

OSTEOMALACIA IN PREGNANCY

(A Case Report)

by

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Osteomalacia is a deficiency disease akin to rickets, and due chiefly to absence from diet of calcium and the antirachitic Vit. D combined with lack of sunlight. The disease usually makes its appearance during pregnancy and the softening of the bones progresses rapidly in the absence of the treatment (Alan Brews, 1963).

A rare case of pregnancy with osteomalacia is reported from Zanana Hospital, Udaipur.

CASE REPORT

Mrs. R., 28 years old Mohammedan female was admitted to Zanana Hospital, Udaipur on 8-10-76 with amenorrhoea of 6 months, and pain in both hip joints since 1 year, more marked since 2 days.

Patient gave history that she was unable to walk since 2 months.

Menstrual History: Menstrual cycles were regular 28 days and normal flow lasting for 3 to 5 days was painless. Last menstrual period was 6 months back.

Obstetric History: She had 2 full term normal deliveries and both children were alive, last delivery was 4 years back.

General Examination: Patient was fairly built, pulse 84/mt., temperature normal. Cardiovascular and respiratory systems were normal. The movements at the hip joints were extremely painful and there was marked tenderness at both iliac crests and pubic rami.

Per abdomen: The height of uterus was 26 weeks and ballotment was present.

Investigations: Hb.—9.6 gm%. Urine—Alb. Sugar Nil.

11-10-76

Total proteins:	5.1 gm%
Albumin:	3.2 gm%
Globulin:	1.9 gm%

12-10-76

Serum calcium: 8.2 mgm/100 ml of serum.
Alkaline phosphatase 9.3 K.A. units/100 ml
Inorganic phosphorus 3.4 mgm%.

13-11-76

Alkaline phosphatase 6.3 K.A. units/100 ml.
serum calcium 9.6 mgm/100 ml. of serum

29-12-76

Alkaline phosphatase 9.6 K.A. units/100 ml.	
Serum calcium 8.2 mgm/100 cc. of serum.	
Total proteins:	5.1 gm%
Albumin:	2.9 gm%
Globulin:	2.2 gm%

X-ray pelvis Pseudofractures of pubic rami (Fig. 1). X-ray left shoulder region showed fracture of axillary border of scapula (Fig. 2).

Management: She was given 1 ampoule of Vit. D₃ orally once in a week along with tab. Ossopa. 3 times a day and tablet Vit. C 500 mg. 1 B.D. Besides this she was given iron tonic and oral B complex therapy. She was discharged at request on 30-12-76. She had spontaneous delivery at home of 2.8 Kg. alive female on 8-2-77. On 9-2-77 she was admitted to hospital for review and investigations. Alkaline phosphatase 6.9 K.A. units/100 ml. Serum calcium 8.2 mgm/100 ml of serum. X-ray pelvis showed evidence of osteomalacia.

Patient was discharged in a good condition.

Discussion

Pregnancy and lactation will not cause clinical osteomalacia unless the woman's stores of calcium are already diminished

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by inadequate diet, excessive loss of calcium from prolonged lactation in a previous pregnancy, jejunal mucosal atrophy or very rarely renal tubular acidosis (Barnes, 1974). This woman had osteomalacia probably because of deficient diet as she belonged to a poor socioeconomic group. The second aetiological factor could be purdah system in her community. Lack of sunlight has been known for a long time to be contributing factor in the disease.

According to Barnes (1974) the biochemical changes in osteomalacia show low or normal serum calcium, low serum phosphorus and high plasma phosphatase. Surprisingly in this patient only the organic phosphorus level was slightly lower than normal 3.5 mg/100 ml. X-ray may also disclose Looser's Zones, ribbon like areas of decalcification which according to Albright *et al* (1946) are united but uncalcified fractures and occur only in osteomalacia. Milkman (1934) also described these fractures pointing out that they tended to be symmetrical and to affect certain bones more commonly than others, notably the axillary borders of scapulae, the necks of femora, the pubic and ischial rami, the ribs and proximal third of ulnae (Barnes, 1974).

This patient also had fractures of pubic rami and axillary border of scapula.

Four degrees of osteomalacia have been described by Albright *et al* (1946).

1. Chemical osteomalacia with normal phosphatase.

2. Chemical osteomalacia with high phosphatase.

3. Milkman's syndrome.

4. Advanced osteomalacia.

This patient belonged to third degree. She responded well to treatment with Vit. D₃ and also Ossopan tablets and surprisingly she delivered normally at home.

Summary

A case of pregnancy with osteomalacia is presented who had normal biochemical values except inorganic phosphorus which was slightly lower than normal. She had pseudofractures of pubic rami and axillary border of scapula and responded well to routine treatment of osteomalacia.

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See Figs. on Art Paper VII