Practical management of CKD-MBD

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The definition of Chronic Kidney Disease–Mineral and Bone Disorder (CKD–MBD) is a systemic disorder of mineral and bone metabolism due to chronic kidney disease (CKD). CKD-MBD is manifested by either one or a combination of the following: 1) Abnormalities of calcium, phosphorus, PTH, or vitamin D metabolism, 2) Abnormalities in bone turnover, mineralization, volume, linear growth, or strength and 3) Vascular or other soft-tissue calcification.

In 2009, KDIGO published its first CKD-MBD guideline, and in 2017, its update was published. Many nephrologists at the clinic refer to the KDIGO guidelines to manage their patients with CKD-MBD. However, the complex pathophysiology of CKD-MBD has yet to be revealed, and more evidence is needed for appropriate treatment strategies.

Among the areas of CKD-MBD, there is a lack of practical guidelines and treatment strategies, especially regarding bone health. This is because bone biopsy, which is the basis of evaluation, is difficult to perform in clinical practice and the use of most drugs that improve bone strength is limited in patients with renal impairment. However, recent studies have shown that the use of non-invasive evaluation methods is effective, and new drugs that can be used even in CKD patients have been developed, thus establishing new possibilities for the management of bone disease in CKD-MBD. This time we will focus on the practical management of CKD-MBD in the perspective of bone health.