

Syringomyelia Treatment Guidelines

Introduction

Syringomyelia is a chronic condition characterized by the formation of a fluid-filled cyst (syrinx) within the spinal cord. This guideline provides an evidence-based framework for healthcare professionals managing patients with syringomyelia.

Treatment indications

Treatment is indicated for symptomatic syringomyelia (e.g., progressive neurological deficits, severe pain), significant syrinx expansion on imaging, or underlying conditions contributing to syrinx formation (e.g., Chiari malformation, spinal tumors).

Surgical treatment

- **Decompression surgery:** Indicated for Chiari malformation-associated syringomyelia, this procedure involves posterior fossa decompression with or without duraplasty to restore normal CSF flow and relieve pressure on the spinal cord.
- **Shunt placement:** For isolated syrinx not responsive to decompression or where decompression is not feasible, a syringopleural or syringosubarachnoid shunt can be inserted to drain the syrinx fluid and reduce its size.
- **Tumor resection:** If a syrinx is associated with a spinal cord tumor, surgical removal of the tumor can relieve obstruction and reduce syrinx size.

Non-surgical management

- **Monitoring:** For asymptomatic or minimally symptomatic patients with stable syrinx, regular follow-up with MRI scans and clinical evaluations is recommended to monitor for changes in syrinx size or symptoms.
- **Symptom management:** Pain management includes the use of analgesics, NSAIDs, and neuropathic pain medications (e.g., gabapentin, pregabalin). Physical therapy with tailored exercises can help maintain muscle strength, improve mobility, and reduce stiffness. Occupational therapy can assist in adapting daily activities and improving quality of life.

Follow-up and long-term management

- **Regular assessments:** Annual or bi-annual MRI scans are necessary to monitor syrinx size and progression. Regular neurological evaluations are essential to assess motor and sensory function and identify new or worsening symptoms.
- **Patient education:** Educate patients on signs and symptoms of syrinx progression and when to seek medical attention. Guide activities and exercises to avoid exacerbating symptoms.

Special considerations

- **Pediatric patients:** Regular assessments to monitor the impact of syringomyelia on growth and development are crucial. Early detection and management of scoliosis, which may require orthopedic intervention, are essential.

- **Pregnancy:** Preconception counseling is important to discuss the potential impacts of syringomyelia on pregnancy and delivery. Close monitoring during pregnancy is necessary for any changes in symptoms or syrinx size.
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Effective management of syringomyelia requires a patient-centered, multidisciplinary approach. Regular monitoring, timely surgical intervention, and comprehensive non-surgical management are essential to improving patients' outcomes and quality of life. Healthcare professionals should tailor treatment plans to each patient's individual needs, considering the underlying cause and severity of the condition.