

## **Title**

Third ventriculostomy in the treatment of Late-onset Idiopathic Aqueductal Stenosis of the Elderly.

A focus on clinical presentation and radiological diagnosis

## **Authors**

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## **Background and Objectives**

Endoscopic Third Ventriculostomy (ETV) is considered the gold standard treatment for obstructive hydrocephalus due to obstruction of cerebrospinal fluid (CSF) ventricular pathways caused by mass lesions. However long-term efficacy of this procedure remains controversial as treatment of chronic adult hydrocephalus due to primary stenosis of Sylvian aqueduct (Late-onset Idiopathic Aqueductal Stenosis, LIAS), especially in the elderly population.

The authors describe clinical presentation, diagnostic investigations in elderly patients affected by LIAS and define their clinical and radiological outcome after Endoscopic Third Ventriculostomy (ETV).

## **Materials and Methods**

From January 2003 to December 2012, 25 consecutive LIAS patients treated by ETV were retrospectively reviewed. Fifteen of them were older than 65 years old.

Pre and post-operative clinical and radiological findings, including conventional and Phase-Contrast cine MRI (PC cine MRI) were investigated.

## **Results**

ETV was successfully performed in all patients. Patients neurological condition improved. Only one patient required shunt implantation.

## **Conclusions**

Clinical and radiological results reveal a satisfactory outcome of LIAS patients treated by ETV. At follow-up (average duration: 48.6 months) a clinical improvement could be demonstrated in all cases except one. Selection criteria of LIAS patients seem to be crucial to obtain satisfactory and long lasting results. Even in elderly patients with chronic hydrocephalus, ETV can be considered the treatment of choice.