sometimes become manifest for the first time during pregnancy or the puerperium.

In these cases signs of corpuscular defects such as a high proportion of spherocytes, the sickling phenomenon or abnormal haemoglobins are present.

In the present case there was no evidence of any concomitant disease such as leukaemia or reticulosis or of drug ingestion liable to produce haemolysis. However, she did have mild pre-eclampsia, marked thrombocytopenia, blood urea 55 mg/100 ml at the time of the haemolysis, no antibodies in the serum and showed red cell fragmentation and a few burr cells. These findings raise the possibility that this patient might have been a mild example of microangiopathic haemolytic anaemia. Renal biopsy was not contemplated because of the marked thrombocytopenia.

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Obesity with cardio-respiratory failure

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'OBESITY is a condition in which the body contours are distorted by a diffuse accumulation of adipose tissue' (McMullan, 1959). Although obesity is equated with health in some societies, Western civilization is rightly conscious of its numerous complications. Amongst the latter is a clinical syndrome of hypovenilation, pulmonary hypertension, secondary polycy-

thaemia and eventual cardiorespiratory failure. The cause of this syndrome is not established but it has been suggested (Carroll, 1956) that excessive fat on the chest and abdominal walls, by interfering with the mechanics of breathing, is a contributory factor. This view is supported by the finding that the abnormalities may be reversed by satisfactory weight loss.

FIG. 1. Patient on admission.

In this paper we describe a patient with such a syndrome who was successfully treated by a combination of dietary restriction and surgical removal of adipose tissue.

Case report

A 57-year-old woman weighing 308 lb and 4 feet 10 inches in height was admitted to hospital on 31 October 1968 in cardio-respiratory failure.

She gave a history of weighing 126 lb at the time of her marriage in 1937, and of weight-gains after each of four unsuccessful pregnancies. During this period she had become progressively more short of breath on exertion and had developed both winter bronchitis and varicose veins. For 4 years, in spite of bronchodilators and diuretics, breathlessness and gross oedema of the legs had prevented the patient from leaving her ground-floor flat.

On examination she was obese (see Fig. 1), orthopnoeic and cyanosed. The pulse was regular 80/min. Blood pressure 100/70 mmHg. Heart sounds were normal and there were no murmurs, JVP raised. There was bilateral pitting oedema below the knees and marked varicose eczema above the left ankle. Auscultation of the chest revealed generalized wheezes and some coarse crepitations at both bases. No other abnormalities were found.

Investigations: Hb. 123% (18 g); RBC 5.5 m/mm³; WBC 7500/mm³. (N. 54%; E. 4%; L. 30%; M. 12%).

PCV 62%, ESR 1 mm/hr. Serum electrolytes, liver function tests and urinalysis normal. Blood urea 42 mg/100 ml. Sputum culture: no pathogenic organisms. ECG: RVH. Chest X-ray showed marked cardiomegaly. Spirometry (6 November, 1968), severe restriction without airway obstruction; blood gases: arterial hypoxaemia and mild hypercapnia.

The patient was very breathless when confined to bed and was nursed in an armchair for the first 2 weeks. She was treated with digoxin, diuretics, bronchodilators, oxygen (28% via a 'Ventimask') and a 250 calorie diet with vitamin supplements. The patient's weight, after an initial rapid loss due to a pronounced diuresis, fell steadily. *Pari passu*, her breathlessness and exercise tolerance improved. Bilateral mastectomy was performed in April 1969 and abdominal dermolipectomy in July 1969, both by Mr R. D. P. Craig. The latter operation was complicated in the immediate postoperative period by a haemorrhage for which a 6-pint blood transfusion was given.

The patient left hospital on 16 October 1969. At this time she was not receiving any treatment and her weight was 166 lb.

At the time of writing (April 1970), the patient weighs 168 lb, is employed full-time in the hospital kitchen, and is undertaking normal social activities without difficulty.

FIG. 2. Patient at time of discharge.

TABLE 1. Weight and respiratory function findings on admission and at discharge

	Weight (lb)	FEV ₁ (litres)	FVC (litres) (predicted value 2.7 litres)	FEV ₁ FVC	%	Pao ₂ (mmHg)	Paco ₂ (mmHg)
On admission	308	0.75	0.95	78		54	46
On discharge	166	1.1	1.5	73		64	30

Discussion

For a great majority of obese patients the treatment of choice is a low calorie diet coupled with moderate daily exercise and frequent medical surveillance. However, gross obesity may prove resistant to standard reducing diets. Thus, in recent years total starvation has become increasingly adopted in such cases. Treatment is usually carried out under close in-patient supervision, but out-patient management can be successful (Collison, 1967). There are definite risks associated with this type of treatment (Silverstone, 1967).

Surgical removal of adipose tissue, as a means of treating obesity, is rarely performed in this country. This is surprising because surgery can remove

adipose tissue which is little affected by dietary weight loss, for example the breasts, and may also improve the physical appearance.

The present case shows the substantial benefits which may result from satisfactory weight-loss from a combination of dietary restriction and surgical removal of adipose tissue. Thus, a woman who had been almost totally disabled for 4 years returned to work and, moreover, showed striking changes in both her physical appearance (see Fig. 2) and mental outlook. Respiratory function showed increases in Pao₂, FEV₁, FVC, and a fall in Paco₂ (Table 1). Cardiac function also improved, as shown by reduction in heart size radiologically. In addition, the secondary polycythaemia was corrected. These

improvements may be explained on the basis of the general weight-loss but the bilateral mastectomy, by increasing the compliance of the chest wall, may also have contributed.

It is not considered that this case supports a policy of surgical removal of adipose tissue in all cases of obesity. It is felt, however, that such treatment, namely bilateral mastectomy in post-menopausal obese patients with large pendulous breasts and abdominal dermolipectomy, should be considered as an adjunct to dietary restriction in the grossly obese patient.

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Aplastic anaemia with carcinoma of the thyroid

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APLASTIC anaemia is characterized by the occurrence of anaemia, leucopenia, and thrombocytopenia, resulting from hypocellularity of the bone marrow (Vincent & De Gruchy, 1967). Implicit in the term, as first used by Ehrlich in 1888, is that there is no associated evidence of increased blood destruction, or of infiltrative disease of the bone marrow (Scott, Cartwright & Wintrobe, 1958). The idiopathic condition originally described is less common than the secondary type, in which some toxic agent can be implicated (De Gruchy, 1968) and carries a worse prognosis (Vincent & De Gruchy, 1967). Although the idiopathic type occurs at all ages it is rare in childhood (De Gruchy, 1968). The condition carries a high mortality rate, and poses many problems in management (Vincent & De Gruchy, 1967).

The coexistence of idiopathic aplastic anaemia and malignancy is exceedingly uncommon. In one survey of malignancy and anaemia there were only two cases of aplastic anaemia in a series of sixty-five cases (Banerjee & Narany, 1967). Leucoerythroblastic anaemia may occur where there are bone marrow metastases, while acquired autoimmune haemolytic anaemia is described in association with disseminated malignancy (De Gruchy, 1968).

Papillary adenocarcinoma is one of the more usual thyroid tumours and not infrequently occurs in children, where it carries a good prognosis (Willis, 1967; Anderson, 1967). An extensive search of the literature has failed to reveal a case of idiopathic aplastic anaemia associated with adenocarcinoma

of the thyroid, without demonstrable bone marrow metastases. It is possible that the following case may be unique.

Case report

The patient, a 16-year-old grocer's assistant, was admitted to hospital in December 1968. He gave a 4-week history of malaise, tiredness, and increasing breathlessness. In the week preceding admission he had experienced daily occipital headaches and had fainted on several occasions. There was no relevant past or family history. For 12 days he had been receiving oral iron, but he denied exposure to other drugs, known toxic chemicals or radiation. He gave no history of blood loss or of a bruising tendency.

On admission he was a pale, rather overweight boy, with numerous petechiae and several purpuric haemorrhages over his trunk. He had sinus tachycardia and a BP of 160/70 without evidence of cardiac failure. The trachea was deviated to the left and a large rubbery lymph node was palpable medially in the right posterior triangle of the neck. The liver and spleen were not palpable.

Investigations: Haemoglobin 5.6 g/100 ml (39%). PCV 15%, RBC 1.76 million/mm³, reticulocytes less than 1%, MCV 80 µ³, MCHC 38%; ESR 48 mm in first hour; WBC 4100/mm³ (neutrophils 18%, lymphocytes 80%, monocytes 2%); platelets 31,000/mm³. No immature cells were seen in the peripheral blood film. Serum iron 345 µg/100 ml. TIBC 420 µg/100 ml. Serum folate 13.0 mµg/ml. Serum B₁₂