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Mini-invasive with intra-operative ultrasound: How it influence my surgery?

Khoo Yee Hwa, Mohd Sofan Zenian, Senthil Kumar Rajapthy and Pulivendhan Sellamuthu Queen Elizabeth Hospital, Malaysia

Background: Evaluating the safety and effectiveness of Intraoperative Ultrasound (IOUS) as a standard device for minimally invasive intracranial surgery for Intracranial Bleed (ICB) in Queen Elizabeth Hospital (QEH).

Materials & Methods: We reviewed cranial surgery cases done in Neurosurgical Department of Queen Elizabeth Hospital, state of Sabah, Malaysia, where IOUS were used in our minimally invasive craniotomy cases. Patient records, intraoperative sonographic images and post-operative radiological images were analyzed and compared to the conventional craniotomy to evaluate the effectiveness and safety of the procedure.

Results: We have taken on a total of 20 cases with intracranial bleed into this study. Minimal invasive surgery shortens the timing of the surgery and reduces post-operative complications such as low risk infection, wound breakdown and CSF leak, shortened the hospital stay, less pain at the operation site, less blood loss and comparable functional neurological outcome and post-operative CT scan findings. It IOUS is helpful in intraoperative localization the lesion prior to Dura opening, assessing the residual and avoiding vital structures including major vessels and ventricles. The only difficulty we faced in the course of this study is the unforeseen circumstance of crucial vessels impeding the path and safe route to the lesion owing to the small limited craniotomy.

Conclusion: The use of the IOUS has complemented current widely practiced surgical method of dealing with ICB. Mini craniotomy is associated with better cosmesis and wound healing as the skin incision not extends more than 5 cm length and it shortened the operative time without compromising the neurology outcome.

Biography

Khoo Yee Hwa has obtained her Medical degree from Volgograd State Medical University, Russia. She has completed her training in Raja Permaisuri Bainun Hospital, Ipoh, before becoming a Medical Officer in Neurosurgery Unit, Queen Elizabeth Hospital, Sabah. She has been actively managing neurosurgical patients from pediatrics group to older patients ward and intensive care unit.

khooyeehwa@gmail.com

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