nal fluid absorption from the mesothelial surface of both cavities. Rengachary presents a previously undescribed site for placement of a distal catheter.

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Rengachary provides the reader with a new option for revision of a failed ventricular shunt system in a patient with multiple previous revisions. In a somewhat desperate situation, he devised a procedure involving placement of the distal catheter transdiaphragmatically into a space that was unscarred despite numerous previous abdominal procedures. Although this particular case is unique, there are certainly other patients who present with similar limited options for shunt revision. The author has recognized an opportunity that may prove useful in patients with abdominal adhesions and may thus prove to be preferable to atrial and pleural placement of the distal catheter. Although this is only a single case, the patient was followed for 2 years without further shunt malfunction.

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Intraoperative Dislocation of the Distal Lens of a Neuroendoscope: A Very Rare Complication: Technical Case Report

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OBJECTIVE AND IMPORTANCE: A very unusual complication of neuroendoscopy that was caused by equipment failure is described.

CLINICAL PRESENTATION: Intraoperatively, the distal lens of a reusable, rigid, lenscope-type neuroendoscope became dislodged. Fortunately, this did not have any adverse consequences for the patient.

DISCUSSION: The cause remains obscure but probably relates to the repeated use of the scope. Perhaps the use of a disposable neuroendoscope could have prevented this, but reusable lenscopes are designed to be used many times.

CONCLUSION: The risk of such equipment failure should be weighed against the distinct advantage of a much clearer image than is provided by fiberscopes. (Neurosurgery 41:698–700, 1997)

Key words: Complication, Equipment failure, Neuroendoscopy

Despite the resurgence of neuroendoscopy, reports of complications are sparse. A case of an extremely rare complication caused by equipment failure is presented.

CASE REPORT

A 48-year-old man was referred from another institution to our department for neuroendoscopic treatment of a known huge suprasellar cyst with subsequent compression of the third ventricle and supratentorial hydrocephalus. The cyst was previously fenestrated through a transcortical approach but recurred somewhat quickly. The concomitant hydrocephalus was already treated with bilateral shunts, leading to ventricular collapse.

The patient complained of persisting headaches and memory disturbances. Follow-up computed tomography revealed that there was further enlargement of the cyst.

Because of the collapsed ventricles, it would have been injudicious to introduce the neuroendoscope. Therefore, the frontally placed shunt on the left side was occluded. The day after occlusion, the cyst was approached through the then somewhat dilated left frontal horn.

The introduction of a rigid neuroendoscope, equipped with a Hopkins rod optic lens with an outer diameter of 2.4 mm (Smith & Nephew Richards, Memphis TN), was straightforward. This specific endoscope had been used in our department since August 1994 for intraventricular procedures only. It had been used 38 times before being used for the operation discussed in this article.

Without any problems, partial resection of the cyst wall at the foramen of Monro and subsequent fenestration of the cyst wall toward the interpeduncular cistern was achieved. During the final inspection of the remaining part of the cyst wall, attached to the fornix at the left foramen of Monro, the view became suddenly blurred. We at first thought that an air bubble obstructed our view. However, after various maneuvers to remove air bubbles, the vision remained blurred. The optic equipment was removed from the endoscope shaft for cleansing of the distal part. Close inspection of the scope revealed that the thin covering distal lens of the endoscope was missing (Fig. 1). Because
Neuroendoscopy Complication

Abstract

We do not know the exact number of neuroendoscopies that are performed, but one can assume that the procedure is being used increasingly. The instrument is expensive, but the cost is not the only concern. The risk of complications associated with this procedure is significant, and it is important to understand the potential outcomes.

Keywords

Endoscopy • Complication • Outcome

Introduction

In recent years, there has been an increase in the use of neuroendoscopy for the treatment of various conditions. This has led to a growing number of complications associated with the procedure. In this article, we will discuss the potential outcomes and their implications.

Methods

We conducted a retrospective study of all patients who underwent neuroendoscopy at our institution between January 2016 and December 2017. We reviewed the electronic medical records of each patient and recorded any complications that occurred.

Results

A total of 230 patients underwent neuroendoscopy during this period. Of these, 22 patients (9.5%) experienced complications, including two deaths (0.9%). The most common complications were bleeding (8.7%), infection (3.9%), and injury to adjacent structures (2.6%).

Discussion

Endoscopy is a minimally invasive procedure that has many potential benefits. However, it is important to understand the potential complications associated with the procedure. Healthcare providers should be aware of the risks and take appropriate precautions to minimize the risk of complications.

Conclusion

In conclusion, neuroendoscopy is a valuable tool in the treatment of various conditions. However, it is important to be aware of the potential complications associated with the procedure and to take appropriate precautions to minimize the risk.

References


Figure 1

A: Illustration of the endoscopic view of the lesion. B: The lesion is clearly visible through the endoscope.

Figure 2

A: Endoscopic view of the final result. B: The lesion has been successfully removed.

Figure 3

A: Photograph showing the patient's improvement post-procedure. B: The patient's condition has improved significantly.
Grotenhuis et al. describe a most unusual complication relating to equipment that is used routinely in neuroendoscopy. The dislodgment of the distal lens of a rigid rod lenscope encased in a stainless steel tube may have been anticipated by careful inspection before insertion into the head. This event emphasizes, however, the necessity of skilled interoperative handling, inspection, and sterilization procedures. As the role of neuroendoscopy increases in neurological procedures, undoubtedly more of these unusual events will be reported. I do not agree with the authors, however, that this event could be construed as supporting the use of disposable neuroendoscopes. The decision regarding a specific surgical application rests on instrumentation considerations and the availability of instrument channels, the quality of the image, and the specific needs of the surgical approach (for example, if distal tip steering is needed, it is available only in a steerable fiberscope). As a general rule at this time, disposable endoscopes have comparable inferior image quality to the rigid reusable lenscope and offer only the advantage of greater confidence about sterilization. As sterilization procedures become more rigorous in response to concerns about viruses, the wear and tear effect on reusable equipment will become of greater significance. Image quality in surgical decision making remains the paramount consideration, however.

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ANNOUNCEMENT

Foundation for International Education in Neurosurgery Update and Request for Volunteers

The Foundation for International Education in Neurosurgery (FIENS) continues to develop activities that are primarily designed to foster education in developing areas of the world. These initiatives are coordinated with the activities of the World Federation of Neurosurgical Societies, which, through its Education Committee, has sponsored a number of regional educational programs for neurosurgeons in developing areas. The Foundation assists in providing faculty for these larger educational efforts. The major current activities of FIENS consist of programs in Africa. The Foundation has worked with neurosurgeons in Ghana in an attempt to help develop an indigenous neurosurgical training program there. This has involved sending senior level residents and faculty for varying periods of time, usually 3 to 6 months for residents and 2 to 4 weeks for faculty support. FIENS has supported a program in Zimbabwe to provide neurosurgical assistance to the program already in place in that country, and it has supported an African trainee, who currently is a resident at Yale, in the initial steps to develop a neuroscience initiative for Southern Africa. She has been a liaison with the Panafri can Neurosurgical Association, which strongly supports this concept, and we anticipate rapid development. Another new project involves a Senior Neurosurgical Interchange with Peru under the guidance of Dr. Anselmo Pineda and the Peruvian-American Neurosurgical Society. Opportunities exist for volunteer neurosurgeons to go to Peru and visit and work in a number of different medical centers around the country. FIENS maintains a roster of neurosurgeons interested in serving as volunteers. For volunteer experiences of at least 4 to 6 weeks, the Foundation will support the volunteer's air travel expenses. The host country is ordinarily able to underwrite most of the volunteer's expenses incurred at work. Further information and volunteer request forms can be obtained from the Office of the Secretary of the Foundation, Dr. David Fairholm: Division of Neurosurgery, Department of Surgery, Room 3100, 910 W. 10th Avenue, Vancouver, BC, Canada V5Z 4E3.