A017 Bronchoscopy-Guided Percutaneous Dilatational Tracheostomy in Critically Ill Patients: A Study of Complication and Expanded Utility

Suprith C,1 Madhusudan Kalluraya,1 Deepak Ramachandra,1 Mehta R.1
1Critical Care Medicine, Apollo Speciality Hospital, Jayanagar, Bengaluru, Karnataka, India

Background: Bronchoscopy-guided percutaneous dilatational tracheostomy (BG-PDT) is one of the most frequently performed procedures in critically ill patients. Complications occur in 5% to 40% of tracheostomies depending on study design, patient follow-up, and the definition of the different complications. The mortality rate of PCT is less than 2%. We conducted this study to assess the complications and expanded utility of BG-PDT in the Indian setting.

Materials and Methods: A retrospective analysis of 116 BG-PDT performed in the past 3 years was done. PDT was done using the standard technique, using the Cook PDT kit and videobronchoscopy guidance, with all steps done under vision. Postprocedure, all clots which migrated to the distal airway were suctioned. Complications were noted. Additional BAL was done in patients with infiltrates for cultures.

Results: One hundred sixteen BG-PDT were performed. The most common indication for BG-PDT was anticipated prolonged ventilator stay to facilitate weaning. Complications were divided into intra-procedural and early postprocedural complications. Positive BAL culture was also analyzed.

Conclusions: Our study shows that BG-PDT is safe with minimal complications, when performed by experienced ICU personnel. The advantages include confirming all steps under vision, postprocedure suctioning of clots, and BAL done in the same setting. We propose BG-PDT as an “expanded PDT strategy,” combining a safe visually guiding procedure with clot clearance, and additional BAL for cultures.

A018 Observational Study of Intracranial Pressure Variation Using Ultrasonography Guided Optic Nerve Sheath Diameter in Trendelenburg Position among Major Abdominal Laparoscopic Surgery

Shobha Purohit,1 Gaurav Sharma,1 Deeksha Singh1
1Department of Anaesthesiology, SMS Medical College and Hospital, Jaipur, Rajasthan, India

Background: Laparoscopic surgeries are widely established due to its various benefits. It requires adequate surgical exposure that is achieved by pneumoperitoneum often combined with Trendelenburg position that collectively causes increase in intra-abdominal pressure leading to many systemic physiological consequences including increase in intracranial pressure. Noninvasive USG guided ONSD was used as their measurement correlates with invasive method in patients of neurocritical care unit. We aimed to investigate the effect of Trendelenburg position with pneumoperitoneum on ONSD to examine possible changes in ICP in patients undergoing major laparoscopic abdominal surgery.

Materials and Methods: Study included 40 patients of ASA I, II with no neurological disease undergoing major abdominal laparoscopic surgery. USG guided ONSD was measured in both eyes 3 mm behind the globe preoperatively, following induction, 3 min after Trendelenburg position and 3 min with pneumoperitoneum, 2 minutes after desufflation; other parameters observed were HR, SBP, DBP, MAP, Ppeak, and ETCO2.

Results: ONSD was significantly increased from baseline in Trendelenburg position (p < 0.001). Mean ONSD at Trendelenburg position (5.2 ± 0.8) was significantly more than that in supine position (4.7 ± 0.7). Four patients had ONSD > 5.8 mm (the cutoff value for prediction of ICP above 20 mm Hg in previous studies). Mean ONSD at Trendelenburg with pneumoperitoneum (5.6 ± 0.8) increased compared with supine position. Seventeen patients had ONSD > 5.8 mm.

Conclusions: We conclude that ONSD which reflects ICP was significantly increased from baseline in Trendelenburg’s position with pneumoperitoneum.

A019 Hydrocephalus Secondary to Cervical Spinal Cord Surgery

Subhajit Guha,1 Indranil Ghosh,1 Bibhukalyani Das1
1Department of Neurocritical Care, Institute of Neurosciences Kolkata (INK), Kolkata, West Bengal, India

Background: Cerebrospinal fluid (CSF) leakage is a common complication after spinal tumor resection that resolves naturally in many cases. Hydrocephalus with CSF leakage as a complication after spinal surgery is rare. Here, we report a rare case of delayed hydrocephalus due to CSF leakage after cervical cord tumor surgery.

Case Description: A 60-year-old lady with gait disturbance and numbness of both hands underwent uneventful surgery of C1–C2 partial laminectomy and excision of schwannoma. Three months after surgery she was readmitted with features of postoperative meningitis. CSF examination was normal while CT scan showed very small pseudomeningocele. She improved with antipyretics and empirical antibiotics. Two months after this episode she presented in a deeply comatose state. CT brain revealed gross hydrocephalus and she became conscious only after VP shunt.

Conclusion: Hydrocephalus due to CSF leakage is a rare complication after spinal surgery. In our case, CSF did not prove septic meningitis. However, inflammation may