BENIGN TUMORS AT THE FORAMEN MAGNUM:
SURGICAL CONSIDERATIONS*
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At times, the symptoms of tumors affecting the spinal cord may resemble those of degenerative diseases of the central nervous system. This is ascribable especially, it seems to us, to the capricious nature of the unfolding symptoms of benign tumors in the vicinity of the foramen magnum. Unless the physician obtains an accurate history and attributes sufficient significance to the patient’s often bizarre and at times seemingly functional subjective complaints, he is likely to deny the patient his ultimate opportunity for cure.

In a previous communication, four two of us (J.G.L. and H.W.D.) with Thelen pointed out that approximately 30 per cent of the neoplasms at the spinocranial junction are benign, extramedullary, and theoretically completely removable. In spite of the benignity of tumors in this location the prognosis is influenced considerably by the size of the neoplasm and consequently by the duration of the symptoms caused by it. It seemed timely, therefore, to analyze the symptoms and signs of the tumor, and the clinical course in the 30 cases of benign tumors at the foramen magnum encountered at the Mayo Clinic from 1924 to 1956.

Twenty-six of these tumors were meningiomas and 4 were neurofibromas. Nineteen patients were females and 11 were males. The youngest patient was 19 years old, and the oldest 69 years. The age group from 40 to 50 years was the most common period for the occurrence of a benign tumor at the foramen magnum, 14 tumors being present in patients of this age (Fig. 1).

Twenty-seven of the 30 patients harboring benign neoplasms in this location underwent surgery. Of the 3 patients not operated on, 1, a woman in the last trimester of pregnancy, was moribund on admission and died shortly after admission; another elected to defer operation and died a few days later in respiratory failure, and the last patient was considered to have an inoperable lesion after pneumoventriculography. In each of these 3 cases, postmortem examination was performed, and the diagnosis was verified grossly and by microscopic section.

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SYMPTOMATOLOGY

The outstanding initial symptom in our series of cases was posterior cervical pain which frequently extended into the occiput. Fourteen patients gave cervical pain as the initial complaint and 6 gave suboccipital headache. Five additional patients said that one or the other of these symptoms had been present at some time. In a few instances cervical pain had preceded all other symptoms by several years, and in 1 instance, remarkably enough, by 12 years. The cervical pain was described as extending into the occiput and sometimes into the frontotemporal regions. The cervico-occipital pain was often influenced by coughing, straining, sneezing and the position of the patient’s neck. Increasing discomfort was often initiated by movement of the neck, forcing the patient to keep his neck in a protective tilt.

In the course of the disease, paresthesia and definite numbness were frequently present in the cervico-occipital area, and hyperesthesia was not infrequent. In 2 instances the patient told of marked tenderness in the neck and occiput which rendered lying on his back almost impossible.

A feeling of weakness of an extremity, usually the upper extremity, was the next most common initial complaint; 6 patients mentioned this, while another 3 patients had paresthetic sensations in the hand or foot as the earliest symptom. In another patient, the initial symptom was low-back and sciatic pain; this was present for several years and was followed subsequently