ACTINOMYCOTIC BRAIN ABSCESS

COMPLETE EXCISION WITH RECOVERY

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In 1878 Israel reported the first case of actinomycosis in man, which had been observed by von Longenbeck 33 years earlier. Ponfick first described actinomycosis of the brain in 1880 when he reported 2 cases. The involvement of the central nervous system by this disease is in itself rare, and there has been considerable discussion as to whether it can be primary. Zeitlin and Lichtenstein stated that actinomyotic lesions of the central nervous system were secondary to a focus elsewhere in the body, and that if no obvious gross primary lesion could be found, the lungs and other organs should be carefully examined after fixation. However, Cope in a monograph on the disease lists 10 cases of isolated involvement of the brain, 6 of which were located either in the third ventricle or near the septum pellucidum and the anterior commissure. Sanford and Voelker, reporting 670 cases of actinomycosis in 1925, and Cope, reviewing 1,330 cases in 1938, grouped the sites of infection into the cervico-facial, thoracic, abdominal, and miscellaneous. The incidence of cerebral distribution was so small that a separate designation was not made, but these cases were merely included in the miscellaneous group of 8 per cent and 5 per cent respectively. In an extensive review of actinomycosis of the head and neck in 1936, Gardiner stated that “actinomycosis of the brain is almost a hopeless situation.” The following year Friedman and Levy collected from the literature 108 cases of actinomycotic involvement of the central nervous system; 23 of these were reported as primary. Treatment was symptomatic and the cases were “invariably fatal.”

The advent of chemotherapy has changed the prognosis of the disease. Walker reported a cure of the abdominal type of actinomycosis using sulfa drugs. Ogilvie and Dobson, Holman, and Cutting found that these drugs inhibited secondary invaders, thereby permitting the natural body resistance to overcome the actinomycosis. Cures with penicillin were reported in 1944 by Wollgast, Herrell, Christie and Garrod, and by numerous others since that time. Penicillin was not necessarily the only drug used, but it was regarded by all authors as the most important factor in effecting the cure. Kolouch and Peltier reviewed 1,236 cases with regard to the success of therapy in cervico-facial, thoracic, and abdominal cases and concluded that a regime of energetic supportive therapy, chemotherapy, and radical excision of the infected tissue was best. None of the above authors reported on the treatment of actinomycosis affecting the central nervous system. However, in June 1948 Jacobson and Cloward described the cure of a patient with actinomycotic meningitis treated with sulfonamides, penicillin, and streptomycin.

Könlein in 1910 appears to have been the first surgeon to perform complete excision of a brain abscess. Although not their usual procedure, most neurosurgeons have, in selected cases, completely removed well encapsulated abscesses. Clovis Vincent in 1936 recommended this procedure in practically all cases. In recent years many pyogenic brain abscesses have been treated by radical excision along with

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massive doses of chemotherapy.\textsuperscript{1,7,11,14,17,20} LeBeau\textsuperscript{19} reported 3 cases of thoracogenic brain abscesses which were cured by these methods.

We are presenting an additional case of apparent cure of an actinomycotic brain abscess, probably of thoracogenic type, which was treated by a similar procedure.

**CASE REPORT**

On Oct. 13, 1947, V. P., a 45-year-old white male, was awakened from his sleep by a convulsive movement beginning in the left arm, extending to the left leg, and eventually followed by numbness over the left side of the body. He then lost consciousness, bit his lips, and had sphincter incontinence. Although he was placed on anticonvulsants, he had several similar seizures during the ensuing 10 days before admission to the hospital. Following each episode there was a marked left hemiparesis from which he never completely recovered. The only other significant symptom was vertex headache, which began with the acute phase of his illness.

At the age of 6 the patient had aspirated a piece of leather and a lung abscess developed, which on one occasion caused such severe illness that a fatal outcome was feared. Secondarily there was a chronic productive cough which was noticeably aggravated by an attack of pneumonia in 1940.

On admission to the Neurological Service at University Hospital, the patient’s temperature was 99\textdegree, pulse 68, and respirations 20. Abnormal neurological findings were limited to slight weakness of the left upper and lower extremities, with hyperactive patellar reflex on the right. There was slight dyspnoea with coarse ronchi throughout the chest and definite moist rales at the bases. The only other unusual physical finding was a generalized shotty lymphad