Haemochromatosis with pigmentation may result in refractory anaemia (Bomford and Rhoads, 1941). No other features of this condition could be demonstrated, and injection of a weak solution of potassium ferricyanide and hydrochloric acid into the skin (Fishback, 1939) produced no iron reaction.

On the evidence available it is difficult to be dogmatic on the aetiology of this condition. The association of a normoblastic marrow with macrocytes in the circulating blood suggested a defect in maturation, in that haemoglobinization of immature normoblasts was occurring. It is of interest to note that a degree of macrocytosis was still present after splenectomy. This indicates that splenectomy has not resulted in a complete return of maturation to normal. The improvement in the blood picture after splenectomy suggests, however, that the spleen was at least partially responsible. This fact seems definite, but any other deduction would be speculative.

It has not been possible in the above case to demonstrate the excessive destruction in the spleen of formed elements which Doan and Wright (1946) and other workers stress. The evidence here supports those who hold that the spleen in such cases exerts an inhibitory effect on maturation. There may, however, have been some increased destruction of abnormal formed elements.

Whatever the cause, removal of the spleen resulted in a great improvement in the blood picture and in the patient's general condition, although it did not result in complete haematological recovery. It enabled a woman with an anaemia so gross as to render her a bedridden invalid, with oedema, and with a 2-cm. congestion of her neck veins to lead an active life. In view of the beneficial effects of splenectomy it is important that cases of this type be recognized.

A suitable name for this condition is difficult to choose. American workers have used such terms as "splenic panhaematopenia" and "idiopathic hypersplenism." Until the cause has been defined the latter seems suitable. Unfortunately the simple term "splenic anaemia" is inappropriate because of its association with Banti's syndrome.

Summary

A case is described of gross anaemia, leucopenia, and splenomegaly associated with a normoblastic marrow picture.

Splenectomy partially relieved the condition.

The pathogenesis is discussed but no definite conclusion is reached.

I wish to thank Prof. R. S. Aitken for permission to record this case, Dr. H. W. Fullerton and Prof. A. Kekwick for much helpful advice and criticism, and Dr. W. M. Davidson for the pathological report.

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A draft regulation has been made by the Minister of Health extending the superannuation benefits open to mental-health officers to regional psychiatrists employed by Regional Hospital Boards.

PEPTIC ULCER DURING PREGNANCY

WITH A REPORT OF A CASE OF PERFORATION

BY

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Although complaints of indigestion are common among expectant mothers the association of peptic ulcer with pregnancy is believed to be most unusual. During the period 1928–37 Sandweiss *et al.* (1943) discovered only one case of proved duodenal ulcer in 70,310 pregnancies collected from five hospitals in Detroit. Over a similar period in New York City one case of gastric ulcer was reported from 348,310 pregnancies. Both cases resulted in death from perforation. Avery Jones (1947) stated that no case of proved peptic ulcer was discovered among 10,000 pregnancies at the antenatal clinic of the Central Middlesex Hospital even in the few cases referred to the dietetic clinic for indigestion.

In view of the almost universal association of digestive disturbances with pregnancy it is not surprising that activity in an unsuspected ulcer is often overlooked until perforation has occurred. Nevertheless the above figures show that it must be extremely rare to meet with this complication. Scott (1945), discussing the differential diagnosis of acute abdominal lesions in pregnancy, does not even mention ulcer perforation as a possibility, although appendicitis, intestinal obstruction, and gall-bladder disease receive full consideration.

The following case, in which perforation of a duodenal ulcer occurred at the 36th week of pregnancy, is reported partly because it is so rare and partly because it affords an opportunity of reviewing the effects of pregnancy upon peptic ulcer in general.

Case History

A primipara aged 24, at the 36th week of pregnancy, was admitted to the North Herts and South Beds Hospital on Aug. 20, 1947, complaining of acute abdominal pain. Four years previously she had been treated in hospital for a duodenal ulcer, and this had been confirmed by an *x*-ray examination. She had not suffered from any other illness, and did not show any signs of masculine endocrine characteristics. The significance of this is referred to in the commentary below. During her pregnancy she had had two severe attacks of indigestion relieved by alkalis. A third attack began a few days before admission, and she finally collapsed with a very severe pain in the epigastrium.

When first seen, eight hours after the onset of the acute pain, she complained of continuous pain all over the abdomen and had vomited twice. Her temperature was 100° F. (37.8° C.) and her pulse rate 84. The size of the uterus corresponded with the dates, and it contained a live foetus presenting by the vertex. There were no signs of toxaemia, but generalized abdominal tenderness and some rigidity were present in the right side of the epigastrium. No peristalsis could be heard.

Having excluded the possible causes of pain due to the pregnancy, the diagnosis appeared to rest between a perforated duodenal ulcer and a perforated appendix displaced upwards by the enlarged uterus.

Laparotomy was performed ten hours after the onset of the acute pain. A high paramedian incision was made and free fluid was encountered. A small perforation about 4 mm. in diameter was found on the anterior surface of the duodenum. This was closed and a small portion of omentum sutured over it. A brief search for the appendix served only to show the extreme difficulty of locating this organ late in pregnancy, and in order not to disturb the uterus, the surface of which was

already red and injected, the attempt was abandoned. The abdomen was then closed without drainage.

Next day she was much better. Morphine and progesterone were given daily in an attempt to postpone labour, but four days after the operation labour started, and she was delivered spontaneously of a living child weighing 6 lb. (2.7 kg.) after an easy labour lasting 17 hours. She did not complain unduly of any discomfort in the abdominal wound. Her subsequent progress was uneventful. A test meal in the puerperium revealed marked hyperchlorhydria, and a barium meal six weeks after the operation showed that the ulcer was still active and there was some delay in emptying. She was discharged to continue medical treatment, but further surgical measures may be necessary at some future date.

Commentary

This case must be regarded as an exception, for a proved duodenal ulcer was aggravated during pregnancy and perforated at the 36th week. The diagnosis was not difficult once it was realized that an ulcer had existed before pregnancy. A perforated appendix could not, however, be entirely excluded, and for this reason treatment by continuous suction was rejected.

There appears to be no reason why pregnancy should predispose to perforation in the rare cases of active ulceration, but it is possible, in the case of a duodenal ulcer, that rearrangement of the viscera with traction on the mesentery by the enlarging uterus could lead to duodenal ileus. Hurst and Stewart (1929), however, describe the rising uterus supporting the stomach as one of the main reasons for the favourable influence of pregnancy upon the symptoms of ulcer.

The reason for this apparently beneficial effect of pregnancy upon peptic ulcer is not altogether clear. Hurst's explanation was given before the significance of endocrines in pregnancy was appreciated; and while the support of the uterus might benefit a gastric ulcer in the long type of stomach it is difficult to see how it could help a duodenal ulcer in the short high stomach. Two other factors are probably involved: (1) the physiological atony which is believed to occur in the smooth muscle of the alimentary canal during pregnancy—it is even possible that the stomach may pass through similar phases of alteration in tone comparable to those which are known to occur in the ureter; (2) the hypochlorhydria which is so often found during pregnancy.

Way (1945) has investigated the relation between gastric acidity in pregnancy and the presence of gonadotrophic hormone in the urine. His results suggest that the secretion of acid varies inversely with the concentration of gonadotrophic hormone present at the same time in the urine. These two factors, probably controlled by the endocrine system, might operate together to alter favourably for the duration of pregnancy two of the adverse conditions so often present in the ulcer diathesis—viz., hypermotility and hyperacidity.

It is well known that 80–90% of all peptic ulcers in adults occur in men. Differences in mode of living may be partly responsible, but endocrine factors are probably also involved in this very definite sex-incidence. Bockus (1944) suggests a direct relation between pituitary hormones and peptic ulcer apart from pregnancy. He quotes the following evidence as suggestive, but it is still unproved: (1) Pituitary hormones and urinary extracts have prevented experimental ulcer in animals; (2) the occasional occurrence of polyuria in ulcer patients; (3) many female patients with peptic ulcer show masculine endocrine characteristics.

If it could be proved that pituitary hormones are able to reduce the secretion and motility of the stomach a new method of treatment might be established to rival the popularity of vagal resection. The beneficial effects of pregnancy upon peptic ulcer are therefore worth considering if only to see whether the conditions could be reproduced in the non-pregnant state.

In actual practice the obstetrician faced with the rare association of peptic ulcer and pregnancy need only remember two things; first, to survey the case from the endocrine point of view to exclude masculine characteristics suggesting an android pelvis and possible dystocia; and, secondly, to pay serious attention to any symptoms of indigestion that may occur during the pregnancy.

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APLASTIC ANAEMIA IN SIMMONDS'S DISEASE

REPORT OF A CASE

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The part that the pituitary gland plays in erythropoiesis is uncertain, and although disease of the pituitary may be associated with anaemia its mode of action is unknown. In his review of Simmonds's disease Sheehan (1939) found that there was nearly always a moderate anaemia and that this anaemia is usually hypochromic in the early stages. After many years the hypochromic anaemia may give rise to the hyperchromic variety, and according to Sheehan these hyperchromic anaemias are most often seen in cases in which there is a severe hypothyroid element. Escamilla and Lisser (1942), in their review of 101 typical verified cases, found that in those cases in which relevant data were given the average haemoglobin was 65% (minimum 40%) and the average red blood cell count 3,710,000 (minimum 2,000,000). It is not stated what type of anaemia was present. Snapper *et al.* (1937), describing cases of pituitary and gonadal deficiency, suggest that insufficiency of the anterior lobe of the pituitary may be followed by achlorhydria and that this achlorhydria may induce anaemia after a long interval. The anaemia may be identical with that in pernicious anaemia (Witts, 1942), and in these cases it responds to liver therapy as anticipated. They suggest that anaemia is absent in cases of Simmonds's disease of short duration because the anaemia occurs only after the achlorhydria has been present for a considerable time. However, Simmonds's disease is commonly associated with both hypothyroidism and hypogonadism, and either of these conditions in itself may be responsible for an anaemia. Bomford (1938) and Jones (1940) have described hypoplasia of the bone marrow in hypothyroidism, while recently Watkinson *et al.* (1947), describing two cases of hypopituitarism and hypogonadism, conclude that the long-standing hypogonadism may be responsible for the observed hypocellular bone marrow.