Steatorrhoea with Osteomalacia, Amenorrhoea and Absent Body Hair.—Arnold Bloom, M.D., M.R.C.P.

Mrs. R. M., aged 26.

History.—One of five siblings, others in good health. Active at school, played games, never ill.

Aged 14, developed large ulcers on both shins, which persisted until a year ago.

Married five years, one miscarriage. For the past four years, periods scanty or absent; amenorrhea six months.

Eighteen months ago weight 8 st. 9 lb.; appetite became poor, developed intermittent diarrhœa, several loose motions daily. Bedridden for nine months prior to admission.

On admission.—Weight 5 st., wasted, helpless, ulcerated back, skin pale and smooth, absent pubic and axillary hair, genitalia and legs ædematous (Fig. 1). Marked tetanic



Fig. 1.



Fig. 2 (3.9.54).—Triradiate pelvis with fractures of pubic rami.



Fig. 3 (11.11.54).—After therapy. Callus formation at fracture sites.

spasm of arms and hands, Chvostek's sign positive. B.P. 90/50. Her manner was childlike, with cheerful indifference to her plight.

Findings.—Serum calcium 6, phosphorus 3·4, sodium 305, potassium 17·5, cholesterol 130, urea 15 mg./100 ml.; total serum proteins 3·3 grams %; alkaline phosphatase 36·1 K.A. units; Hb 67%; mild iron deficiency anæmia. Blood sugar curve 86 fasting, 86 half an hour after ingestion of 100 grams glucose, 82 one hour after, 68 mg./100 ml. two and a half hours after. Total fæcal fat 36·6 grams/100 grams fæces. Of the fæcal fat 90% is split. Fat balance (three days 100 grams fat/diem intake) 86% absorption. Urine: calcium not present; amino acids increased; 17-ketosteroids 0·7 mg./24 hours. F.S.H. (Dr. Russell Fraser) 8 mouse units positive, 16 mouse units negative.

X-rays: Generalized rarefaction of all bones; pelvis triradiate due to pressure of femoral

heads on softened bones; Milkman fractures in ribs, left fibula (two) and both pubic rami (Fig. 2).

Treatment and progress.—Intravenous calcium gluconate. High protein, gluten-free diet. Ergosterol 600,000 I.U. intramuscularly every two weeks, folic acid 10 mg. t.d.s., Becosym tabs. 2 t.d.s. and ascorbic acid 50 mg. t.d.s.

Early relief of tetany and slow general improvement. No diarrhea. Despite loss of

ædema, weight rose by 5 lb. Able to walk, though with limp.

Blood calcium rose to 10.4 mg. %, serum protein to 5.4 grams %. Repeat X-rays after six weeks showed generalized increase of bone calcification and callus formation at fracture sites (Fig. 3).

Comment.—The endocrine depression, as evidenced by amenorrhoa, absent body hair and low 17-ketosteroid excretion, is probably due to severe malnutrition. The normal urinary F.S.H. secretion suggests that the pituitary gland is not primarily at fault.

In view of her steady improvement on present lines, no adjuvant endocrine therapy has as yet been tried but the low serum protein and low 17-ketosteroid excretion make it likely

that osteoporosis is present as well as osteomalacia.

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