



Primary lactase deficiency and bone mineral density in postmenopausal women

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Dear editor and readers,

In his letter to the editor, Dr. Akif Altinbas asks us to relate to the practical ramifications of our study, which indicate that postmenopausal women with primary lactase deficiency (PLD) have higher rates of osteoporosis with reduced Z-scores in most skeletal sites including those that are the most vulnerable to fracture.

First, we would like to emphasize that the study related to PLD only and not to lactose-intolerant patients. As indicated in the introduction to our study, these two conditions do not always correlate. Some lactose-intolerant patients are not positive for PLD, and others who do have PLD are asymptomatic. Our study did not relate to the question of whether lactose-intolerant postmenopausal women are more likely to have osteoporosis. When we began the meta-analysis, we considered investigating this issue as well, but we found only three studies that addressed this question [1–3]. The first two [1, 2] were included in the meta-analysis since they evaluated whether both PLD and lactose intolerance are associated with bone marrow density. The results of both studies did not show any statistically significant association between lactose intolerance and bone marrow density. The third study only looked at self-reported lactose intolerance and bone marrow density. The authors reported a statistically significant reduction in bone marrow density in the lumbar spine and a tendency towards reduced bone marrow density in the hip. Since three studies do not suffice for a meta-analysis, further studies on this issue are required to clarify it further.

We see two practical aspects to our study results:

1. **Diagnosis:** We believe that general practitioners and family doctors should pay more attention to lactose intolerance and refer these patients to more precise diagnostic tests (lactose breath test, genetic testing), since abstention from dairy products is not diagnostic for PLD.
2. **Treatment:** Patients who are diagnosed with PLD should eat dairy products with a lactase supplement. As noted in the introduction to our study, the mechanism for reduced bone marrow density in PLD patients is not clear. The most common, but unproved, assumption is that it is related to reduced calcium consumption. However, since dairy products are also a source of energy and protein and PLD patients have low BMI, this could also contribute to reduced bone marrow density. Thus, we believe that it is important to prescribe lactase supplementation to enable consumption of dairy products in addition to calcium supplementation.

Compliance with ethical standards

Conflicts of interest None.

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