Use of Blood Transfusion Set in Intraventricular Neuroendoscopy

Sir,

Hydrocephalus is treated with different types of shunts. With the advent of neuroendoscopy, hydrocephalus is being frequently managed by making third ventriculostomy. By this, obstructed ventricles are bypassed and CSF is diverted into pre-pontine cistern. Intraventricular tumors are being operated with craniotomy and transcortical transventricular or transcallosal approach to the tumors.1 These tumors can be approached with neuroendoscope to have good magnification, illumination and visualization.2 This is ideal for small cystic tumors. Intraventricular or paraventricular tumors like colloid cyst, craniopharyngiomas, ependymoma, and pineal gland tumors etc. are being inspected, biopsied or excised with neuroendoscope. Concomitantly the hydrocephalus associated with these tumors can be managed by endoscopic third ventriculostomy and septostomy.3 There are some limitations with this procedure such as small ventricles, vascular tumors and solid tumors, measuring more than 2 cm in size.4 The bleeding faced during resection of these lesions is controlled with irrigation and diathermy coagulation. Neuronavigation, stereotaxy, aspirators (CUSA) and other different newer modalities are being used along with flexible neuroendoscope to deal with intraventricular tumors.

The authors use warm ringer solution for irrigation. Drainage and irrigation ports of endoscope are connected with infusion drip set. It was found that these drip sets usually got kinked and blocked, so we started using blood transfusion set in place of drip sets. It is authors’ routine practice nowadays to use blood transfusion set for drainage of neuroendoscope set and at the end of operation the authors cut the chamber of transfusion set and send the clogged debris for histopathology. By this technique the authors have diagnosed sepal glioma, colloid cyst, craniopharyngioma and ependymoma.

Irrigation is routinely used in neuroendoscopy. Copious lavage (5 - 6 liters) is needed in ventricular haemorrhage,5 ventricular empyema and resection of intraventricular tumors. We recommend this simple technique of using blood transfusion set for the irrigation and drainage of neuroendoscope to avoid kinking during neuroendoscopy and to get ventricular lavage debris from the transfusion set chamber along with biopsy specimen for histological confirmation of intraventricular brain tumors or specimen for culture and sensitivity in ventricular empyema or infected CSF.

REFERENCES


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