likely a spectrum of instability, and it is critical to determine this in order to direct treatment, as many different techniques have been proposed [4, 5, 12, 15, 19, 20, 24, 26]. Nonetheless, there is a lack of high-quality research that has evaluated the efficacy of the variety of existing management strategies. A good starting point should be a focus on developing consensus based criteria to standardize definitions, diagnostic criteria and treatments. Even though there is a growing body of evidence addressing hip instability, clinicians should be careful and proceed using evidence-based principles prior to proposing wide range of treatments in all forms (operative and non-operative). This will elevate the facts from fiction.

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