

# **ACCELERATED RECOVERY AFTER NEUROSURGERY; CHALLENGES AND CONTROVERSIES**

**Presenting Author: Yasser Zaghloul, MD, FCARCSI – Sheikh Khalifa Medical City –  
Abu Dhabi – United Arab Emirates**

## **Background:**

Enhanced Recovery After Surgery (ERAS) protocols, are combinations of evidence based perioperative strategies which work synergistically to markedly speed recovery after surgery. ERAS protocols aim to attenuate the perioperative stress response, shorten the length of hospital stay and early return of organ function.

ERAS protocols are widely applied in many surgical specialties, no current protocol available for ERAS after neuroanesthesia and neurosurgery.

## **Methods:**

Review of the recent literature as well as the experience of our institute.

## **Results:**

Many components in the well-established ERAS protocols can be applied to some neurosurgical procedures e.g. elective craniotomy. However run of such protocol depends mainly on the patient's neurological status.

The following can be applied on selected patients, preoperative optimization, same day admission, limiting the time of fasting to 6 hours for solid food and 3 hours for liquids, no premedication and prophylactic antibiotic. Preoperative oral carbohydrate fluid may induce vomiting and preoperative.

Intraoperative strategies include, short-acting anesthetics should be used, avoidance of nasogastric tube and urinary catheter, avoid salt and fluid overload and maintain normothermia. From the anesthetic point of view both inhalational and total intravenous anesthesia can be used in patient with normal intracranial pressure.

All attention should be given to prevent the factors which may cause brain injury e.g. hypotension, hypoxia, anemia, acidosis, hypercarbia and acidosis. At the end of surgery, care should be taken to provide smooth emergence and recovery and to avoid sympathetic stimulation.

For pain control, the scalp should be infiltrated with local anesthetic at the end of surgery and postoperative opioids free analgesia by using regular Paracetamol and a non-steroidal anti-inflammatory drug. Tramadol may be added in case of more severe pain.

Postoperatively, early ambulation and oral intake should be encouraged as soon as possible, prevention of nausea and vomiting, avoidance of fluids load and early removal of catheters.

## **Conclusion:**

Depending on the preoperative patient's neurological status, ERAS pathway can be applied to some neurosurgical procedures e.g. elective craniotomy.