SURGICAL TREATMENT OF SYRINGOMYELIA ASSOCIATED WITH CHIARI TYPE I MALFORMATION (Abstract)*. **Thesis. São Paulo, 1994.**

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The results of the treatment of 26 patients with syringomyelia associated with Chiari type I malformation are presented. All the cases were confirmed by magnetic resonance imaging. The age varied between 16 and 58 years with a concentration at the 3rd and 4rd decades of life. The duration of symptoms varied from 6 months to 24 years and sixty five per cent of the patients (17 cases) had symptoms lasting from one to four years, demonstrating that syringomyelia is a disease with late clinical manifestation and slow progression. Movement disturbance, characterized by abnormal deep tendon jerks, pyramidal motor deficit, amyotrophy and spasticity were observed in all patients. Sensibility disturbance was found in only 20 patients. Cranial nerves lesions, cerebellar deficit, headache and kyphoscoliosis were present in a small number of cases. In 7 patients basilar impression was confirmed by X-ray examination and magnetic resonance imaging.

Surgical treatment was indicated only when neurological deficits became worse. All patients underwent a posterior cranial fossa decompression and laminectomy of the first two or three cervical vetebra according to the lenght of the cerebellar herniation. The foramen magnum was enlarged in the posterior and lateral borders to decompress the spinal cord and medulla oblongata. A catheter of siliconized latex was placed communicating the 3rd ventricle with the subarachnoid space of the high cervical region. This was done to allow a free flow of the cerebrospinal fluid. With the purpose of enlarging the posterior cranial fossa, it was employed a graft of bovine pericardium to close the dura mater. The evolution of the neurological deficits after surgery was not uniform. Pyramidal deficit, spasticity and gait disturbance became better in 87.5, 81.2 and 78.6 per cent of the patients, respectively. These results were considered good. The disturbances of sensibility and the amyotrophy improved in only 11.7 and 21 per cent of the patients, respectively. These results were considered poor.

These observations emphasize the necessity of early surgical indication, before the aggravation of these symptoms. There were two deaths and eleven cases of transitory complications after surgery. These results permit us conclude that the posterior cranial fossa decompression and laminectomy of the first two or three cervical vertebra are efficacious in the treatment of patients with syringomyelia associated with Chiari type I malformation.

KEY WORDS: **syringomyelia, Chiari type I malformation, surgical treatment.**

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