

Dr. NAVDEEP SOKHAL

Personal Information:

Name: Dr. Navdeep Sokhal
Designation: Professor
Dept of Neuroanaesthesiology
and Critical Care
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Qualification : MBBS, MD, DM

Awards and achievements :

1. **Patent granted** for “A breath sample line for effective ventilation monitoring” by Government of India on 22-Nov-2022.
2. **Course director** for **AIIMS Critical Care Course** : In this course interns and surgical residents were trained for various lifesaving skills like basic and advanced cardiac life support, airway management, vascular access and cricothyrotomy on mannequins and were taught basic concept of critical care management.
3. **Published chapters in books.**
4. **Lectures and presentations at various national and international conferences**

Skills :

- **Advanced Trauma Life Support (ATLS) instructor.**
- Trainer of **Percutaneous tracheostomy (PCT)** skills on cadaver and patients.
- **Cricothyromy** to manage emergency airway.
- Skillful in **fiberoptic intubation** and utilizing different difficult airway gadgets.
- Well versed with advanced ventilator and monitoring techniques including neuromonitoring like **Evoked potential, Transcranial doppler, ICP and jugular venous oximetry.**
- Expertise in head and neck pain intervention procedures for trigeminal neuralgia, stellate ganglion block and epidural catheterization for labour analgesia.
- Organised and conducted pain and airway workshops.

Innovation :

- **Patent** granted for “**A breath sample line for effective ventilation monitoring**” which is related to end-tidal-carbon-dioxide (EtCO₂) monitoring.
- The same was accepted for commercialization by National Research Development Corporation (NRDC) under “**MAKE IN INDIA**”.
- Another patent is in pipeline related to achieving fog free vision through spectacle and goggles after wearing surgical face mask (N-95) for medical personnel. I developed it for health care workers to face poor vision issue due to fogging during COVID pandemic.

Patents :-

Granted patents:

- A breath sample line for effective ventilation monitoring. Patent No: 412088. (Nov 2022)

Published patents:

- Verma M, Sokhal N. Anti-fog safety goggles with fan. The Patent Office Journal. 2021 May;19:22320.
- Sokhal N, Dash HH. A breath sample line for effective ventilation monitoring. The Patent Office Journal. 2014 Feb;6:2960.

Awards and achievements :

- **Patent granted:** A patent was granted to me for “**A BREATH SAMPLE LINE FOR EFFECTIVE VENTILATION MONITORING**” by Government of India in Nov-2022. This was a proud moment for the Department of Neuroanaesthesiology and Critical Care.
- **Awarded best paper** 3rd prize in World conference on Covid and Critical Care (W4C) held in Oct 2021.
- **Indigenous fogless goggles with fan** – We made our own **fogless goggles with fan** which helped hundreds of healthcare workers working in designated COVID ICUs and COVID workplace to see clearly without fogging inside goggles leading to

improved health care delivery and patient care while working in COVID ICU in 2020-21.

- **Best paper award** -One of my poster “Comparison of propofol and ketofol on transcranial motor evoked potentials (TcMEPs) in patients undergoing thoracolumbar surgery” presented by our student has won best paper award in **ISNACC 2020** in Chennai.
- **Expert for evaluation of NRDC Awards** applications in Feb 2017 by is Deputy Manager of the **National Research Development Corporation**. NRDC is a government body which transfer technology from the public sector to the private sector and would patent the product for commercial utilization.
- **Joint organizing secretary for AIIMS Neuroanesthesia update** held in AIIMS in Sept 2016.
- **Devised and developed** AIIMS Critical Care Course (**ACCC**) as one of the core faculty member in **2016**. In this course doctors from various disciplines, designations and institutes are trained using simple principles of applied physiology in care of critically ill and post-operative patients. I have organized this workshop multiple times as faculty member or **Course Director** since 2016. Latest participation as Course director for ACCC in 2023.
- Certified as **ATLS instructor** in 2015.

Publications:

1. Sokhal S, **Sokhal N**, Sharma P, Chouhan RS. Fire Hazard in an Anesthesia Machine: A Case Report. A A Pract. 2022 Jul 25;16(7):e01603.
2. Khandelwal A, Chaturvedi A, **Sokhal N**, Singh A, Sharma HB. Comparison of Propofol and Ketofol on Transcranial Motor Evoked Potentials in Patients Undergoing Thoracolumbar Spine Surgery. Asian Spine J. 2022 Apr;16(2):183-194.
3. **Sokhal N**, Kumar A, Aggarwal R, Goyal K, Soni KD, Garg R, Deorari A, Sharma A. Acute critical care course for interns to develop competence. Natl Med J India. 2021 May-Jun;34(3):167-170.
4. Khandelwal A, **Sokhal N**, Kumar N, Singh S, Sokhal S. Phenytoin-induced Excessive Sedation During Awake Craniotomy: An Unusual Observation. J Neurosurg Anesthesiol. 2019 Jan;31(1):87-88.

5. **Sokhal N**, Chaturvedi A, Rath GP, Bala R. Airway obstruction following cervical spine surgery: A diagnostic dilemma. *J Anaesthesiol Clin Pharmacol* 2017 Apr-Jun;33(2):266-267.
 6. **Sokhal N**, Rath GP, Chaturvedi A, Singh M, Dash HH. Comparison of 20% mannitol and 3% hypertonic saline on intracranial pressure and systemic hemodynamics. *J Clin Neurosci.* 2017 Aug; 42:148-154.
 7. Bindra A, Bithal P, **Sokhal N**, Arora A. Pain relief can be painful. *Indian J Palliat Care* 2015 Sep; 21:355-7.
 8. **Sokhal N**, Rath GP, Chaturvedi A, Dash HH, Bithal PK, Chandra PS. Anaesthesia for awake craniotomy: A retrospective study of 54 cases. *Indian J Anaesth.* 2015 May;59(5):300-5.
 9. **Sokhal N**, Goyal K, Chowdhury T, Rath GP. See-saw pattern in ventilator graphic: Is there any story behind? *Niger Med J.* 2014 Jul;55(4):359-61.
 10. Chowdhury T, **Sokhal N**, Prabhakar H. Severe haemodynamic disturbances following normal saline irrigation in cerebro-pontine tumour surgery. *Indian J Anaesth.* 2012 May;56(3):312-4.
 11. **Sokhal N**, Sokhal S, Chowdhury T. Unusual difficulty during central venous catheterization. *Saudi J Anaesth.* 2012 Jan;6(1):90-1.
 12. Chowdhury T, **Sokhal N**. Propofol may be useful in patients with congenital dystonia syndrome undergoing magnetic resonance imaging. *Saudi J Anaesth.* 2012 Jan;6(1):89.
 13. **Sokhal N**, Chowdhury T, Goyal K. Postoperative lingual edema is not always a predictor of airway compromise. *Saudi J Anaesth.* 2012 Jan;6(1):79-80.
 14. **Navdeep Sokhal**, Tumul Chowdhury, Keshav Goyal, Sachidanand Jee Bharati. Dramatic improvement in complete white out lung: causes and management. *BJA -Out of the blue E-letters* [Internet]. 2011 Oct 11. Available from: http://bj.oxfordjournals.org/forum/topic/brjana_e1%3b7990
 15. **Sokhal N**, Dube SK, Rath GP, Marda MK. Positioning pressure transducers: upright or upside down? *Ann Card Anaesth.* 2011 Jan-Apr;14(1):66.
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