

MEDICAL GRAND ROUNDS

May 12, 1960

John S. Chapman, M.D.

male, age 7½ years. Admitted -59; died -59.

History: Some ten months prior to admission the patient first began to have earache, associated with loss of weight and appetite. There was slight improvement, but about four months later there was recurrence of earache, and consultation was obtained. The patient was thought to have chronic otitis media, purulent, and was treated with antibiotics. Anorexia and weight loss continued and the child began to have daily fever and headache. Four weeks before admission, the patient was strong enough only to walk about the house. Diarrhea developed and lasted two weeks, during which the boy became severely dehydrated and eventually lost consciousness. He was then admitted to a hospital and received intravenous fluids. Three weeks before admission to this hospital the patient had recurrent drainage from the ears bilaterally.

Past History: The child was born 1952. His birth and development were entirely normal and he had not had any previous illness.

Family History: Mother and father are in good health as are the four siblings. There is no history of tuberculosis in the family and no known contact with tuberculosis. The child had lived in far west Texas most of his life. (These facts were obtained from the mother and father who are intelligent although they speak imperfect English.)

Physical Examination: Temperature 99, pulse 120, respiration 40, weight 23½ pounds. General appearance was that of a severely ill and semicomatose boy of about the stated age. Both ear canals contained whitish exudate. The neck was supple and the fontanelles were closed. Heart and lungs were normal to physical examination. The liver was about three to four finger breadths below the costal margin in the right mid-clavicular line, but the spleen was not palpable. No abnormal neurological reflexes were obtained.

Laboratory: Hemoglobin 7.3 grams. WBC 8,000; P.69; L.21; M.1; Bands, 10. Urinalysis revealed large clumps of white blood cells, with many cells present, 2 plus albumin and a considerable number of casts. The bilirubin was 2.2 mg%, mostly direct. Lumbar puncture revealed spinal fluid under normal pressure with normal sugar and protein and no cells. Blood urea nitrogen, potassium, sodium and calcium all were within normal limits.

X-ray: The initial film revealed a coarse military infiltration scattered throughout both lungs. There was no evidence of mediastinal adenopathy or pleural effusion. No cavitation was observed.

Course in Hospital: The child was immediately started on intravenous fluids, and a tube was placed through the nose into the stomach through which feedings were begun. Initial drug therapy consisted of iron, PAS, isoniazid, and streptomycin. On the second and third days of his admission he received transfusions of 125 cc of whole blood. Temperature ranged during the first 10 days up to as high as 103° with swinging spikes. Thereafter, the temperature settled to around a maximum of 99.8° and continued so for approximately a week, when once again the wide swings recurred. At this time it was thought that drug reaction might be involved and the drugs were temporarily discontinued. Withdrawal of drugs had no effect and they were reinstituted almost immediately with the addition of the more usual antibiotics. A repeat lumbar puncture

revealed no evidence of meningitis.

X-ray of the skull at this time revealed a bilateral sclerosing mastoiditis, but otherwise was not significant. Culture from the external auditory canal revealed aerobacter and pseudomonas with sensitivity only to viomycin and polymyxin B. Urine continued to show large amounts of pus, moderate quantities of albumin and considerable numbers of casts. On [redacted]-59 a bone marrow was negative. On [redacted] acid fast bacilli were noted in a concentrated smear of the urine, and this specimen was set up for culture. On [redacted] blood urea nitrogen was 38, sodium 130, potassium 3.5, chlorides 97, CO_2 21.9, total protein 8.9, with albumin 3.2 and globulin 5.67.

During the remainder of the child's hospital course he continued to present markedly abnormal urinary findings and to have an enlarged liver; the spleen finally became palpable at about 1 finger breadth below the left costal margin. Consultations from numerous services were held, but adduced no additional information. On [redacted], his fever was ranging around 104° daily and there was epigastric and right upper quadrant tenderness. Surgical consultation was obtained and it was thought that there was no evidence of peritonitis at this time. The patient was placed on intravenous fluids and on gastric suction. On [redacted], the lips and nails were noted to be cyanotic, and the liver was markedly enlarged and tender. He rather suddenly developed gasping respiration and died.

Other investigations not noted above included repeated white blood counts with a range of 8,000 to 18,000 with characteristically 85 polymorphonuclears, 10 lymphocytes, and 2 to 4 monocytes.

A Mantoux test 1-100 on [redacted], was positive with 22 mm of induration and a photochromogen skin test at the same time produced an induration of 18 mm. All fungus cultures revealed marked overgrowth of candida albicans, which were thought to be contaminants. The urine culture set up for acid fast bacilli revealed heavy growth of organisms that were regarded as being photochromogenic mycobacteria. Several gastric cultures and two other urines were negative.

BIBLIOGRAPHY

1. Butler, W. B., and Pollak, A.: Human infection with acid-fast organisms. *Am. J. Clin. Path.*, 22:363, 1943.
2. Wood, L. A., Keith, H. M., and Needham, G. M.: Non-tuberculous cervical adenitis in children. *Proc. Staff Meet., Mayo Clin.*, 31:259, 1956.
3. Frisick, F. H., and Masson, A. M.: Cervical lymphadenitis in children caused by chromogenic *Mycobacteria*. *Canad. M.A.J.*, 75:793, 1956.
4. Chapman, J. S., and Guy, L. Ruth: *Sarcofula*, caused by atypical *Mycobacteria*. *Pediatrics*, 23:323, 1959.
5. The Anonymous *Mycobacteria* in Human Disease. Charles C. Thomas-Publisher, March, 1960.
6. Chapman, J. S.: Varieties of Tuberculosis in Children. *Minnesota Medicine*, 42:1773-1778, Dec., 1959.
7. Debre', R., Noufflard, H., Brissaud, H. E., and Gerbeaux, J.: Infections of children by strains of tubercle bacilli initially resistant. *Am. Rev. Resp. Dis.* 80:326, Sept., 1959.
8. Gastanbide-Olier, M., and Smith, D. W.: A rapid means of differentiating atypical acid-fast bacilli and avian tubercle bacilli from other *mycobacteria*. *Am. Rev. Tuberc. and Pulm. Dis.* 77:662, April, 1958.
9. Konno, K., et al.: Differentiation of human tubercle bacilli from atypical acid-fast bacilli. *Am. Rev. Tuberc. and Pulm. Dis.* 77:669, April, 1958.
10. Schmidt, L. H., Hoffmann, E., and Steenken, W., Jr.: The pathogenicity of atypical *mycobacteria* for the rhesus monkey. *Am. Rev. Tuberc. and Pulm. Dis.* 75:189, February, 1957.
11. Wolinsky, E., et al.: Atypical chromogenic *mycobacteria* associated with pulmonary disease. *Am. Rev. Tuberc. and Pulm. Dis.* 75:180, February, 1957.
12. Crow, E. E., et al.: A limited clinical, pathologic and epidemiologic study of patients with pulmonary lesions associated with atypical acid-fast bacilli in the sputum. *Am. Rev. Tuberc. and Pulm. Dis.* 75:199, February, 1957.