

Komplikationen bei endoskopischer Aqueduktoplastie Complications of endoscopic aqueductoplasty and stenting

Michael J. Fritsch¹, Manwaring KH², Mehdorn HM³

¹Klinik für Neurochirurgie
UK-SH, Campus Kiel

²Phoenix Children's Hospital

³Klinik für Neurochirurgie

Introduction

Endoscopic aqueductoplasty has been established as one option for the treatment of aqueductal stenosis and isolated 4th ventricle. We previously reported our surgical technique and results. We now summarize a 2-institution experience in regard of complications and lessons learned.

Material and Methods

We retrospectively analyze treatment and outcome of 30 patients who underwent endoscopic aqueductoplasty with or without stent. Surgeries were performed between July 1996 and June 2003. Mean age at time of surgery was 6 years (4 months – 36 years). Mean follow up is 24 months (6 – 84 months).

Results

We had the following complications: 1 infection/ventriculitis that required removal of the stent and subsequent re-stenting, 2 transient and 1 permanent oculomotor paresis, 1 asymptomatic posterior fossa hygroma, 2 patients with stent migration (complication rate 23%; 7/30 patients). Reclosure rate following simple aqueductoplasty without stenting was determined by the etiology of the aqueductal stenosis.

Discussion and Conclusion

Endoscopic aqueductoplasty without or with stenting has a learning curve, as any other surgical procedure. Complications can be avoided or reduced by learning from previous experiences. Patients with isolated 4th ventricle are the best candidates for the procedure. Stent migration can be avoided by placing a stent that communicates lateral, 3rd and 4th ventricle and is secured by a subcutaneous burr hole reservoir. Reclosure rate following aqueductoplasty can be reduced by stent placement.