or fever he must discontinue the drug and report to his doctor. The same procedure might be applied in the prolonged sulphonamide administration employed in rheumatism prophylaxis. For other cases of sulphonamide administration, limitation of the period of treatment to a week or ten days is probably the best method of prophylaxis, and seems to have almost eliminated agranulocytosis due to this group of drugs. Amidopyrine agranulocytosis is readily avoided, as this drug is unnecessary and should no longer be used.

Summary

No evidence has been found that serial leucocyte counts during the administration of agranulocytosis-producing drugs either prevent agranulocytosis or reduce case mortality.

The reason for this failure is found in the bone marrow, where the condition can become fully established before the peripheral blood gives any warning.

Reliance on leucocyte counts is undesirable, as they may give rise to a misguided sense of security which may prevent the adoption of more useful measures.

Leucocyte counts for purposes of prophylaxis also constitute a waste of time in clinical pathological departments of hospitals, and may mislead clinicians into stopping the administration prematurely, so unnecessarily depriving patients of the benefits of treatment.

Other methods of dealing with drug agranulocytosis are briefly mentioned.

I am indebted to Dr. J. K. Rennie for clinical data. Much of the material in this article is taken from a thesis accepted by the University of Edinburgh for the degree of M.D.

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Information about the hospital services in the United States is summarized in a report published in the *Journal of the American Medical Association* (May 7, 1949, p. 23). The present bed capacity is 1,423,520, and the average daily number of patients occupying hospital beds during 1948 was 1,217,154. Between 16 and 17 million patients were admitted to hospital during the year. The greatest increase in service compared with past years was in the general hospitals. The average daily number of patients in mental hospitals was 664,399: thus nearly 55% of the occupied hospital beds were utilized for psychiatric care. The tuberculosis hospitals contained about 5% of the total hospital load. The average length of stay in general hospitals fell from 11.4 days in 1947 to 10.5 in 1948. There are now 807 hospitals approved for the training of interns and 1,140 for the training of resident physicians. The accredited schools of nursing education, which total 1,163, enrolled 100,174 student nurses in 1948.

TORSION OF NORMAL FALLOPIAN TUBE

BY

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Torsion of the normal Fallopian tube when first encountered strikes one as being rare enough to warrant a little excitement. On looking at the tube and its mesentery during operative work in the abdomen it is hardly conceivable that the tube itself should undergo torsion without involving the neighbouring structure of the ovary: with its broad pedicle it would seem impossible that it could so twist on itself as to give rise to urgent symptoms.

Case Report

A 24-year-old woman was admitted to the maternity unit of the Ayrshire Central Hospital on Dec. 7, 1947. The elder child was 2½ years and the younger 8 months. The family history showed nothing of importance. The husband was alive and well. The patient had been feeding the baby until three weeks before admission to hospital. She stopped on account of an attack of pain in the left iliac fossa and slight uterine bleeding. This was the first sign of uterine bleeding since the birth of the baby, and she was sent to hospital by her doctor as a case of threatened abortion or of subinvolution.

On admission the temperature was 99° F. (37.2° C.), pulse 124, respirations 20, B.P. 120/80 mm. Hg; blood Rh-negative; O(iv); W.R., negative; urine, N.A.D.; chest, heart, and lungs, N.A.D. On vaginal examination a small tender mass was felt behind the uterus, which was slightly enlarged, retroverted, and tender.

After admission there was no further uterine bleeding, so the differential diagnosis rested between ectopic gestation and an inflammatory condition of the tubes. During the next three days there was a slight rise in temperature, and a course of penicillin of 1,000,000 units was given. An Aschheim-Zondek test, which had been taken on admission, was now shown to be negative, and as the patient's temperature had settled she was examined under general anaesthesia. The previous findings were confirmed and the provisional diagnosis of tubal mole made.

Operation.—On Dec. 16 the abdomen was opened through a Pfannenstiel incision. A small mass surrounded by adhesions was found in the pouch of Douglas. When the adhesions were freed the mass was found to be the left tube with three clockwise twists in it. It was removed, leaving the ovary untouched, and the stump was buried in the broad ligament. Appendicectomy was performed and the abdomen closed. The patient was ambulatory by the third day and was discharged from hospital on Dec. 27, 11 days after the operation.

The specimen would at first suggest an atypical tubal pregnancy which had undergone torsion. Section showed no evidence of pregnancy, and microscopically no cells suggestive of decidua or chorionic elements could be found. This, after consideration of the patient's symptoms and history in retrospect, supported the diagnosis of simple torsion of the tube.

Discussion

The standard midwifery textbooks make no mention of this entity, but after reviewing some of the literature it was perceived that it was not really rare. Bland-Sutton (1890) reported the first case, and since then many others have been published. In the majority there has been a history of a diseased condition of the tube—hydrosalpinx, etc. Darner (1926) states torsion of the undiseased tube is less common, particularly in the virgin. French authors, in particular Regad (1933a, 1933b), have referred to a syndrome,

as they consider the condition to be common enough to be regarded as a clinical entity in the virgin. This is of course understandable. In married women there is a greater difficulty in assessing the normality of the tubes, particularly after pregnancy, and this was borne out in my case, in which the woman's last pregnancy occurred only seven months before. She had never menstruated since then and had been feeding the baby, which of course is no bar to pregnancy or pelvic infection.

Shute (1932) wrote an extensive paper on this condition, dealing with all theories of causation and its distribution in the various age groups and types of cases encountered. He found that 80% of cases occurred during the genital activity of women and the remaining 20% during puberty: 68% of the former were on the right side and in 62% the torsion was clockwise. It has been extremely difficult to separate the cases associated with tubal disease from those in the normal tube, as only 8% of specimens had had histological examinations, although one must presume that the 20% arising before puberty occurred in a normal tube. In those not associated with disease there would seem to be some connexion with the initiation of menstruation, and Davies (1925) and McEachern (1934) each cited a case similar to mine. It must be assumed that the bleeding occurring in my case was that of a commencing period.

Blum and Sayre (1937) mentioned the prevalent theories: (1) Haemodynamic (Payr), the idea being that the pulsations of the blood vessels in the mesentery of the tube can in some way initiate the torsion; (2) Sellheim's suggestion that the movements of the body and abdominal wall could be transmitted and this would initiate the torsion. This second theory is understandable when applied to a large ovarian cyst which is in contact with the abdominal wall, for any sudden violent, irregular movement of the abdominal muscles might then start a movement of the cyst to right or left, but it would hardly seem applicable to the tube, which is lying deep in the pelvis.

Anatomical malformations and physiological peristalsis are much more likely to initiate a twist. It has been suggested that drugs such as apiol may also initiate such excessive peristalsis as to start torsion. Once a twist has occurred it is easy to understand the consequent interference with circulation and the indrawing of the fimbriae which occur in acute salpingitis and ectopic pregnancy. This results in the extravasation of blood into the tube, with the formation of a small pedunculated mass which may undergo further torsion.

Such a sequence of events will give rise to all the clinical symptoms seen in the case reported, and suggests the erroneous diagnosis of ectopic pregnancy or salpingitis.

Unless this occurs in the pubescent girl it is, to my mind, impossible to recognize a definite syndrome which will identify torsion of the normal Fallopian tube, particularly as it must be assumed that the latter cases are vaginal and difficult to examine. The urgency for operation in these cases is not great; cases have been described in which the distal portion of the tube has actually been amputated by the torsion and a free tubal mass has been removed some considerable time—even years—after what must have been the original crisis.

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AN OUTBREAK OF FOOD-POISONING IN BROMYARD DISTRICT

BY

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On Friday, Nov. 5, 1948, a number of people left Bromyard by coach to attend the evening performance of a play in Birmingham. They arrived early, and 14 persons, so far as is known, entered a near-by restaurant and had a meal consisting of cold beef sandwiches and coffee or alcoholic refreshment. The beef in the sandwiches was described by different patients as being "undercooked," "overcooked," "dark-looking, stringy, and tough."

Of these 14 persons, 11 were taken ill on Nov. 6 and one on the 7th, the incubation period varying from 16 to 36 hours. The presenting symptoms were malaise, lassitude, severe frontal headache, aching in the limbs and back, fever, shivering, abdominal pains, diarrhoea, and in some cases nausea and vomiting. One patient collapsed while attending a memorial service on Nov. 6. Photophobia and tenderness of the eyeballs were complained of by four patients, and one patient stated that he had had puffiness round the eyes.

The severity of the attack varied considerably: from headache and abdominal discomfort, with mild pyrexia only, to complete incapacitation with pyrexia of 102–104° F. (38.9–40° C.) at the onset, associated with extreme diarrhoea and blood in the stools. The duration of the attack extended over a period of two to three days in the mildest case; whereas in the most severe cases, although the acute phase of the illness had passed off within seven days, residual lassitude, anorexia, and minor recurrences of the headache and abdominal symptoms persisted for two to three weeks.

Two of the persons who ate the beef sandwiches suffered only from slight headache and malaise on the following day. A specimen of faeces from one of these persons gave a negative result on culture; no specimen could be obtained from the other person. It is of interest to note that, of those persons who took alcoholic refreshment, these were the only people who had two glasses of either gin or sherry with their sandwiches.

Investigations in Bromyard.—Specimens of faeces obtained from the 12 persons who were taken ill yielded salmonellae on culture, which were later identified as *Salmonella bovis morbificans*.

Investigation at the Restaurant, Birmingham.—(a) Bacteriological examination of specimens of faeces from the eight members of the staff at the restaurant showed that four persons were excreting *Salm. bovis morbificans*. Two of these four had not been ill, while the other two had had symptoms of enteritis after Nov. 5. (b) Bacteriological examination of rat droppings in the restaurant revealed the presence of *Salm. bovis morbificans*. (c) Bacteriological examination of the rat-poison which was being used in the restaurant showed the presence of *Salm. enteritidis* (Gaertner).

Discussion

These findings indicate that in all probability there was an epidemic of gastro-enteritis due to *Salm. bovis morbificans* affecting the rodent population in the vicinity of the restaurant at Birmingham, and that unprotected food had been contaminated by the infected rodents. The beef had