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European Renal Association – European Dialysis and Transplant Association

2017 KDIGO CKD-MBD Guideline Update

It´s important to keep all laboratory parameters in view!

June 30, 2017

End of June, “Kidney Disease: Improving Global Outcomes” (KDIGO) published an update of the guidelines on “chronic kidney disease – mineral bone disorder” (CKD-MBD) [1]. CKD-MBD is a common comorbidity in patients with chronic kidney disease, especially dialysis patients, and has severe clinical implications like blood vessel calcifications in form of arteriosclerosis, in part driven by smooth muscle cells in the vessel walls that rebuilt themselves into bone-like cells. This leads to thick and stiff arteries – which results in a high cardiac mortality and morbidity. Besides, CKD-MBD also has a negative effect on bone health and patients often suffer from bone pains, and more frequent fractures. Therefore, there is clearly a need for treating (and preventing) CKD-MBD in CKD patients.

Currently, this is mainly done by controlling mineral metabolism, which is dramatically disturbed by uremia if left untreated, and secondary hyperparathyroidism. There is a need for controlling serum phosphate, calcium and parathormone (PTH) levels within certain target ranges. The KDIGO guidelines gave and now give clear updated recommendations how to achieve these goals. But what has been changed in the update? As Professor Markus Ketteler (Coburg, Germany), ERA-EDTA Council member and chair of the KDIGO CKD-MBD Guideline Update Committee points out, a few central changes have been made, because some new randomized clinical studies changed the body of evidence:

- A central recommendation is that one laboratory parameter should not be acted upon out of its context. Instead, one should look at all parameters in its entirety and over time. This “holistic” view is new and central, because in the past one parameter (e.g. serum phosphate) has often been lowered at costs of another (e.g. serum calcium, if calcium containing phosphate binders were used). “The guidelines now ask us to see the big picture and to do a risk assessment before we treat. Data suggest, for instance, that a high PTH might not be associated with a high risk, if serum calcium and phosphate concentrations are well controlled. This means, one might accept elevated PTH levels in this situation instead of treating them with active vitamin D which would elevate the calcium and phosphate levels and add to the risk. This is a slight change in philosophy”, comments Ketteler.



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- Another difference is the new evaluation of the serum calcium. Before, the guidelines recommended to maintain calcium concentration in the target range. In the update, it is now emphasized that hypercalcemia must be avoided. “Many new studies showed that high calcium levels are associated with higher morbidity and mortality in our patients – and this is why KDIGO felt we had to red-flag high serum calcium levels”, comments Ketteler. In turn, a slight decline in serum calcium can be acceptable, especially in the context of treatment with calcimimetics, and should not prompt overzealous supplementation.
- Bone densitometry (DEXA) is now acknowledged as a valuable tool to assess fracture risk in CKD patients. “But we have to keep in mind that this examination does not give any clues about what kind of bone disease the patient is suffering from, if he/she has a low or high turnover”, reminded Ketteler.

CKD-MBD is a very complex condition and ERA-EDTA formed an official CKD-MBD working group a few years ago. As Professor Marc Vervloet (Amsterdam/The Netherlands), vice chair of this working group, points out, the ERA-EDTA has a part in gaining new evidence that led to the guideline update: **“Our working group is very active and we published various papers and initiated various projects like the bone biopsy registry which we are planning right now. Thus, ERA-EDTA improved and distributed knowledge in the field of CKD-MBD. Many of our working group members are renowned CKD-MBD experts and participate in the KDIGO guideline committee, too.”**

[1] <http://kdigo.org/wp-content/uploads/2017/02/2017-KDIGO-CKD-MBD-GL-Update.pdf>

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



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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