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Bone biopsy is not at all outdated!

EU-ROD Position paper highlights bone biopsy as a useful tool in the diagnostic workup of CKD-MBD

July 20, 2017

Renal osteodystrophy (ROD) is a heterogeneous group of metabolic bone diseases complicating progressive chronic kidney disease (CKD). Bone biomarkers and bone imaging techniques may help to assess bone health and predict fractures in CKD, but they do have limitations: In the end, one often cannot say, if the patient suffers from high or low bone turnover. But the assessment of bone turnover is vital for choosing the right treatment. Also laboratory parameters as PTH are not always reliable. Studies have shown that even patients with a normal to high PTH can suffer from an adynamic bone disease. “Then, a treatment of these patients with PTH-lowering substances would be the final blow for the bone”, comments Professor Pieter Evenepoel, Leuven/Belgium, chair of the European Renal Osteodystrophy (EU-ROD) initiative, which was created under the umbrella of the ERA-EDTA CKD-mineral and bone disorder (MBD) Working Group in 2016 and which has just published a position paper on bone biopsy in CKD patients [1].

As Evenepoel concludes, a bone biopsy remains at present a prerequisite for proper evaluation of bone quality. But according to a recent survey conducted among European nephrologists, bone biopsies are performed rather exceptionally, both for clinical and research purposes.

“Understandably, the patients are not keen on undergoing this procedure. But if they are told, why it is necessary, they usually adhere”, explains Evenepoel.

The EU-ROD initiative believes that the main reason why bone biopsies are not performed as often as needed is that clinical and pathological expertise has been vanished. The mission of the EU-ROD initiative is to revitalize bone biopsy as a clinically useful tool in the diagnostic workup of CKD-MBD and to foster research on the epidemiology, implications and reversibility of renal osteodystrophy. As such, the EU-ROD initiative aims to increase the understanding of this “uremic bone disease” and ultimately to improve outcomes in CKD patients.

“A more widespread implementation of bone biopsies as a diagnostic procedure may widen the therapeutic horizon and foster the development



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and validation of more reliable, non-invasive diagnostic tools”, explains Evenepoel. “In the previous years we learned that the pathophysiology of renal bone disease extends beyond the skeleton and that there are links between abnormal bone remodelling activity and the risk for soft tissue and vascular calcification in CKD patients. We saw that bone diseases in the setting of uremia go hand in hand with a disturbed mineral metabolism. But this is something we have to study further – who knows, the bone may be not only a target, but also a driver of mineral disturbances in CKD. Only bone biopsy studies can give us important information and are essential to understand the links!”

[1] Evenepoel P, D’Haese P, Bacchetta J et al. Bone biopsy practice patterns across Europe: the European renal osteodystrophy initiative—a position paper NDT 2017 [epub ahead of print]. Full paper at: <https://academic.oup.com/ndt/article/3061412/Bone>

About ERA-EDTA

With almost 7,000 members, the ERA-EDTA ("European Renal Association – European Dialysis and Transplant Association") is one of the biggest nephrology associations worldwide and one of the most important and prestigious European Medical Associations. It supports basic and clinical research in the fields of clinical nephrology, dialysis, renal transplantation and related subjects. It also supports a number of studies as well as research groups and has founded a special "Fellowship Programme" for young investigators as well as grant programmes. In order to involve young nephrologists in all activities ERA-EDTA has the Young Nephrologists' Platform (YNP), a very active committee whose board includes members who are 40 years old or younger. Besides, it has established various working groups to promote the collaboration of nephrologists with other medical disciplines (e.g. cardiology, immunology). Furthermore, a "European Renal Best Practice" (ERBP) advisory board was established by the ERA-EDTA to draw up and publish guidelines and position statements. Another important goal of the ERA-EDTA is education: several series of CME-courses as well as the annual congress offer an attractive scientific programme to cover the need of continuous medical education for doctors working in the fields of nephrology, dialysis and transplantation. The association's journals, NDT (Nephrology, Dialysis, Transplantation) and ckj (Clinical Kidney Journal), are currently the leading nephrology journals in Europe; furthermore NDT-Educational is the online educational journal, open for free to all uses, of the Society as well as the very important and useful feature of NDT-Educational "Literature Review". The ERA-EDTA Registry is a large epidemiologic database comparing countries by assessing nephrology practice throughout Europe. ENP, the European Nephrology Portal, is the latest new initiative of ERA-EDTA: here all those interested in the activities of the Society can find everything that is done, all in one place! Finally, ERA-EDTA is member of the European Kidney Health Alliance (EKHA), a consortium of patients, nurses, foundations all related to renal issues that actively interacts with the European Parliament. For more information please visit www.era-edta.org