BILATERAL ANGIOMA OF CHOROID PLEXUS

CASE REPORT*

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A review of the literature disclosed 8 reported cases of angioma of the choroid plexus, but no instance of bilateral angioma was recorded.1–7,9 Liber and Lisa5 reviewed the symptomatology of 6 cases. All patients except 1 were under 17 years of age and 3 were infants. All but 1 had evidence of cerebrospinal hemorrhage. Hydrocephalus was evident in the 3 infants, as it was in our case. Our case presents essentially the picture of infant hydrocephalus with intraventricular hemorrhage which has been relieved by bilateral excision of angiomas of the choroid plexus.

CASE REPORT

W.T., a 3-month-old white male infant, was admitted to the neurosurgical service at the Methodist Hospital on Jan. 9, 1952, because of excessive increase in the size of his head. The birth weight was 7½ lbs. and the immediate post partum period was uneventful. At a routine 6-weeks' examination, the parents were told that his head was larger than normal, and 4 weeks later the head showed a progressive enlargement, for which the child was hospitalized.

Examination. The circumference of the head was 44 cm. and the fontanelles were open and bulging. There was a rough, raised hemangiomatous area, 2.5 cm. in diameter, on the extensor surface of the right arm at the elbow (Fig. 1). There was marked anemia, the RBC being 2,240,000, Hb. 6.1 gm., and WBC 10,800 with a normal differential. Bleeding and clotting time were normal.

Bilateral subdural taps were negative, but at a depth of 2½ cm. xanthochromic, blood-tinged fluid was recovered from the ventricle. PSP dye injected was recovered almost immediately in the spinal subarachnoid space. Ventricular fluid contained 141 mg. per cent protein, 1,750 RBC, and 24 lymphocytes. Ventriculography showed symmetrical dilatation of the entire ventricular system.

Course. The child received multiple small blood transfusions and ventricular taps were done daily with the removal of 30 to 50 cc. of CSF. By the 12th day the fluid was free of gross

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blood, but the xanthochromia persisted. After 6 weeks the fluid was clear, colorless, and contained only 3.8 mg. of protein, with no cells. The fontanelle, however, continued to be tense when taps were temporarily discontinued.

Operations. Seven weeks after admission, a right choroid plexectomy revealed a discolored, red-purple plexus about twice the normal size.

Seven days later, a left choroid plexectomy (Fig. 2) disclosed a similar plexus of deep red color, about three times the usual size.

Course. Following surgery the child retained its feedings normally and the fontanelle remained depressed. One week later the hemangioma of the right elbow was removed and 4 days after this the child was discharged from the hospital. Circumference of the head was 43.5 cm. and his weight 16 lbs.

Pathological Report (Methodist Hospital #19605, right, and #19708, left). The plexuses were essentially similar. They were enlarged, dark red, and glistening. The normal papillary projections seemed ironed out. The plexus on the left side was larger, measuring 1.5 X 1.4 X 0.5 cm.; the right was 1.8 X 0.8 X 0.5 cm.

Microscopically the striking feature was the presence of ramifying blood-filled channels lined by endothelial cells and with scant and, for the most part, compressed stroma composed of spindle-shaped cells and collagen. Few recognizable papillary processes were seen, and little evidence of remaining lining epithelium was present. Through the sections a well-marked vasodilatation was seen which appeared distinctly apart from the angiomatous pattern noted above.

Examination of sections from the skin lesion on the arm revealed the characteristic pattern of a hemangioma, predominantly of capillary type.

Subsequent Course. One year after discharge from the hospital, the child weighed 28 lbs. and the head measured 50.5 cm. The fontanelle was closed. He was talking in monosyllables, was able to say some short phrases, and sat alone. He could walk about the room by holding on to furniture. Subsequent development has been normal and the fontanelle remains closed.

COMMENT

Of 25 children who have had plexectomies since 1939, 3 can be classified as excellent results with regard to normal physical and mental development with control of hydrocephalus. Microscopic review of the lesions in these 3 cases showed that 1 should have been classified as angiomatous and another as having at least marked vasodilatation suggesting angiomatous. The third plexus was not remarkable. The production of excess fluid as a cause of hydrocephalus in some cases is at least a rational speculation.