interest to notice that the intervention occasioned by manual rotation did not result in any material increase in morbidity.

TABLE IV.—*Infantile Mortality*

	No.	Stillborn	Neonatal Deaths	Total
Face to pubes . . .	121	4	4	8 (6.6%)
Spontaneous rotation . .	209	6	2	8 (3.8%)
Manual rotation . . .	85	3	1	4 (4.7%)

The series of 3,700 deliveries yielded 3,743 infants, including 108 stillborn and 47 neonatal deaths: total, 155 (4.2%).

The infantile mortality compares favourably with the average for the whole series of 3,700 deliveries; in fact, it is slightly better of infants that spontaneously rotated. Taking the face-to-pubes group and the manual-rotated group—that is, all cases that failed to rotate spontaneously—the infantile death rate is 5.8 per cent. It is difficult therefore to understand Miller's figure of 22.3 per cent. in similar types of cases.

TABLE V.—*Average Duration of Labour (Hours and Minutes)*

	Average for Occipito-anterior Deliveries		Face to Pubes		Spontaneous Rotation		Manual Rotation	
	Stage 1	Stage 2	Stage 1	Stage 2	Stage 1	Stage 2	Stage 1	Stage 2*
Primiparae . .	13 0	1 57	21 0	3 0	14 12	2 27	18 4	4 0
Multiparae . .	6 50	0 42	6 6	1 0	8 06	0 50	9 8	2 0

* Before forceps.

The average duration of labour in primiparae shows an expected increase in both the first and second stages, but there is little difference in the multiparae except in those that required manual rotation of the head.

Management of Occipito-posterior Positions

Years ago when I became especially interested in obstetrics I asked an old and experienced colleague how he treated occipito-posterior cases. He replied, "I give them morphia," and "What then?" I asked. "I give them more morphia," was the reply. Further persistence evoked the same response, "More morphia." In this axiomatic advice there is much if not the entire truth. The moral is that these cases should be left alone as long as the condition of the mother and foetus permits or until a careful examination reveals that the progress of labour is definitely at a standstill.

It will be seen that in our experience 80 per cent. of cases either rotate spontaneously into the occipito-anterior position or are delivered face to pubes without undue risk to mother or child. The remaining 20 per cent. require manual assistance to rotate or to complete a rotation which is checked by impingement upon the ischial spines. Cases classified at the onset of labour as occipito-lateral may come to a standstill because of the arrest of the head by the ischial spines and with the sagittal suture still in the transverse diameter of the pelvis; but there is no doubt that the head may, at the onset of labour, be definitely in the occipito-posterior position and its attempt to rotate be checked in the transverse diameter of the lower strait of the pelvis. The principal factor causing this is imperfect flexion of the head, which not only throws a longer diameter of the head across the pelvis but also results in a presentation the plane of which is a long oval instead of the usual circle. Careful examination of those cases in which arrest occurs will invariably reveal the fact that

the anterior fontanelle can be readily palpated, and that therefore a cephalic diameter, the occipito-frontal, of four and a half inches is engaged. Confirmation can be obtained by tracing the sagittal suture directly or obliquely backwards to the posterior fontanelle and by palpation of an ear.

It is not, as a rule, difficult to rotate the head so as to bring the occiput to the front, but there are two points in the procedure which are important. The head must be initially disengaged by pushing it upwards and the hand so applied that after rotation it is apposed to the left side of the pelvis, where it should remain until the left blade of the forceps is applied. This last manœuvre prevents a swing back of the head which may occur as the result of torsion of the neck. The rotation should always be assisted by manipulation of the body, by the unoccupied hand, through the abdominal wall. Occasionally it may be necessary to pass the hand beyond the head and actually rotate the child's body by pressure on the shoulder.

Trepidation when faced by an occipito-posterior case becomes steadily less with experience, which permits delay within the limits of safety—a period not easily determined by the inexperienced, who, through their lack of knowledge, are led to intervene too soon.

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REPORT ON A CASE OF PSITTACOSIS

BY

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This report deals with a case admitted to hospital with the diagnosis of lobar pneumonia. The history and the clinical findings on admission were most suggestive of typhoid fever, a conclusion which was not supported bacteriologically. After other causes for the pyrexia had been excluded, psittacosis or miliary tuberculosis alone remained. Blood tests confirmed the diagnosis of psittacosis. The following is a clinical report of the patient's progress until his discharge from hospital.

Case Report

The patient, a man aged 69, stated that his illness began suddenly on November 6, 1939. He described it as an attack of "the shivers," and thought it was a recurrence of malaria, which he had had thirty-six years previously. He remained in bed, slightly delirious, until November 9, when he got up feeling better, but still indefinitely unwell. A dry cough then developed and his appetite disappeared, and on November 16 he was forced to bed again. Mild diarrhoea began on the 22nd and lasted till the 26th, when he was sent to hospital. He had no other complaints, but stated that he had lost weight. There was no feature of note in his personal or social history.

On examination he appeared ill and listless, but answered questions intelligently. He had a dry skin, dry furred tongue, clean throat, dry cough, and was slightly cyanosed. The temperature was 100° F., respirations 28, and pulse 100. There was no skin rash. His heart sounds were pure, poor in volume, regular, with occasional extrasystoles, and the blood pressure was 110/70. His breathing was free, but there was dullness on percussion over the right apex, with a diminished bronchial respiratory murmur accompanied by fine crepitations. Elsewhere his lungs appeared normal. His abdomen was doughy and distended, but no other abnormality

was detected. A motion passed was "pea-soup" in type. There was no abnormality in his nervous or genito-urinary system, the urine showing only a faint trace of acetone.

After admission he became more gravely ill. His temperature (axillary readings) remained continuous in type, with occasional morning remissions, and settled by lysis on December 14; there was a temporary recrudescence on December 19 associated with diarrhoea. The highest temperature recorded was 102.5° F. on December 1. Respirations remained elevated at between 30 and 40, settling with the temperature. The cough remained and continued into convalescence, but no sputum was ever produced. Cyanosis was always slight. The changes at the right apex persisted, and both bases were involved shortly after admission. Resolution of the lung changes was not complete until the second week in January, 1940. The pulse rate never rose above 110, and the blood pressure remained low until convalescence. Slight oedema of the dependent parts occurred about December 10, and some precordial pain was noted about the same time. Both disappeared early in convalescence. The only nervous change observed was a toxic delirium, worse at night, between December 4 and 7. The cerebrospinal fluid was not under pressure and showed no increase in cells. The appetite was fair. Sickness or vomiting did not occur, but hiccup was a problem for a few days. The abdomen remained doughy and distended, but there was no tenderness or enlargement of the liver and spleen. Constipation was the rule, with periodic series of loose stools, "pea-soup" in type. Five days after the temperature settled (December 19) this diarrhoea recurred for twenty-four hours associated with a transitory temperature rise. No skin rash was seen until December 14, when a toxic erythema appeared. Profuse sweating occurred in the middle of the illness. Labial herpes was never noted. The blood counts gave the following results:

Date	R.B.C.	W.B.C.	Hb %	Differential Count				
				P.	L.	M.	B.	E.
27/11/39	—	8,000	—	—	—	—	—	—
1/12/39	—	8,250	—	—	—	—	—	—
4/12/39	3,010,000	7,500	90	75.1	12	11.3	1.5	0
12/12/39	3,880,000	8,400	82	—	—	—	—	—
18/12/39	3,800,000	10,800	84	—	—	—	—	—
21/12/39	—	13,800	—	—	—	—	—	—
30/12/39	4,700,000	7,500	—	—	—	—	—	—
3/1/40	5,250,000	5,600	92	65	27	6	2	—

Faeces.—Tests were carried out on November 29 and December 9 on several specimens, but no organisms of the enteric or dysentery groups were isolated.

Blood Clot Culture.—No organisms of the enteric or dysentery groups were isolated.

Serological Tests.—The Wassermann reaction was negative. On November 28 and December 1 there was no agglutination with *B. typhosus*, *B. paratyphosus* A and B, or *Br. abortus*.

On December 5 there was a definitely positive reaction for psittacosis, which reaction was still as strongly positive on February 10, 1940, almost two months after recovery. Details of the tests are given in the table in the next column.

This is the first case of psittacosis to be notified in the city of Edinburgh, and is one of the four reported in Scotland. When the condition was first considered a possibility the patient was questioned rigorously regarding contact with birds. When such contact was denied, and this had been supported by statements from his friends, attention was directed to the occurrence of suspicious illness among his associates, but this also was negative. Cases of psittacosis occurring without an obvious source of infection have been recorded previously, and it is worthy of note that although the Brazilian parrot is the natural host of the disease, infection may spread from it to other birds—for example, budgerigars, parakeets, bullfinches, canaries, fulmar petrels (Rasmussen, 1938), and, it is alleged, sea-gulls—and from these to man. Also, labora-

	Serum Dilution	Antigens + 2 M.H.D. Complement		
		Psittacosis	Control	Saline
5.12.39 ..	1:4	++++	—	—
.. ..	1:8	++++	—	—
.. ..	1:16	++++	—	—
.. ..	1:32	++++	—	—
10.2.40 ..	1:4	++++	—	—
.. ..	1:8	++++	—	—
.. ..	1:16	++++	—	—
.. ..	1:32	++++	—	—
Known positive	1:41	++++	—	—
Known negative	1:41	—	—	—
Saline		—	—	—

tory animals, such as cats, mice, and monkeys, have been infected experimentally (Sturdie and Scott, 1930), and clinical records exist of a monkey that was infected in a menagerie by diseased parrots (Löns, 1930), and of a dog that was suspected of causing the disease in man (Wagner, 1884). Mice have been suggested as being sources of infection, but this has never been proved (Leichtenstern, 1899). Another possibility has been suggested by Gerlach (1936), who believes that man may be infected from contact with the actual disease, but that the virus may lie dormant until stimulated to produce the typical clinical picture by intercurrent illness. Further explanation of the present case may lie in the fact that the causal virus is notably resistant to drying and may remain around the habitation of a diseased bird long after the latter has died, or that the common carrier—a budgerigar—escaping from its home may deposit infective excreta anywhere before being recaptured or dying. Finally, it is interesting to note that pigeons are resistant to experimental infection (Sturdie and Scott, 1930).

There were several unusual clinical features in the above case: (1) The simulation of typhoid fever by the periodic occurrence of diarrhoea, with "pea-soup" stools—intestinal symptoms being uncommon in man. (2) The duration of the illness—five weeks as compared with the average three weeks, a feature recorded in some other instances. (3) The rare mode of onset—an acute illness for a few days followed by an ambulatory period before the next acute stage and the development of the characteristic symptoms. (4) The absence of headache, which is accepted as being one of the most constant features of the disease. Typical features were the blood changes and the occurrence in the lungs of a lesion simulating, in clinical signs, a lobar pneumonia, but lacking sputum, respiratory embarrassment, or cyanosis.

The determining factor in the diagnosis of the illness was the complement-fixation test carried out by Professor Bedson at the London Hospital. Such a reaction may be obtained in the course of the illness or during convalescence, and in the case described it was the only possible laboratory test which could be conducted, as the patient produced no sputum or pleural effusion from which the causal virus could be recovered. Blood culture was similarly useless, as the blood in psittacosis is generally sterile after the first four days of the illness, and in the case in question the illness had been present presumably twenty days before admission. The second complement-fixation test conducted on serum taken from the patient almost two months after the illness had ceased is interest-

ing in that it is as strongly positive as the original. It shows the value of the test in making a retrospective diagnosis in a case which is suspected only some time after recovery. Such a strongly positive reaction as that given by the present patient may not be found, as the duration of antibodies after recovery is variable. An interesting speculation on the present reaction is that it may be caused by persistent infection.

Finally, treatment was purely symptomatic. A total of 20 grammes of sulphapyridine (M & B 693) was given by mouth, on the dosage scale recommended for pneumonia, beginning on December 5, without producing any change whatever in the patient's general condition or in the lung signs.

I wish to thank Professor S. P. Bedson for his co-operation in carrying out the necessary serological tests and for his permission to publish the detailed results of such tests.

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Clinical Memoranda

Chemotherapy of Middle-ear Disease in Dispensary Practice

The pneumococcus is often enough responsible for middle-ear infection to suggest the use of sulphapyridine (M & B 693) as a curative agent in this condition. In a short series of cases treated at a municipal dispensary this drug produced considerable benefit in some instances, while in others no therapeutic action was discernible.

ACUTE CASES

Case 1.—A child aged 14 months had a red bulging tympanum, injection of fauces, and a temperature of 101° F. A dose of 0.25 gramme of sulphapyridine was given every three hours. The temperature fell to normal within eighteen hours, and the ear was cured by the third day.

Case 2.—A child aged 4½ had the same symptoms as in Case 1, but complained of severe pain in the ear. The child looked extremely ill—the type of case that one expects to require mastoidectomy. Sulphapyridine, 0.5 gramme thrice daily, was given, and all symptoms cleared up rapidly and left no impairment of hearing.

Case 3.—A child aged 5 had been "awake and screaming all night." When first seen the next morning the membrane had just ruptured and pus was discharging freely. From the pus pneumococci were recovered by culture, and on a slide staphylococci and streptococci were seen. Streptococci and staphylococci in cultures from the skin around the ear did not correspond morphologically with those from the middle ear. On 0.5 gramme of sulphapyridine thrice daily the ear was dry within four days.

Case 4.—A child aged 6 had the membrane ruptured two days before the beginning of treatment. From the discharge staphylococci and streptococci were obtained, but no pneumococci. Here, too, the organisms from the discharge differed morphologically from those of the skin of the outer ear. This case cleared up as quickly as Case 3 on the same dosage.

CHRONIC CASES

Eighteen cases of chronic ear discharge, ranging between 3 and 63 years of age, had symptoms persisting from two to twenty years. All of them had been treated for long periods by "ear drops" of various kinds. Cultures of the pus from these cases contained no pneumococci, but abundant staphylo-

cocci and streptococci. A few filamentous bacteria were seen on direct slide preparations of pus, but could not be cultured. It was noticeable that the staphylococci were smaller and less numerous than in the acute cases, and corresponded exactly with those obtained from the skin of the outer ear.

Prolonged administration of sulphapyridine in these cases brought about no diminution of discharge, except in the case of a child aged 3 in whom the discharge lessened but did not entirely disappear. This intractable chronic condition was evidently due to the replacing of the original invading organisms (themselves susceptible to the early use of drugs) by the ordinary flora of the skin of the external ear.

From the foregoing it is apparent that sulphapyridine is of value in the treatment of acute middle-ear infection, even when it occurs in malnourished children brought up under the poorest economic conditions. It is equally clear that, in the dosage employed, the most potent and polyvalent chemotherapeutic remedy yet evolved fails to benefit chronic ear conditions. These findings suggest the desirability of the early use of a suitable sulphonamide drug in all acute middle-ear infections, as thereby the number of chronic cases will be reduced to a minimum. Seven months after treatment I examined the acute cases and there was no deafness.

My thanks are due to the medical officer of health for Glasgow for permission to publish these notes.

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Strangulated Inguinal Hernia in an Infant

The following notes may be of interest on account of the rarity of strangulation in so young a child and because the condition suggested that, in addition to the loop of gut being adherent to the distal part of the sac, there was kinking of the loop by adhesions which were obviously not of very recent formation.

CASE REPORT

The patient, aged 14 days, was a full-term male of normal delivery, weighing 8 lb. at birth, and had been breast-fed four-hourly. For the first three days after birth it was somewhat cyanosed, had a cough, and vomited occasionally. On the day before admission it had vomited two or three times, had refused the breast, and was said to have become cyanosed during the day.

On examination it was not markedly dehydrated. The scrotum and prepuce were swollen, red, and oedematous. Both testicles were descended, and the right side of the scrotum was filled with a fluctuating swelling the size of a bantam's egg running up into the inguinal canal. The swelling was translucent to light and partly reducible with gentle continuous pressure. During the night and early the next day the child vomited some bile-stained fluid several times and passed a little clear red fluid per rectum.

An anaesthetic was given, and at operation a strangulated loop of small bowel was found in a thick sac containing much sanguineous fluid, strangulation having occurred at the level of the internal ring, and a few muscle fibres in this region had to be divided to release it. The loop of bowel was adherent to the distal part of the sac, and when delivered was found to be kinked by considerable adhesions between the afferent and efferent limbs of the loop at its distal end. These were divided and the bowel, which was very black but still viable, was returned to the abdomen. As the child's condition after ten minutes of anaesthesia was poor the sac was divided and ligated in its upper part, but no attempt was made to remove the scrotal portion. A small drain was inserted in the scrotum. The next day a little bile-stained fluid was passed per rectum, and from then onwards the stools were normal. The baby was fed on a dried milk mixture and made an uninterrupted recovery, gaining 3 oz. in the first week after operation.

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