

Osteomalacia

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Osteomalacia is the general term for the softening of the bones due to defective bone mineralization. Osteomalacia in children is known as rickets, and because of this, *osteomalacia* is often restricted to the milder, adult form of the disease. It may show signs as diffuse body pains, muscle weakness, and fragility of the bones. A common cause of the disease is a deficiency in Vitamin D, which is normally obtained from the diet and/or sunlight exposure.^[1]

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Osteomalacia

Classification and external resources

| | |
|-------------------|-----------------------|
| ICD-10 | M83. |
| ICD-9 | 268.2 |
| DiseasesDB | 9351 |
| eMedicine | ped/2014 radio/610 |
| MeSH | D010018 |

General characteristics

Osteomalacia in the adult is most commonly found in confined, dark-skinned, or diet-disbalanced subjects. Many of the effects of the disease overlap with the more common osteoporosis, but the two diseases are significantly different. Osteomalacia is specifically a defect in mineralization of the protein framework known as osteoid. This defective mineralization is mainly caused by lack in vitamin D.

Osteomalacia is derived from Greek: *oste* refers to bone, and *malacia* means softness. In the past, the disease was also known as *malacosteon* and its Latin-derived equivalent, *mollities ossium*.

Causes

The causes of adult osteomalacia are varied.

- Insufficient sunlight exposure, especially in dark-skinned subjects
- Insufficient nutritional quantities or faulty metabolism of vitamin D or phosphorus
- Renal tubular acidosis
- Malnutrition during pregnancy
- Malabsorption syndrome
- Chronic renal failure
- Therapy with Fumaderm

Clinical features

Osteomalacia in adults starts insidiously as aches and pains in the lumbar (lower back) region and thighs, spreading later to the arms and ribs. Pain is non-radiating, symmetrical, and accompanied by tenderness in the involved bones. Proximal muscles are weak, and there is difficulty in climbing up stairs and getting up from a squatting position. Physical signs include deformities like triradiate pelvis and lordosis. The patient has a typical "waddling gait". Pathologic fractures due to weight bearing may develop. Most of the time, the only alleged symptom is chronic fatigue and bone aches are not spontaneous but only revealed by pressure or shocks.

Biochemical findings

Biochemical features are similar to rickets. The major fact is a collapsed vitamin D rate in blood or serum.

Radiographic characteristics

Radiological appearances include

- pseudofractures
- *protrusio acetabuli*

Treatment

Nutritional osteomalacia responds well to administration of 200,000 IU weekly of vitamin D for 4 to 6 weeks, followed by a maintenance dose of 1600 IU daily or 200,000 IU every 4 to 6 months.

References

- [^] <http://www.nlm.nih.gov/medlineplus/ency/article/000376.htm>

See also

- osteoporosis
- osteopetrosis, the opposite of osteomalacia

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Categories: Pediatrics | General practice

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