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Impact of dural venous sinus stenting on acetazolamide use and symptomatology in idiopathic intracranial hypertension patients

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Purpose: Dural venous sinus stenosis (DVSS) stenting has emerged as a surgical treatment modality for patients with idiopathic intracranial hypertension (IIH) and DVSS, but more research is needed to evaluate the efficacy of this intervention. This study is a retrospective observational clinical study that aims to add to existing literature on the efficacy of DVSS stenting on improving symptomatology, retinal imaging results, and dependence on acetazolamide.

Methods: Charts of 19 female patients who received DVSS stenting in the last 6 years were retrospectively reviewed. Presence and severity of pre and post stent symptomatology of papilledema (examined by fundoscopy and optical coherence tomography with retinal nerve fiber layer assessment (OCT-RNFL)), headaches, migraines, and pulsatile tinnitus were recorded and stratified according to the following criteria: resolution, improvement/deterioration, and stability. Changes in the required dosage of acetazolamide were also compared. Significance of results was determined using the paired t-test and Wilcoxon signed rank test.

Results: 17 of the 19 total patients presented with papilledema prior to stenting, and 88% improved with stenting, with 52%

showing complete resolution, but results from OCT RNFL analysis in these patients were not significant ($p = 0.11$ OD, $p = 0.36$ OS). 18 of the 19 patients presented with headaches, and of these, 82% showed symptomatic improvement, with 44% of the total showing complete resolution. In 11% of patients with headaches, symptoms were stable, and in 5.5% of patients, symptoms worsened after stenting. 9 patients presented with migraines prior to stenting, and of these, 55% showed symptomatic improvement, 44% showed stable symptoms, and 11% reported worsening. There was a statistically significant ($p=0.0078$) decrease in the number of patients requiring acetazolamide pharmacotherapy, with 12 requiring it initially and only 1 poststent.

Conclusion: Our findings support the use of DVSS stenting for improvement of symptoms and decreasing need for ongoing pharmacotherapy in eligible IIH patients

Biography

Dr. Eman Hawy is an ophthalmologist in Loma Linda, CA and is affiliated with Loma Linda University Medical Center. She specializes in neuro-ophthalmology and is experienced in stroke, brain tumors, myasthenia gravis, migraine disorders, concussion, and hereditary optic neuropathy.