Women	
Uncorrected levels	.. 89.44% (13.24 g./100 ml.)
Corrected levels	.. 91.90% (13.60 g./100 ml.),
with a standard deviation of 7.07 and a standard error of the mean of 0.57	

For both the uncorrected and corrected values the means for men and women differ significantly at the 0.001 level of confidence.

There is considerable evidence that sex hormones play a part in the difference between the red-cell and haemoglobin level in lower male and female animals (Vollmer *et al.*, 1939; Domm *et al.*, 1943; Finkelstein *et al.*, 1944). Evidence in man, however, is conflicting (Widdowson and McCance, 1936; Vahlquist, 1950).

A hypothesis that a proportion of women are anaemic by the time of the menopause by reason of menstruation or repeated pregnancies, and that because of inadequate diet the iron-deficiency is not restored afterwards, would explain much of the data of this and other surveys. In this survey the differences in frequency of anaemia were significantly higher in women than in men ($P < 0.05$). If an arbitrary level above the 80% Haldane used in this survey (say 90%) had been chosen, and patients below this level investigated and treated, the difference in mean haemoglobin levels between men and women would, I think, have been narrowed further.

Haemoglobin and Living Alone

In this survey women living alone were found to have significantly lower haemoglobin levels than those not living alone. The mean uncorrected haemoglobin level for women living alone was 85.98% (12.73 g./100 ml.) and for women not living alone 90.90% (13.45 g./100 ml.). This difference was significant ($t = 2.66$, $P < 0.01$).

Corrected haemoglobin levels, where the significant differences between the sexes in age, incidence of anaemia, and frequency of living alone were also taken into account, also showed a significant difference, the mean haemoglobin level for women living alone being 89.26% (13.21 g./100 ml.), and for women not living alone 92.64% (13.7 g./100 ml.); difference significant at 0.05 level ($t = 2.4$, $P = 0.02$).

The mean (uncorrected) haemoglobin level for men living alone (90.30% = 13.3 g./100 ml.) was not quite significantly lower at the 0.05 level of confidence (P approximately 0.10) than for men not living alone (95.33% = 14.11 g./100 ml.).

Corrected haemoglobin levels also showed no significant difference, the mean haemoglobin level for men living alone being 95.9% (14.19 g./100 ml.) and for men not living alone 93.3% (13.81 g./100 ml.) ($t = 1.08$, $P = 0.30$).

It is not likely that sex hormone factors could account for the significantly lower haemoglobin levels for women living alone compared with those not living alone. The clinical impression that women living alone are probably the section of the population who care least about proper feeding would do so.

Haemoglobin and Social Class

There was no significant difference in the incidence of anaemia in the various Registrar-General or survey classes, nor in the mean haemoglobin level of men and women in those classes (because of the small numbers involved Registrar-General classes I and II and IV and V were amalgamated for statistical analysis).

Summary and Conclusions

Haemoglobin estimations were performed on 101 men and 155 women over the age of 65 in a general practice.

At the age of 65 the haemoglobin levels were significantly higher in men than in women, but with increasing age the haemoglobin level of men gradually decreased, and that of women gradually increased, until at the age of 74 significant differences disappeared.

Five men (5%) and 20 women (13%) had haemoglobin levels below 80% Haldane (11.84 g./100 ml.).

There were no significant differences in haemoglobin levels in the various Registrar-General classes, nor in those of a classification based on apparent material comfort.

In this survey it appeared that a major factor in the high incidence of anaemia in women over the age of 65 was poor nutrition, and it is suggested that it may be a major factor in the difference in haemoglobin levels between the sexes in old age.

I am grateful to Dr. H. F. Barnard and the staff of the Pathology Laboratory, Westwood Hospital, Beverley, who made the haematological estimations, and to Mr. A. B. Royle, Hull University, for help with the statistics.

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Medical Memoranda

Congenital Absence of Gall-bladder Associated with a High Caecum and Absence of Ascending Colon

The following unusual case is thought to be of sufficient interest to be put on record.

CASE REPORT

A man aged 45 was first seen in the out-patient department on November 16, 1956, complaining of upper abdominal pain on the right side with some intolerance to fatty food, and flatulence. He was very tender over the gall-bladder and to a lesser degree over the appendix area. Cholecystograms showed no function of the gall-bladder. Examination with the double-dose technique again showed no function of the gall-bladder. The radiologist reported the case as one of gall-bladder disease obliterating the cystic duct.

On admission the patient complained of right-sided abdominal pain of a sharp, gripping character, on and off for

about 12 months, never being longer than three to four weeks without pain. This was often felt in the right hypochondrium, and radiated at times through to the back, but not to the shoulders and was not related to meals. He had no history of jaundice, rigors, or pyrexia associated with the pain. He had not vomited, but the pain nauseated him. He suffered considerably from flatulence, and for the previous 12 months he had tended to suffer from frequent bowel actions with loose stools. There had been no blood or mucus in the stools and there was no history of haemat-

Intravenous cholangiogram 80 minutes after injection showing the biliary passages and no gall-bladder.

emesis or melaena. There were no symptoms of urinary disease. His appetite was poor and he had lost weight recently.

On examination his general condition was good. No abnormal physical signs were found except for some tenderness over the gall-bladder region and over McBurney's point, not nearly so marked as when he was first seen. Cholecystitis with possible subacute appendicitis was provisionally diagnosed.

Operation.—On January 17, 1957, the abdomen was explored through a right subcostal incision, and the gall-bladder was found to be completely absent. There was a narrow, shallow groove on the liver in the position of the gall-bladder fossa. The common bile duct was dissected out and found to be of normal size and not dilated. There was no evidence of a rudimentary cystic duct. A small triangular pad of fat which usually fills the space between the cystic duct and the hilum of the liver contained a small artery which presumably would have been the cystic artery. The caecum was very high in position, lying just beneath the liver and constituting part of the hepatic flexure, so that in fact there was really no ascending colon. The appendix was retrocaecal, pointing upwards and backwards so that its tip was in contact with the liver. It contained a faecalith and was much thickened. The appendix was removed and the abdomen closed.

The histological report stated: "The appendix shows marked fatty infiltration in the submucosa, which is a rather unusual finding. It contains a large faecalith."

On June 24 an intravenous cholangiogram (see Fig.) was carried out and the report stated: "The biliary passages are well visualized in the films taken at 40, 60, and 80 minutes after injection. The right and left hepatic ducts are shown

but no evidence of a cystic duct or gall-bladder. No dilatation of the duct is shown and no calculi are demonstrated."

He had been seen several times as an out-patient: his symptoms had completely disappeared, and there had been no recurrence for over six months.

COMMENT

Gross (1936) reported 38 cases of absence of the gall-bladder with hepatic and common bile ducts normally present and functioning, also 35 other cases of abnormalities of the biliary ducts suggesting atresia, etc. Perusal of the reported cases would suggest that when the gall-bladder is absent the gall-bladder fossa is commonly absent too, but the shallow dimple made by the presence of a rudimentary cystic duct appears to be present in rather less than half the reported cases. The literature suggests that the condition of absent gall-bladder is two or three times as common in the female as in the male.

Smyth (1949) stated that most of the reported cases presented with stones in the common bile duct associated with biliary colic and jaundice. In a number of cases in which stones were not present in the common bile duct the biliary ducts were found not to be dilated as in the present case.

I cannot find any reference in the literature to the carrying out of an intravenous cholangiogram on these patients. It is interesting in that the cholangiogram in the present case showed normal passage of the dye through the bile ducts. I can find only one reference to associated congenital abnormalities in the abdomen with this condition: Rains (1951) described an abnormality of the lesser omentum associated with absence of the gall-bladder.

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Primary Varicella Pneumonia

Primary varicella pneumonia was first described by Waring *et al.* (1942); since then about 60 cases have been reported in the United States of America (Hampton, 1955; Kriss, 1956; Endress and Schnell, 1956; Weinstein and Meade, 1956; Fitz and Meiklejohn, 1956; Southard, 1956; Tan *et al.*, 1956; Moore, 1957; Krugman *et al.*, 1957), and one of a Hawaiian serving in the American Forces in Germany (Cowley *et al.*, 1956).

No report of the condition occurring in this country has been found in the literature, and it is thought that the following case, which presents similar features, would be of interest.

CASE REPORT

A 26-year-old naval rating became ill with malaise and fever. Twenty-four hours later he developed a typical