mostly live in small tenement holdings often badly overcrowded. In spite of these conditions multiple cases in the same house were not recorded. In addition to the more or less permanent element there is throughout the year a floating population of immigrant labourers, who pass through the city in search of employment in Burma. Most of these men come from India where epidemic cerebro-spinal meningitis was raging in 1934-35. In spite of this fact no explosive outbreak occurred in the city during those years, as would appear from the statement given below :—

Cases of meningitis in Rangoon

Year	Attacks	Deaths
1934	4	4
1935	8	6
1936	7	5
1937	27	20
1938	57	39
1939	36	16

Though incidence and death increased slowly from 1934 onwards no serious menace occurred like those experienced in Calcutta, Delhi and Ahmedabad between 1934-35. The highest number of seizures recorded in Rangoon city was in 1938 when 57 attacks with 39 deaths occurred, while the corresponding figures in three important cities in India in 1934-35 were as follows (Russell, 1936) :—

	1934		1935	
	Cases	Deaths	Cases	Deaths
Calcutta ..	..	..	814	539
Delhi ..	..	..	508	198
Ahmedabad ..	738	344	..	..

The only instance of a suspected epidemic of fulminating character was reported from some remote villages in Haka subdivision, Chin Hills District, towards the first quarter, in the Report on the State of Public Health in Burma, for 1937. In four village tracts affected 103 deaths were recorded in course of three and a half months. These villages are inhabited by people of primitive type who reported the deaths many days after they had actually occurred. The public health authorities experienced great difficulty in getting accurate information and the inference of cerebro-spinal meningitis being the cause was drawn mainly from hearsay symptoms. No pathological material could be procured for examination and no record is available as to any of the cases being examined by a qualified doctor.

Summary

1. Epidemics of cerebro-spinal meningitis in Burma were forecast in 1935 but did not materialize till 1937.

2. The epidemic went on smouldering for three successive years in Rangoon and is probably continuing even now. In no instance were multiple cases reported from the same house, though considerable overcrowding and unsatisfactory sanitary conditions were associated with many holdings which returned meningitis cases.

3. Group I meningococci were responsible for this disease in almost all cases which came under observation, and this relationship has been maintained for three successive years 1937–39.

4. A single strain of group II meningococcus was recovered from a solitary case at Bhamo in Upper Burma.

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A Mirror of Hospital Practice

A CASE OF PERITONITIS FOLLOWING ABORTION TREATED WITH SULPHONAMIDE

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I AM prompted to put this case on record because of the patient's surprising recovery from a rapidly spreading peritonitis following on abortion.

The patient was a multipara aged about 35. She had had 11 previous pregnancies all of them going on to full term, but seven children had died under the age of two years. (Kahn test later showed + + +.) The recent history was that she was five months' pregnant. After three or four days of considerable bleeding, the fœtus and placenta were expelled entire. The next day there was stated to be fever and lower abdominal pain, which increased for two days, when she was brought to the hospital. She had been attended by a village *dai* with some hospital training. Interference was not admitted.

On admission. 17th March, 1940 (9-30 *a.m.*).—Temperature 103.4°F. Pulse—104 per minute. Respiration—28 per minute. General condition, poor, dehydrated. The patient complained of severe hypogastric pain. Very slight and not offensive blood-stained vaginal discharge was present. Vaginal examination was not done.

Abdomen: Rigidity and tenderness below umbilicus more marked on right side. The fundus uteri could

not be felt on account of resistance. Upper abdomen not rigid or tender and moving slightly on respiration. The patient had not vomited and was taking fluids by mouth.

Blood count: Hæmoglobin—38 per cent; red blood corpuscles—2,600,000 per c.mm.; colour index—0.7; white blood corpuscles—12,000 per c.mm.; polymorphonuclears—80 per cent.

Treatment

17*th March*, 1940.—Fowler's position. Intravenous soluseptasine 5.0 c.cm. 5 per cent; 1,000 c.cm. saline subcutaneously. Glucose water allowed by mouth 2 to 3 ounces hourly.

Sulphonamide P (B. D. H.), 4 tablets, 11-30 a.m.
(Sulphanilamide)
2 „ 4-30 p.m.
2 „ 6-30 p.m.
2 „ 10-30 p.m.
2 „ 2-30 p.m.
2 „ 6-30 p.m.

Total 7 gm. plus 1/2 gm. intravenously.

Enema given with good result in the afternoon.

Morphia gr. 1/6 at night. Local heat to abdomen.

18*th March*.—The tenderness had increased in extent to well above the umbilicus and was obviously a spreading peritonitis. There was slight general distension.

All fluid by mouth was stopped and a duodenal tube passed by the nose before there was any vomiting, though the patient complained of nausea, and distension, and inability to pass flatus. Fluid aspirated half hourly was at first bilious and later in the day definitely fæculent in smell and appearance. The patient tolerated the tube well as she stated it relieved the sense of fullness. Subcutaneous saline 1,000 to 1,500 c.cm. was given twice in the day into the submammary and thigh regions. Soluseptasine 5.0 c.cm. was given four hourly by day intramuscularly and four tablets by mouth which were probably not absorbed.

In the afternoon there was almost a classical Hippocratic facies with diffuse tenderness and moderate distension of the whole abdomen and the case was regarded as hopeless. In the evening however the condition appeared to be stationary and it was noted that the fluid aspirated was less in amount and less brown in colour. The temperature remained at 102°F. and the pulse 120 per minute. Morphia was repeated at night.

Blood count: White blood corpuscles 10,600 per c.mm., and the polymorphonuclears were 84 per cent.

19*th March*.—General condition stationary.

Aspirated fluid less in quantity and gradually clearer and non-fæculent. Three further injections of soluseptasine were given intramuscularly and pituitrin ½ c.cm. hourly followed by a flatus tube. On one occasion flatus was passed.

Less distension and tenderness. Tenderness localized again mainly to the right iliac region.

Temperature between 100° to 102°F. Pulse 120 to 130 per minute.

20*th March*.—Definite improvement. Less distension and tenderness. Duodenal tube removed. Subcutaneous saline continued. A teaspoonful of fluid allowed by mouth, at first two hourly and then hourly. Watery motion passed after pituitrin 1.0 c.cm. Temperature—99° to 101°F. Pulse 100 to 130 per minute. Blood count—white blood corpuscles 6,000 per c.mm. Polymorphonuclears 72 per cent. No sulphanilamide given.

21*st March*.—Improvement continued. Abdominal signs less. Patient asked for pituitrin again. Injection repeated with passage of flatus and watery motion. Temperature—98° to 99°F. Blood count—white blood corpuscles 4,400 per c.mm. Polymorphonuclears 74 per cent.

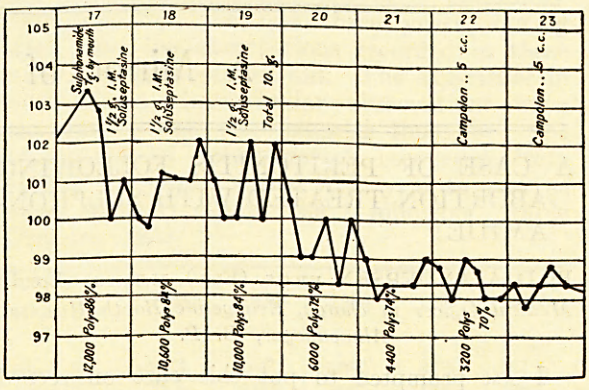
22*nd March*.—Afebrile. Taking moderate amount of fluids by mouth. Blood count: Red blood corpuscles—1,900,000. Hæmoglobin—30 per cent. White blood corpuscles—3,200 per c.mm. Polymorphonuclears—70 per cent. Concern was felt about the fall of leucocyte count and, acting on a verbal report of its value in such cases, Campolon was given daily in 5.0 c.cm. doses for three days and on alternate days in the next week.

23*rd March*.—Steady improvement. Light diet begun gradually.

27*th March*.—General condition fair. Fundus could now be felt about half-way between umbilicus and pubis. White blood corpuscles 5,000 per c.mm. Polymorphonuclears 63 per cent. Kahn test + + +. Further progress uneventful.

Comment

The conclusions that can be drawn from a single case of this kind are limited. A. J. Cokkinis writing on 'Sulphonamides in Surgical Infections' in the *British Medical Journal of* 29th October, 1938, states: 'My experience with sulphonamide compounds in acute peritonitis suggests that when used correctly chemotherapy may prove of life-saving value, but also that when used indiscriminately it may prove the reverse. The deciding factor again appears to be the immunity response of the patient. Although the cases treated have been comparatively few, they show quite decisively that sulphonamide compounds should not be used as a prophylactic measure against peritonitis in such lesions as perforated ulcer and intestinal strangulation or after operations such as colectomy. They also suggest that it is unsafe to employ chemotherapy in the very early stage of actual peritonitis, that is, while the effusion is still serous and the immunity presumably unawakened. On the other hand, when the more powerful sulphonamide compounds have been administered to cases of fully developed coliform or streptococcal peritonitis with either a profuse purulent effusion or extensive peritoneal œdema the result has usually been a dramatic and lasting improvement. Once started the chemotherapy should be continued for at least ten days but it should never be begun until any removable and unlocalized source of infection has been dealt with by operation'.



The above quotation has been given in full as it acts as a corrective to the impression that might be conveyed by a single successful case. The case reported does, however, confirm that sulphonamide can in certain cases of peritonitis have dramatic effects. The case was the more

surprising, as there was what amounted to fæcal vomiting though the fluid was actually drawn off by a duodenal tube as a therapeutic measure.

Other features of interest are—

1. That the chemotherapy was begun late, that is 48 hours after the onset of definite symptoms of infection which is interesting in view of Cokkinis' recommendation that it should be delayed till immunity has been awakened.

2. That the chemotherapy was only continued for three days, a large dose being given by mouth during the first day of treatment, and moderate doses parenterally the next two. The administration was stopped because of the marked clinical improvement associated with a rapid fall in the leucocyte count. In view of the continued clinical improvement and also the progressive further fall of the leucocyte counts, this proved to be justified. A fairly rapid recovery towards the normal occurred when the drug had time to be excreted, but it seems that if the administration had been continued for a week or ten days as is more usual, a grave and probably fatal condition due to the drug would have resulted. This therefore stresses the advisability of very frequent blood, and particularly white cell counts, whenever large or moderate doses of sulphonamide are employed.

3. No information was obtained as to the nature of the infecting organism, but in view of the favourable response to treatment it can be presumed to be one or several of the group known definitely to be inhibited by sulphanilamide, *viz,* hæmolytic streptococci, certain of the non-hæmolytic streptococci, as *S. fæcalis, B. coli,* certain *pneumococci, gonococci,* and possibly certain anærobes as *B. welchii.*

A CASE OF ANEURYSM OF ASCENDING AORTA

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V. A., male, aged 30, was admitted to the J. J. Hospital with a history of syphilis for which he had had treatment with Bismuthiodol and potassium iodide. He complained of pain in the chest for four months and slight breathlessness on exertion. The pain was in the right side of the chest in front. Occasionally, he said, he also felt it in the inter-scapular region at the back on the right side.

On examination it was found that the veins on the right side of the neck were congested. There was a diffuse swelling (3 inches by 3 inches) with pulsation of the chest wall on the right of the sternum in the 3rd and 4th intercostal spaces extending from the right sternal border almost to the right nipple. This area was dull on percussion. Over it there was an expansile impulse, systolic thrill and bruit. The apex beat was in the 6th intercostal space in the left nipple line. There was a loud ringing aortic second sound. The pulse was collapsing, rapid and regular at both the wrists. The blood pressure was unequal on the two sides, being 138/68 mm. Hg. in the right arm and 129/76 mm. Hg. in the left arm. The pupils were unequal, the left being larger than the right. The Wassermann and Kahn tests were positive.

Electrocardiographic examination showed left axis deviation. On *x*-ray examination an aneurysm of the ascending aorta was seen. Photographs of the antero-posterior and lateral views are given here. They show saccular aneurysmal dilatation of the convex border of the ascending portion of the aortic arch, extending to the right side and in front.

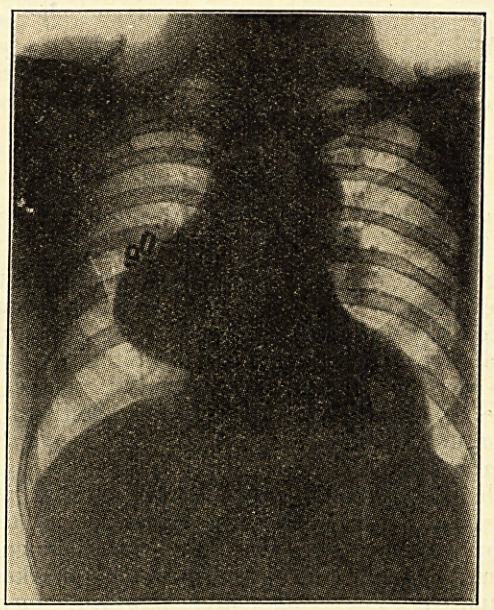

Fig. 1.—Showing aneurysm of ascending aorta (antero-posterior view).

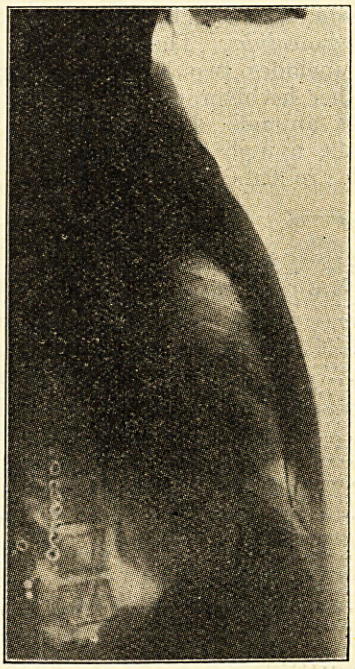

Fig. 2.—Showing aneurysm of ascending aorta (lateral view).