

## The relation between vitamin D deficiency and fibromyalgia syndrome

*To the Editor*

I have read Dr. Matthana's intriguing article<sup>1</sup> with its attractive title that linked fibromyalgia with vitamin D deficiency, as one recalls the overlap of the clinical features of fibromyalgia with those of osteomalacia (adult vitamin D deficiency disease). Dr. Matthana very well covered the recent literature on the subject, however, I have to question the accuracy of her diagnosis of fibromyalgia. Apart from fulfilling the American College of Rheumatology 1990 criteria for classification of fibromyalgia, some authorities in standard texts consider fibromyalgia as a diagnosis of exclusion,<sup>2</sup> and admittedly, the author mentioned the exclusion of rheumatologic disorders. In an alternative expression, others impose a minimum investigation screen for some 5 clinically occult conditions that could contribute to some of the symptoms of fibromyalgia,<sup>3</sup> in which the screen includes testing the serum alkaline phosphatase.<sup>3</sup> The alkaline phosphatase is typically raised in osteomalacia with a reported elevation in 94% of biopsy-proved series of cases of osteomalacia.<sup>4</sup> This test is totally missing in the text of Dr. Matthana's article<sup>1</sup> that means that Dr. Matthana did not exclude the likelihood of osteomalacia as a possibility, or comorbidity among her 100 female patients. The reported progressive improvement of the symptoms of some two-thirds of her 61 vitamin D deficient patients conform best, if not only, with improvement of an underlying osteomalacic process as the cause of the symptoms.

Dr. Matthana mentioned in the article that osteomalacia is quite a late manifestation of vitamin D deficiency.<sup>1</sup> However, if we skip the phrase "at any age", all features of the quotation are actually manifestations of osteomalacia or its associations.<sup>5</sup> One wonders whether the prefix "osteo" (Greek osteon - bone) has been interpreted as to necessitate radiologically demonstrable bone lesions to dare applying the term osteomalacia, but x-ray findings are only seen in the advanced disease.<sup>3</sup> During the nineties of last century, while the United Nations Security Council blockade was imposed on Iraq, we saw and treated many osteomalacic, notably lactating women presenting with musculo-skeletal pain and tenderness with features of proximal muscle weakness, and mostly negative x-rays but positive biochemical tests, notably a raised serum alkaline phosphatase.

The controversies on the nature of the association between vitamin D deficiency and fibromyalgia that Dr. Matthana discussed at length would have demanded more than one additional comment. The discussion brought her to conclude 2 possibilities. As her first choice stated: ". . . vitamin D deficiency is misdiagnosed as fibromyalgia",<sup>1</sup> I refrained from further comments apart from adding that vitamin D deficiency disease in adults is the same as osteomalacia.

The apparent misconception of the clinical features of osteomalacia may be ascribed to: 1) being overwhelmed by those of rickets of childhood, and 2) their further mix-up in the way of their presentation in some well-known texts. I have 3 examples of such books, notably all American, that the interested reader could consult.<sup>6-8</sup>

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*Reply from the Author*

I would like to thank Dr. Al-Dabbagh for reading my article. I agree with you that there is an overlap of the clinical features of fibromyalgia syndrome with those of osteomalacia and to be more precise, there is some similarity not overlap, but actually this problem was totally solved with the clear American College of Rheumatology 1990 Criteria for Classification of Fibromyalgia, which combine the diffuse musculoskeletal pain that is a feature of osteomalacia with the presence of at least 11 of the 18 tender points, which are distributed according to a map that is not present with osteomalacia, and this clearly can differentiate fibromyalgia from osteomalacia and other diffuse musculoskeletal pain syndromes, that were mentioned as clinically occult conditions. So, clinical diagnosis of fibromyalgia is still different from that of osteomalacia. Regarding alkaline phosphate, which is a great landmark in the diagnosis of osteomalacia, it was discarded in my article as the emphasis was on fibromyalgia not on osteomalacia, even if there is association to avoid distraction of ideas, and concentrate more on the relation between fibromyalgia and vitamin D deficiency as this needs further research to correlate fibromyalgia with osteomalacia.

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## References

1. Matthana MH. The relation between vitamin D deficiency and fibromyalgia syndrome in women. *Saudi Med J* 2011; 32: 925-929.
2. Hellmann DB, Imboden JB. Musculoskeletal and immunologic disorders. In: McPhee SJ, Papadakis AP, editors. *Current medical diagnosis and treatment 2010*. 49th ed. New York: Mc Graw Hill Medical; 2010. p. 729-787.
3. Doherty M, Ralston SH. Musculoskeletal disease. In: Colledge NR, Walker BR, Ralston SH, editors. *Davidson's Principles and Practice of Medicine*. 21st ed. Edinburgh (UK): Churchill-Livingstone Elsevier; 2010. p. 1053-1129.
4. Fitzgerald PA. Endocrine disorders. In: McPhee SJ, Papadakis AP, editors. *Current medical diagnosis and treatment 2010*. 49th ed. New York: Mc Graw Hill Medical; 2010. p. 991-1078.
5. Smith R. Disorders of the Skeleton. In: Weatherall DJ, Ledingham JGG, Warrell DA, editors. *Oxford Textbook of Medicine*. 2nd ed. Oxford (UK): Oxford University Press; 1988. p. 14-19.
6. Lorenzo JA, Canalis E, Raisz LG. Metabolic bone disease. In: Kronenberg HM, Melmed S, Polonsky KS, Larsen PR, editors. *Williams Textbook of Endocrinology*. 11th ed. Philadelphia (PA): WB Saunders; 2008. p. 1269-1310.
7. Arnud CD, Kolb FO. The calcitropic hormones and metabolic bone disease. In: Greenspan FS, Forsham PH, editors. *Basic and Clinical Endocrinology*. Middle East Edition. Beirut (Lebanon): Librarie du Liban; 1983. p. 236-237.
8. Drezner MK. Osteomalacia and rickets. In: Goldman L, Bennett JC, editors. *Cecil Textbook of Medicine*. 21st ed. Philadelphia (PA): WB Saunders; 2000. p. 1391-1398.

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Al-Elq AH, Sadat-Ali M, Al-Turki HA, Al-Mulhim FA, Al-Ali AK. Is there a relationship between body mass index and serum vitamin D levels? *Saudi Med J* 2009; 30: 1542-1546.

Al-Turki HA, Sadat-Ali M, Al-Elq AH, Al-Mulhim FA, Al-Ali AK. 5-Hydroxyvitamin D levels among healthy Saudi Arabian women. *Saudi Med J* 2008; 29: 1765-1768.