



NEWSLETTER

PAKISTAN SOCIETY OF ANAESTHESIOLOGISTS KARACHI - CHAPTER

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**Pakistan Society of Anaesthesiologists
Karachi - 2019-2020**

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EDITOR'S NOTE

Dear Colleagues Assalam o Alaikum:

October PSA Newsletter is in your hands. This newsletter is dedicated to World Anaesthesia Day and our Heroes, who sacrifices their lives to serve ailing humanity as a frontline soldier during Covid-19. May Allah SWT keep everyone safe and sound during these difficult days of Covid-19 and grant us strength to shoulder our responsibilities. I request you all if you have anything to share related to anaesthesia fraternity, do share with me. Suggestions are always welcome.

Regards

Prof Zahid Akhtar Rao
Editor

ADVANCEMENT IN SURGERY IS DUE TO ADVANCEMENT IN ANAESTHESIA

“ If you be constrained to use your saw, let first your patient be well informed of the imminent danger of death by the use thereof” John Woodall (1556-1643). These words came from a surgeon of that time who was referring to amputation surgery. Nowadays thousands of patients undergo this type of surgery all over the world, without any complication.

Before ether and chloroform was discovered patients preferred death to undergoing operations, operating rooms were made at a distance from main hospitals so that the screams of those undergoing the surgeon's knife were not audible to other patients. Physiological stress of surgery led to deaths from shock. It was not until 1846 that William Morton a dentist demonstrated the general anaesthetic effects of ether on a patient at Massachusetts general hospital in Boston, USA. The patient had a tumour removed from his neck, survived and did not remember anything. This was the birth of modern anaesthesia and along with the development of antiseptic techniques these two developments changed the face of surgical management of patients. Spinal anaesthesia was introduced in 1897 allowing surgery on lower limbs to be conducted without general anaesthesia.

Curare, a muscle relaxant was discovered in 1942 and resulted in the ability to produce muscle relaxation independent from sedation. Before this the relaxation required high doses of general anaesthetic leading to complications and even death. This major discovery in anaesthesia allowed surgical fields like thoracic and cardiac surgery to develop further. Also early 20th century, saw the development of endotracheal tubes and discovery of thiopentone. The first anaesthesia machine was designed by Boyle in 1917. In late 20th century several new safer drugs were developed both for pain relief during and after surgery as well as new inhalational anaesthetic agents with fewer side effects. Parallel to these innovations the anaesthesia education and training was improved. All these factors led to safer anaesthesia techniques for sedation, general and regional anaesthesia, and pain management allowing surgical advances.



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UPCOMING CONFERENCES / MEETINGS / SYMPOSIA

Euroanaesthesia
November 28-30, 2020
Barcelona

**17th World Congress of
Anaesthesiologists**
Rescheduled to 2021
September 4-8, 2021
Prague, Czech Republic

Anaesthesia was in fact one of the first specialty to focus on patient safety and in spite the increase in more complex surgeries on sicker patients the anaesthesia mortality has decreased almost ten times from 1 in 10,000 cases to nearly 1 death per 300,000 cases. All these anaesthetic advances have enabled surgeons to allow using techniques like laparoscopic surgery and short stay surgery.

In conclusion the advances in anesthesia over the years have made surgery much safer.

Dr. Fauzia Khan,
Professor,

CENTRAL AND PERIPHERAL NERVE BLOCKS: VALUABLE AND SAFER OPTION DURING COVID-19 PANDEMIC

Patients with confirmed or suspected COVID-19 infection presenting for surgical treatment is a challenge for all anaesthesiologists. General anaesthesia (GA) involve aerosol generating procedures (AGPs) and upholds the greatest risk of viral transmission. A recent joint statement from the American and European societies (ASRA and ESRA) recommends regional anaesthesia (RA) preference over GA where possible to minimize aerosol risks and cross contamination of other patients and healthcare workers¹. It offers many obvious solutions to the particular problems posed by COVID patients. This is also now being reflected in literature showing significant rise in regional anaesthesia practices during this pandemic. A recent study has revealed overall increase use of RA (34 %) and as the primary anesthesia technique (26%) was noticeably higher than previous UK data (11%)

Potential advantages of regional anaesthesia Patient, Surgical, Institutional, Environmental

- Superior analgesia decrease opioid consumption and its related adverse effects
- Reduced postoperative complications e.g decrease surgical site infections, improve patency of AV grafts
- Shorten stay in PACU, decrease frequency of ICU admissions and reduce length of stay in hospital. More ICU beds available that could preferentially be allocated for patients with severe illness. Another institutional benefit is conservation of resource and financial costs of personal protective equipment (PPE)
- Operating theatre turnover may be improved by avoiding both the post-intubation and post-extubation wait for air changes, and more stringent and lengthy cleaning processes².

Usesafe practices

- RA procedures are not contraindicated for COVID-19 positive patients
- Donning and doffing of appropriate PPE before doing the procedure with an observer
- The use of N95 (FFP3) masks or similar powered air-purifying respirators (PAPRs) generally are not considered necessary. Droplet and Contact PPE will suffice for most instances
- All patients should wear a surgical mask to restrict droplet spread.

Operational Advice

- The use of common areas, such as a block room, should be avoided to reduce cross-infection.
- All the charting and electronic recordings should be done outside theater
- Avoid bringing trolleys into the room The required equipment and drugs should be prepared and packed in a plastic bag
- Use plastic covers to protect ultrasound equipment and nerve stimulator

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- Currently, no dose adjustment for RA is recommended.
- Perineural adjuvants (e.g. Dexamethasone, Clonidine, Dexmedetomidine) should be considered to prolong the block duration. The benefit must be balanced against the risks of possible side effects
- Ultrasound guidance for peripheral nerve blocks is desirable. It helps in providing appropriate dose and reduced volume of local anesthetics and can minimize complications

PostBlockinsertion practical considerations

- Allow sufficient time for block to work and success should be thoroughly tested before proceeding with surgery to minimize the need for conversion to GA.
- Use minimal supplemental oxygen needed to maintain saturation
- Excessive or deep sedation should be avoided to reduce the need for any airway manipulation or interventions.
- Patients should be recovered in the operating room or an airborne infection isolation room before being transported to a pre-designated area.

Anaesthesiologists must aim to provide the safest anaesthetic management possible in these challenging conditions. An unplanned need for intra-operative conversion to general anaesthesia is the least desirable outcome. This requires excellent communication between the patient, anaesthetist and the surgical team. The patient must always remain at the centre of the process.

References

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Dr. Faisal Shamim

Associate Professor & Consultant

THE KING LT/LTS-D: AN AIRWAY RESCUE DEVICE

King LT/LTS-D laryngeal tube is a disposable, simple device, used alternative to an endotracheal intubation for advanced airway management.

It is placed in the esophagus and serves as a mechanical airway when ventilation is needed for patients who are apneic or unconscious with ineffective ventilations.

The King LTS-D allows the passage of the gastric tube through a separate channel. It is designed with a straightened, beveled distal tip that assists in directing the airway posterior to the larynx and into the upper esophagus. Due to this unique configuration, there is minimal risk of the device entering the trachea.

A single port inflates both proximal and distal cuffs. The proximal cuff stabilizes the device and seals the oropharynx. The distal cuff blocks entry of the esophagus, reducing the possibility of gastric insufflation. Ventilatory seal pressures of 30cm H₂O or more are achievable. Multiple distal ventilatory openings and bilateral ventilation eyelets facilitate air flow.

Insertion:

1. Choose the correct size King airway based on the patient's height.
2. Test the cuff inflation system by injecting the maximum recommended volume of air into the cuffs.
3. Remove all air from the cuffs prior to insertion.
4. Apply a water-based lubricant to the beveled distal tip and posterior aspect of the tube taking care to avoid the introduction of lubricant in or near the ventilatory openings.
5. Pre-oxygenate the patient 6.1.
6. Position the head: The ideal head position for insertion of the King airway is the sniffing position; tube can also be used

7. Hold the King airway at the connector end with the dominant hand. With the non-dominant hand hold the mouth open and apply a chin lift unless contraindicated due to suspected spinal injury 6.1.
8. With the King airway rotated laterally 45-90 degrees such that the blue orientation line is touching the corner of the mouth, introduce the tip of the tube into the mouth and advance behind base of the tongue. Never force the tube into position.
9. As the tube tip passes under the tongue rotate the tube back to midline (blue orientation line faces the chin)
10. Without exerting excessive force, advance the King airway until the base of the connector aligns with the teeth or gums.
11. Fully inflate the cuffs using the maximum volume of the syringe included in the EMS kit. (see chart)
12. Attach the bag valve mask device to the 15 mm connector of the King and gently start bagging the patient to assess ventilation, simultaneously withdraw the airway until ventilation is easy and free flowing (large tidal volume with minimal airway pressure).
13. Note the depth markings to give an approximate distance in cm's to the vocal cords.
14. Confirm proper position by auscultation, chest movement and verification of CO₂ using waveform capnography.
15. Readjust cuff inflation to just seal the airway.
16. Secure the King airway to the patient using an accepted method and bite block/oral airway. Use care not to place tape over the proximal opening of the gastric access device.

Removal:

Suction must always be available. It is important that the patient is positioned to anticipate vomit.



The King airway is removed. Deflate the cuffs prior to removal. The airway and patient should be suctioned.

