Book review


Bone densitometry is a proliferating tool in rheumatology practice but often the theoretical and technical basis required to give and interpret correctly the data are missing. This book is dedicated to all the physicians, internists, endocrinologists, gynaecologists, who deal with bone disease and particularly osteoporosis. It is also comprehensive for technicians who perform the examinations. It is dedicated to those who already use bone densitometry and I am sure it will convince those who are still reluctant to use it in clinical practice.

The first five chapters deal with the technical issues. They include a review of all the techniques possible to measure bone density these days. Interestingly, all the artefacts that can change the measurement of DEXA at the spine and femoral neck are described. An originality of this book is the presence of a chapter on statistics to help in the understanding of the T and Z score, the statistical notion of risk and also accuracy and precision. This introduces the practical notion of confidence intervals for changes between two measurements. Also important for those who own a densitometer, the quality control procedures that are required to obtain correct data are described. In another chapter the formulas to convert the data from one device to another one (for instance, from Hologic to Lunar) are given. The chapter about reference data is disappointing for a European user. The normative data that are inside each device are critical as they will influence the Z score and T score values and therefore the patient management. It is clear that the data of the NHANES studies that might be, by the number of subjects, the best ones are not included as normative data for Hologic and Lunar devices sold in Europe and also they might not be appropriate for the European population. Also, the fact that the Z score in some devices is adjusted for height and weight is not mentioned in the chapter.

The second part deals with the use of bone densitometry in clinical practice and begins with a chapter on prediction of fracture risk according to the results of bone density measurement. The basis of statistics given in the previous chapter on statistics is useful here. The author prefers to extrapolate from the value of bone densitometry the notion of risk, which is different for instance according to the age of the patient, rather than to use crudely a cut off value of, for example, the fracture threshold or the T score below 2.5. The following chapter extensively covers the effect of various diseases and treatments on bone density. It includes all the endocrine diseases and the modification of bone density in a variety of other pathological situations such as Parkinson disease, AIDS, thalassaemia. Another chapter considers treatment and gives data on the effect of all therapies on bone densitometry. This chapter, as expected, is descriptive and no interpretation is made.

In the last chapter on clinical indications, the guidelines of the different foundations are given and compared. The author does not go into details. For instance, she does not raise the problem of when is it necessary to assess the fracture risk: at 50 years old or later. The book concludes with clinical cases that are discussed according to the previous chapters.

This book reads easily, is well illustrated and the technique is described in a comprehensive manner. It gives straight and unbiased opinion on some very practical problems, for instance which site to measure, when to make a second measurement after a given treatment. It certainly fills a gap with its clarity and its very practical approach of this widely used technique.

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