Syringomyelia associated with a posterior fossa cyst

Illustration of two cases

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KEY WORDS • syringomyelia • arachnoid cyst • posterior fossa • Chiari malformation

Case 1. This 14-year-old girl suffered from progressive numbness around her mouth and right arm. Computerized tomography scanning revealed hydrocephalus and a large cyst in the posterior fossa. Magnetic resonance imaging revealed that the cyst was invaginating the cervical canal and that there was a syrinx at C3–T7. A suboccipital craniectomy and a laminectomy of the atlas were performed and the cyst was found not to communicate with the fourth ventricle. A cystoperitoneal (CP) shunt was placed without direct manipulation of the syrinx. The patient’s symptoms disappeared postoperatively and both the cyst and the syrinx were significantly reduced by 1 postoperative month (Fig. 1).

Case 2. This 7-year-old boy with scoliosis presented with hypesthesia in his chest. Magnetic resonance imaging revealed a syrinx in the cervical and thoracic spinal cord. A large arachnoid cyst was incidentally found invaginating the cervical canal. In this case only placement of a CP shunt was performed. After the operation, the patient’s hypesthesia was not improved but the syrinx was successfully collapsed (Fig. 2).

There are several causes for the development of syringomyelia. However, cases associated with a posterior fossa cyst have rarely been reported. Characteristically, almost all cysts invaginate the cervical canal. These situations are very similar to tonsillar herniation in Chiari malformation. In the two cases outlined, we believe that the cyst invaginated the spinal canal, disturbing the circulation of the cerebrospinal fluid around the foramen magnum and thus causing the syringomyelia. The fact that in both cases the syrinx completely disappeared after posterior fossa decompression without direct manipulation of the syrinx supports our hypothesis. As in the case of syringomyelia with Chiari malformation, we recommend simple decompression of the foramen magnum as the first choice. Furthermore, investigation of the posterior fossa should be included in a case of syringomyelia.

References