

Introduction

Venous sinus stents are commonly placed in patients with medically-refractory idiopathic intracranial hypertension (IIH) with demonstrable venous sinus stenosis. We report our clinical and angiographic outcomes of venous stents placed for IIH.

Methods

We reviewed our clinical database for all patients with IIH who underwent placement of venous sinus stents between 10/2006 and 12/2012. All patients underwent retrograde venography to confirm >50% stenosis as well as a trans-stenosis pressure gradient of =10mmHg. Medical records were reviewed for all relevant clinical, demographic, and radiographic data. Follow-up angiograms were routinely performed beginning at 3 months post-procedure.

Results

There were 30 patients with a mean age of 33±10 years treated in the study period. Follow-up imaging was available for 23 of 30 (77%) patients (mean=23 months). For 7 patients, angiographic follow-up of >2 years (mean= 45 months) was available. All stents remained patent, with mild (<25%) in-stent stenosis observed in 4 patients. In 5 patients, however, we did observe a narrowing of the sinus proximal to the stent. No patient underwent repeat stent placement for persistent or recurrent symptoms, although cerebrospinal fluid diversion was ultimately performed in 5 cases.

Conclusions

Venous sinus stent placement in the setting of a demonstrable pressure gradient across a stenotic sinus segment is a promising therapy for patients with IIH. We have demonstrated long-term patency of all stents placed in this patient subset. Further prospective investigation is necessary to understand the implications of sinus narrowing upstream of a patent stent and, ultimately, to establish the long-term clinical efficacy of venous sinus stent placement for IIH.

Learning Objectives

By the conclusion of this session, participants should be able to:

- 1) Identify indications for venous sinus stenting in IIH
- 2) Describe the long-term patency of venous sinus stents in the setting of IIH
- 3) Describe potential complications of venous sinus stenting in IIH

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