

## Acute Miliary Tuberculosis of the Lungs in Africans

BY

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Before the introduction of antibiotics in the treatment of tuberculosis the prognosis of acute miliary pulmonary tuberculosis was very grave. In 1953, Pagel and his colleagues wrote that, if uncomplicated, 50 per cent. survived by the aid of chemotherapy. The first results of chemotherapy of pulmonary tuberculosis in Africans were so encouraging that it was to be hoped that patients with miliary tuberculosis would respond in a similar way. There was, however, little information available in 1953 when a treatment scheme was initiated in Northern Rhodesia.

This proved to be satisfactory and has been adhered to ever since. It was thought that the most potent combination of anti-tuberculosis drugs should be used. This was intended to accomplish the first aim, i.e., to prevent complications. In 1955, Williams estimated that the survival rate of patients treated with isonicotinic acid hydrazide combined with streptomycin and paraminosalicylic acid either individually or together was 95 per cent. He records that "no patient treated with streptomycin with P.A.S. and I.N.A.H. later developed meningeal tubercle."

In the past five years 18 patients with acute miliary pulmonary tuberculosis, uncomplicated, were treated. The treatment given was streptomycin 1 gm., I.N.A.H. 300 mg. and P.A.S. 20 gm. daily for three months. At the end of three months' treatment the radiological appearances of acute miliary pulmonary tuberculosis had invariably cleared up completely and the patients were clinically fit. P.A.S. was then discontinued. From this point onward the further treatment varied. Patients were kept in hospital for at least a further three months and given streptomycin 1 gm. biweekly and I.N.A.H. 300 mg. daily. This treatment was continued for some months after the discharge of the patient and varied from five to twelve months. All discharged patients attended as out-patients for monthly check-ups when E.S.R., weight and sputa were examined and X-ray films were taken.

In view of the very satisfactory results of treatment and follow-up, it was thought that it would be possible to discharge patients earlier. In the past two years patients were discharged after four and a half to five months' hospital treatment, and their out-patient treatment period was reduced to three to six months. The results were equally good.

The observation after discharge ranges from 11 to 54 months. All patients are fit and there has been no sign of deterioration or of late complications.

It is remarkable that the presence of complications delays the clearing of the radiological signs. Apart from the 18 patients without complications, there were, on admission, two patients with complications. One patient showed acute miliary pulmonary tuberculosis and tuberculous laryngitis. In this case the radiological appearances cleared up completely after four months. The treatment was slightly different. Streptomycin, I.N.A.H. and P.A.S. were given for three months, then P.A.S. was discontinued. In view of the laryngitis which had cleared up by this time, it was considered necessary to continue streptomycin and I.N.A.H. daily for a further two months before changing to biweekly treatment.

The other patient, an African male, aged 27 years, was admitted with miliary pulmonary tuberculosis and tuberculous meningitis. He was admitted to hospital on 30th January, 1957, complaining of cough, giddiness and headache for the last three days. The previous history was irrelevant. Clinical examination revealed some neck rigidity, mild bilateral conjunctivitis—otherwise nil abnormal was found. Chest X-ray film showed the classical picture of acute miliary pulmonary tuberculosis. Twenty-four hours after admission patient became semi-conscious and was transferred to the chest unit. Lumbar puncture: clear fluid; cells and protein increased; sugar decreased; cobweb formation.

Treatment was started with 20 gm. P.A.S., 2 gm. streptomycin and 600 mg. I.N.A.H., the higher doses of streptomycin and I.N.A.H. being the routine treatment of meningitis. The patient remained semi-conscious, so on 13th February, 1957, 25 I.U. ACTH were added. Patient improved rapidly and ACTH was discontinued on 5th March. Two days later the patient developed signs of mental disorder which

were attributed to I.N.A.H., which was stopped. After three months' treatment, streptomycin was reduced to 1 gm. daily, P.A.S. discontinued and I.N.A.H. 300 mg. started again. This daily treatment was continued for three months and was then changed to biweekly treatment. All signs of meningitis disappeared and the patient was fit. Chest X-ray showed complete clearing of the acute miliary process at the end of five months' treatment. The patient was transferred to the chest settlement for convalescence, rehabilitation and out-patient treatment. He was fit all the time. On 4th February, 1958, he became suddenly unconscious. He was readmitted to hospital. On lumbar puncture the protein was increased, but otherwise the fluid was normal. He died within 24 hours. An autopsy was not performed.

#### SUMMARY

In 1953 a routine treatment scheme for acute miliary pulmonary tuberculosis was instituted, consisting of three months' daily treatment with 1 gm. streptomycin, 300 mg. I.N.A.H., 20 gm. P.A.S. At the end of three months P.A.S. was discontinued; streptomycin and I.N.A.H. were given in varying doses to in-patients and, after discharge, to out-patients. Twenty patients with acute miliary pulmonary tuberculosis were treated since 1953, two of them presenting complications on admission. The radiological changes in uncomplicated cases cleared up completely after three months' treatment. The presence of complications delays the clearing of the pulmonary lesions.

One case of acute miliary pulmonary tuberculosis with meningitis is reported. The patient made a complete recovery and was fit at the end of five months' treatment. He died seven months later from a recurrence of the meningitis.

Nineteen patients have been followed up regularly for periods from 11 to 54 months. All are well and fit.

#### REFERENCES

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