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 4mg/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?