Module locomotor system

Learning Objectives:

By the end of the CBL, students will be able to

- Define osteomalacia
- Understand the pathophysiology of osteomalacia
- Interpret role of Vit D and Calcium in bone formation
- Elaborate the effect of Vit D and calcium deficiency

Clinical case

A 35 years old Afghani female presented with history of bone pains throughout the body for last 3 months, she had also difficulty in climbing stairs and her family members have noticed that she was not properly walking as before. She has 6 children, and lactating her last child of one year old. On examination she is anaemic , tenderness on long bones and proximal muscle weakness.

Investigations revealed serum ca 7mg/dl, serum albumin 4 mg/dl , serum phosphate 2mg/dl, alkaline phosphatase 1046U/l.

The following x-rays were performed.

Questions ;

1. Why the patient is having pain in all bones of the body?
2. Why is she having difficulty in climbing stairs?
3. What is this disease known as?
4. What abnormality must have the family members noticed about her walking?
5. Does her disease to do anything with her number of children and lactation?
6. What is the daily requirement of calcium in normal adult?
7. What are the factors for decrease calcium in this patient?
8. What is meant by proximal muscle weakness?
9. What is meant by corrected calcium level and how is it calculated?
10. What is the reason for raised alkaline phosphatase?
11. What abnormality is seen in the x-rays?
12. What happens to shape of pelvis?
13. Why the bones get deformed?
14. What is the normal components of bone?
15. What are the natural products rich in calcium?