

Trabecular bone score and surgical treatment of primary hyperparathyroidism

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The surgical management of patients with primary hyperparathyroidism (HP) has resulted in several advances in recent decades which have improved the surgical management of this pathology, notable among which are the techniques of preoperative localisation, the use of minimally invasive techniques and the intraoperative determination of PTH. In spite of these advances, a number of controversies persist in terms of the surgical indications for patients with HP¹. The complementary tests necessary in the evaluation of the management of the patient with HP in order to define the degree of affectation and the indications for surgical treatment have also developed. In the latest recommendations of the Endocrine Society from 2014², in addition to carrying out a DXA they also recommend the evaluation of the presence of vertebral fractures by conventional radiology or other techniques, and the determination of the trabecular bone score (TBS) for a better definition of the trabecular affectation, which may not be correctly reflected in the densitometry. Furthermore, they recommend the determination of the presence of renal lithiasis by means of conventional X-rays or ultrasound, and the evaluation of the risk of lithiasis through the biochemical evaluation of urine. In respect of the classic criteria for surgery in patients with HP (less than 50 years of age, osteoporosis, history of fragility fracture, glomerular filtrate lower than 60 ml/min/1.72 m², or the presence of renal lithiasis), the recommendations of 2014 add the presence of vertebral fracture or lithiasis detected by respective imaging techniques, or the biochemical risk of lithiasis. In terms of the determination of the TBS, its relevance to the evaluation of the patient with HP is recognised, since it may mean a better estimation of the presence of an alteration in the level of trabecular bone in comparison with a DXA, and access to it may be less limited than other techniques such as HR-pQCT. However, no surgical criteria have been established as a function of the value of TBS due to its limited availability at the

current time, although it is recognised that this may change in the future.

The clinical case presented by Fernández-SanMillán et al.³ features a woman of 57 years of age in whom, in spite of not meeting the criteria for surgery according to the different recommendations, it was decided to perform a parathyroidectomy in response to the existence of a deterioration in trabecular bone structure determined by TBS and after locating an adenoma by gammagraphy. After surgery, an improvement in bone mineral density, and in markers for bone remodelling, were observed. The authors suggest the desirability of including, whenever possible, an estimation of the TBS in the evaluation of patients with HP, since if a deterioration of the bone microarchitecture is observed the indication of surgery could be recommended. In our opinion, this case raises an interesting question as to the need of a better evaluation of bone microarchitecture in patients with HP than we have made to date. The carrying out of a TBS, easier to do and more accessible compared with other techniques, could mean a significant advance in this matter. Although the current recommendations for surgery do not include alterations in TBS as a criterion for surgery, research in this field may change these criteria in the future.

Bibliography

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