account for a proportion of the Schick-positive results and could not explain the persistent Schick-positive state of those individuals who had both passed through an attack of diphtheria and been immunized.

The Schick level after diphtheria should have some relation to the frequency of relapses and secondary attacks, but it is difficult to come to any definite conclusion about this point. Goodall and Washbourn (1928) say that a marked relapse occurs in about 1 per cent. of cases, and they mention that relapses and secondary attacks are not very rare and probably one attack confers little, if any, lasting protection. Ker (1939) states that secondary attacks are quite common, while serious relapses are unusual. These authors agree that a slight recrudescence with or without patching of the sore throat occurs more frequently. It is quite likely that relapses and secondary attacks of diphtheria are more numerous than is generally realized, most of them being labelled as ordinary "sore throats." These are merely a completion of the process of immunization and are usually without danger to the individuals concerned.

Summary

An investigation is described which showed that a representative group of elementary-school children had gained a better Schick immunity following immunization than that obtained by a comparable group who had passed through an attack of diphtheria.

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Clinical Memoranda

Ruptured Ectopic Gestation

The circumstances of the two following cases of ruptured ectopic gestation are perhaps worthy of record as illustrating risks that have to be taken in a scattered community and results that with good fortune may be achieved.

CASE I

A married woman aged 35, a 5-para, was resident at a small station, 120 miles away by rail from this centre, where there is a medical practitioner but no hospital facilities. On October 2, 1939, she complained of some abdominal discomfort and saw her doctor. There were no localizing or distinguishing signs of any kind and her bowels were rather relaxed. She was watched on the 3rd and appeared much better, being up and about attending to her normal household duties. On the evening of the 4th she was found by her doctor alone in her house in a complete state of collapse, pulseless, pale, and complaining of severe abdominal pain referred to the left shoulder. There was no question of the diagnosis of ruptured ectopic, but the problem was how to deal with the patient.

The medical practitioner decided to give her morphine and transfer her in her bed by train to hospital—a six-hours journey. On arrival in hospital she was, under the circumstances, in good condition: not badly shocked, temperature 102° F., pulse 90, abdominal pain less marked (still referred to left shoulder), urine acid and loaded with pus cells, blood slides negative for malaria. After a short period of observation an operation was performed and her abdomen opened by a left paramedian incision. A considerable mass of blood clot was found in the abdomen and pelvis, and the left tube and ovary were thoroughly disorganized. These were removed and the patient made a successful recovery.

CASE II

On November 2, 1939, I was rung up by the sister in charge at a large sawmills camp 100 miles away in the bush. She was very worried about the state of Mrs. A., who had just called her in.

From the sister's description of the case I was able to diagnose a ruptured ectopic and made arrangements for the patient's removal to hospital. This consisted in having her brought in by aeroplane, and the nearest available aeroplane was 300 miles away. She therefore could not be moved before dark that day.

Her history was as follows. She was 28 years old and three years previously had had an abortion at three months. Periods had been regular, and she had just missed a period and hoped she was pregnant.

On October 28, 1939, she was out for a motor drive, had some abdominal pain and slight vaginal haemorrhage, and thought that she was going to start another period. During the next few days the abdominal pain and discomfort and vaginal haemorrhage were intermittent, and she rested or got up as she felt inclined. On November 1 she felt very much better and was up and about, but on the 2nd she had severe abdominal pain, greater vaginal haemorrhage, and called in the sister, who found her in a collapsed state and immediately reported by telephone.

Here again there were no hospital facilities on the spot, and the best line of treatment was to bring the patient 100 miles into hospital by aeroplane. While waiting for the aeroplane she was kept under morphine and given rectal saline, and the foot of the bed was raised, etc., to maintain circulation. On arrival in hospital she was in a completely collapsed condition; the pulse was very poor and 130; temperature 97.6° F.; pale, cold, and clammy; abdomen rigid and distended, with pain referred to both shoulders. She was given rectal saline and glucose and operated on immediately via a right paramedian incision. The abdominal cavity was full of blood and blood clots, and until this was taken away nothing could be distinguished. Over two pints of fluid blood was removed and strained for immediate transfusion. The left ovary was completely destroyed by a cyst (the size of an orange), into which free haemorrhage had taken place, and a portion of the left tube adjoining it. These were rapidly excised, the wound was closed, and two pints of citrated blood taken from the abdomen put back into the median basilic vein.

The patient made an uninterrupted recovery and was discharged from hospital in three weeks.

During the last two years I have given anaesthetics for two cases of ectopic gestation before rupture and have operated on two cases of ruptured ectopic gestation. In the whole area there are probably not more than 400 married women, which gives an abnormally high incidence for this unfortunate occurrence.

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The Ettore Marchiafava prize, founded by the University of Rome in October, 1938, for the best work on morbid anatomy or general pathology, has been awarded to Professor Mario Monacelli, director of the Dermatological Clinic of Messina University, and Professor Giulio Raffaele of the University of Rome.

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