school-children varied widely. It was lowest at Ghasri (4.6% of all school-children), while it was the highest at Sannat (42%). Complete figures for the rest of the population are not yet available.

Early cases and those in which treatment was applied more scrupulously recovered more quickly, but some were very resistant. Any discharge present at the start of treatment usually disappeared within a few days, and for this reason no particular measures were taken to segregate school-children. District nurses carried out frequent visits to households of infected persons to give fresh medicine, to show how drops were best instilled, to advise on the important hygienic aspects of the disease, and to encourage perseverance in treatment.

Cases were declared cured and treatment was stopped when all follicles disappeared and when the conjunctiva became smooth and shining. The duration of the disease varied according to the stage at which treatment was started and to the regularity and assiduity of treatment. An idea of the length of treatment may be had from the following figures. After 13 months of the above course, only 117 cases of trachoma and seven cases of conjunctivitis were still under treatment in the primary schools of Gozo. After a further period of nine months, only six cases of trachoma were left in those schools. Of the 926 contacts, only 354 were left after six months' treatment.

Comment

It is probable that trachoma is spread by contact, through fomites, or through vectors. Lice and flies have long been suspected of being at least partly responsible for the spread of the infection, but no definite proof of this has been forthcoming in this investigation. Lice would abound in less hygienic dwellings, and this fact might at first thought be linked with the generally accepted view that trachoma is a disease of the lower classes. My experience, however, has not borne this out. I found trachoma among all classes with practically equal frequency, but patients of the upper classes tended to have fewer complications, and trachoma was often discovered on routine examination for other conditions. The better hygiene of the upper classes probably prevents or hinders the occurrence of secondary infections, which are responsible for some of the symptoms and some of the complications of trachoma. The case for the fly as trachoma carrier does not seem to be placed on better foundations: this insect is practically ubiquitous in Gozo, and it was found in great numbers in some of the areas where trachoma was less prevalent.

I have already mentioned that the incidence varied greatly from one part of the island to the other. I found this rather baffling, as it is difficult to believe that the state of hygiene would materially differ from place to place. It will be seen from the tables that Sannat and Xewkja, in the south and central parts of the island, had the greatest incidence, while S. Laurenz, Gharb, and Ghasri, in the western sector of the island, showed the lowest number of cases. Again, at the eastern tip, Qala showed a much greater incidence among school-children than did the neighbouring village of Nadur.

The average of affected children was of some interest; the age of those attending the primary schools was between 6 and 14; that of trachomatous children between 8 and 11. This finding agrees with that of an investigation carried out in Malta several years ago, and

its constancy may mean that children of the ages stated have greater contact between themselves, and that spread occurs chiefly in the schools. If this were confirmed, control of school-children would eliminate this disease in a short time.

The part played by immunity in trachoma is obscure but is well worth further study. In this investigation it was quite common to find only a few persons affected in a household, while three cases had trachoma in one eye only. Again, the fact that some cases responded to treatment better than others raises the question of different strains of the trachoma virus.

The sulphonamides have no doubt proved to be a milestone in our age-long fight to conquer trachoma, but they are not the ideal answer to the ophthalmologists' dream. Our goal should be to find a method capable of controlling the disease in a matter of days. Despite several claims, we are probably still far from this, although newer drugs, such as aureomycin, are proving very satisfactory.

Summary

The working of an intensive anti-trachoma drive on the island of Gozo is described. All primary-school children, their contacts, and a large section of the general population have so far been examined, and those found affected given free treatment. This consisted of sulphonamides by mouth for one or more periods of 10 days each, the instillation of sodium sulphacetamide drops (30%), and the application of sodium sulphacetamide ointment (6%). The campaign has yielded very good results, especially in respect of school-children. In two years only 6 out of 721 cases remained under treatment. Sulphonamides have proved very valuable in our fight against trachoma, but we are still in search of a method capable of controlling the disease in a matter of days.

My grateful thanks are due to Professor A. C. Briffa, Chief Government Medical Officer, Malta, for permission to publish this paper, and for constant encouragement and advice in the conduct of this campaign.

Medical Memoranda

Acute Tuberculous Peritonitis Treated with Streptomycin

Up till recently streptomycin has rarely been used in cases of tuberculous peritonitis in this country, mainly owing to difficulties in obtaining the drug. So far there has been no British literature on the subject; but cases have been reported in the U.S.A., from the Medical Department, Veterans Administration Hospital. A number of cases were treated for from 25 to 164 days, and the results were most successful; the temperature came down to normal, and the patients gained weight and felt very well.

Reports on streptomycin treatment have been received from Egypt, the results also being very satisfactory. These papers say that improvement was pronounced in the first two weeks. Similar good results have been obtained in the Argentine, France, and Russia.

We should like to add two cases of acute tuberculous peritonitis treated with streptomycin and *para*-amino-salicylic acid ("P.A.S.").

Case 1

A single female clerk aged 23 years was admitted on November 30, 1949, with a seven-days history of pain in her abdomen, unrelieved by any form of therapy and associated with vomiting. At the age of 18 she had dry pleurisy; there was no family history of tuberculosis.

On examination the patient was seen to be well nourished; palpable glands were present in the neck, she had a cough, and her temperature was 101.6° F. (38.7° C.). The lungs showed some degree of dullness on the right side, with diminished air entry and vocal resonance. The abdomen was slightly distended, and there was diffuse tenderness with signs of free fluid in the abdominal cavity. A radiograph of the chest disclosed an effusion in the right pleural cavity. Her sputum did not contain tubercle bacilli. The erythrocyte sedimentation rate after one hour was 65 mm. A blood count showed: Hb, 80%; red cells, 4,900,000 per c.mm.; white cells, 7,000 per c.mm. A film revealed occasional hypochromic cells. Tuberculous peritonitis was diagnosed, and laparotomy performed.

On exploring the abdomen the peritoneum was nearly $\frac{1}{4}$ in. (0.6 cm.) thick, and this confirmed the diagnosis of tuberculous peritonitis. The abdominal cavity contained a large quantity of straw-coloured fluid, several pints being aspirated from the pelvis. The intestines were matted together into one homogeneous mass and many tubercles were seen on the peritoneum and the bowel wall. The pelvic organs showed typical tuberculous infection, both tubes being densely adherent to the brim of the pelvis.

It was suggested that the patient might be treated with streptomycin. The fluid was sent to the laboratory for culture, which later showed a growth of tubercle bacilli.

Treatment consisted of 1 g. of streptomycin daily, given in four equal doses. After 12 days, P.A.S., 12 g. daily, was added to prevent streptomycin resistance. A few days later the temperature began to subside, and on examination the lung fields were clear. The patient was transferred to Leasowe Open-air Hospital, where treatment was continued; a complete course of 88 g. of streptomycin was given.

After six months the E.S.R. was only 3 mm. in one hour; her weight had increased by 8 lb. (3.6 kg.), and her general condition improved considerably. She continued to attend the out-patient department at regular intervals for further supervision.

Case 2

A housewife aged 46 was admitted on January 11, 1950, with a history of pain in her abdomen radiating towards the back; the pain was not related to food. There was no nausea or vomiting, and her temperature was 104° F. (40° C.).

On examination the patient was very flushed; auscultation of the lungs revealed scattered crepitations and rhonchi; there was dullness at the right base with diminished air entry. A radiograph of the chest revealed a right-sided pleural effusion. A blood count at this time showed: Hb, 70%; red cells, 4,800,000; white cells, 7,600 (polymorphs 80%, lymphocytes 17%, hyalines 3%). A film showed marked anisocytosis with many hypochromic cells. The E.S.R. was 76 mm. in one hour. The abdomen showed some degree of distension combined with diffuse tenderness. A mass could be felt in the lower part of the abdomen on the right side, and evidence of free fluid was present. It was decided to perform a laparotomy to confirm the diagnosis, which clinically was suggestive of tuberculous.

The abdomen was opened through a subumbilical mid-line incision and a large quantity of fluid escaped. The appearances were typical of acute tuberculous peritonitis, the peritoneum, bowel, and pelvic organs all being studded with minute tubercles. About a gallon (4.5 litres) of fluid was present in the pelvis; the omentum was rolled up and thickened, particularly in the neighbourhood of the right iliac fossa, and this thickening was the cause of the mass

described above. The abdomen was closed in the usual way. The fluid, unlike that in Case 1, was sterile on culture.

Streptomycin treatment, 1 g. daily given in four equal doses, combined with 12 g. of P.A.S., was begun immediately. The patient's general condition improved rapidly, her temperature subsided, and the physical signs in the lungs and pleura became normal after 14 days. At this stage she was transferred to Leasowe Open-air Hospital. The E.S.R. dropped to 15 mm. in one hour, the patient put on weight, and her general condition improved considerably. She was kept under further observation and attended the out-patient department. The total dosage of streptomycin given in this case was about 80 g.

It is interesting to note the similarity between these cases. Both patients had considerable pyrexia on admission, and an effusion was present in the pleural cavity. It is, of course, impossible to reach a conclusion at the present stage, and further prolonged observation is necessary before the results of this treatment can be assessed.

We are indebted to Dr. J. K. Cameron, medical superintendent, Leasowe Open-air Hospital, for his assistance in treating these cases, and to Dr. L. Ashcroft, pathologist, St. Catherine's Hospital, for the bacteriological findings.

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Conception in Spite of Extreme Oligozoospermia

Three case histories are presented to illustrate the point that a finding of extreme oligozoospermia does not necessarily mean a hopeless prognosis. After treatment natural conception occurred in each instance. Although with the degree of oligozoospermia present this is very rare, it does suggest that, at least with young couples, a grave but guarded prognosis is more appropriate, and that treatment should be attempted.

For purposes of comparison we may mention that at this clinic the minimum standard of fecundity of semen (not ordinarily necessitating treatment) requires a volume of not less than 2 ml., a density of not less than 30,000,000 spermatozoa per ml., 50% motility after two hours at 37° C., with not more than 25% abnormal headforms, a low content of testicular cells and polymorphs, and absence of agglutination of sperms.

Case 1

This couple were referred on account of infertility. The husband was 26 and an only child; wife 25; married six years; intercourse never satisfactory. The husband worked long hours as a chef in hot and airless surroundings. He had no history of illness, except dental caries. He looked pallid and ill, and had extensive acne of the face, neck, and back. The right testicle was undescended; the left testicle had descended and was of normal size.