Surg Radiol Anat
DOI 10.1007/s00276-016-1648-3

LETTER TO THE EDITOR

Concerning "Pathological findings in patients with low anterior inferior iliac spine impingement"

Rodolfo Morales-Avalos[1,2] · A. G. Espinosa-Uribe[1] · F. Vílchez-Cavazos[2] · R. E. Elizondo-Omaña[1] · S. Guzmán-López[1]

Received: 29 December 2015 / Accepted: 10 February 2016

To the Editor,

We applaud the recent article published by Amar et al. who evaluates the prevalence of low anterior inferior iliac spine (AIIS) in patients undergoing hip arthroscopy and characterizes the concomitant labral and chondral injuries. This study hypothesize that low AIIS is a common intraoperative finding in hip arthroscopy patients and that labral and chondral lesions may be found in a predictable location [1].

Currently, there is interest in extra-articular sources of femoroacetabular impingement (FAI), which may cause a small proportion of FAI cases and are exemplified by trochanteric-pelvic, ischiofemoral and subspine impingement [2].

Our working group recently published an article whose aim was to determine a new morphological classification of AIIS using a sample of 458 dry hemipelvises of known gender and age and to determine the prevalence of the different AIIS morphologies according to sex, age and laterality. Our results suggests that the prevalence of "abnormal" morphology (types 2A, 2B and 3) most commonly occurs in young men (18–39 years) and older women (>40 years) [4].

- Type 1: presents a notch or a concave surface between the AIIS and the acetabular rim, whereby the surface does not contact and is not part of the acetabular rim.
- Type 2A: presents a flat surface between the AIIS and the acetabular rim, whereby the surface reaches the acetabular rim but is not continuous.
- Type 2B: presents a convex surface (with or without bony prominences) between the AIIS and the acetabular rim, which continues directly with the acetabular rim.
- Type 3: presents an AIIS that protrudes into the acetabulum inferiorly with invasion of the acetabular rim, interfering with the continuity of the same in its anterosuperior portion or presents a large anterior bony prominence with multiple spiculae and/or protruding bone [4].

The demographic results obtained in the article support the ones obtained in our osteologic pieces study in relation to the prevalence of abnormal variations of the AIIS according to gender and age and we consider both case series as the only basic and clinical studies of large sample size currently existing.

In this article, the lesions were classified according to the classification proposed by Hetsroni et al. [3]. Among the advantages of our morphological classification is the large simple size and that it was developed in bone specimens; thus, the morphological changes of the AIIS were evaluated in detail, additionally the study was conducted in osteological specimens from a general population. This feature is a strength of the study because this allowed us to determine more accurately the prevalence of the different morphologies, reducing the possibility of selection and confusion bias.

✉ Rodolfo Morales-Avalos
rodolfot59@hotmail.com

[1] Department of Human Anatomy, Faculty of Medicine, Universidad Autonoma de Nuevo León (U.A.N.L.), Ave. Madero y Dr. Eduardo Aguirre Pequeño s/n, Col. Mitras Centro, 64460 Monterrey, Nuevo León, Mexico

[2] Orthopedics and Traumatology Service, University Hospital "Dr. José Eleuterio González", Universidad Autonoma de Nuevo León (U.A.N.L.), Monterrey, Nuevo León, Mexico

Published online: 18 February 2016

We consider important the realization of a similar study to the one carried out by Amar et al. [1] using the morphologic classification proposed by our working group and increase the sample size to elucidate definitely the relation between gender, age and the presence of an abnormal morphology of the AIIS to help understand the morphogenesis and morphopathology of this condition.

Compliance with ethical standards

Funding No funds were received in support of this work.

References

1. Amar E, Warschawski Y, Sharfman ZT, Martin HD, Safran MR, Rath E (2015) Pathological findings in patients with low anterior inferior iliac spine impingement. Surg Radiol Anat. doi:10.1007/s00276-015-1591-8
2. de Sa D, Alradwan H, Cargnelli S, Cargnelli S, Thawer Z, Simunovic N, Cadet E, Bonin N, Larson C, Ayeni OR (2014) Extra-articular hip impingement: a systematic review examining operative treatment of psoas, subspine, ischiofemoral, and greater trochanteric/pelvic impingement. Arthroscopy 30(8):1026–1041
3. Hetsroni I, Poultsides L, Bedi A, Larson CM, Kelly BT (2013) Anterior inferior iliac spine morphology correlates with hip range of motion: a classification system and dynamic model. Clin Orthop Relat Res 471(8):2497–2503
4. Morales-Avalos R, Leyva-Villegas JI, Sánchez-Mejorada G et al (2015) A new morphological classification of the anterior inferior iliac spine. Relevance in subspine hip impingement. Int J Morphol 33(2):626–631