

Efficiencies in Orthopedic Surgery Under Moderate/Deep Sedation & TIVA

xchange™ Nasal Dock in Hand & Upper Extremity Procedures

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About Dr. Amar Patel, MD

Dr. Amar Patel is a fellowship-trained Hand and Upper Extremity Orthopaedic Surgeon at SCOS Orthopedic Specialists. He specializes in complex procedures of the hand, wrist, elbow, and shoulder, often performed under moderate to deep sedation or TIVA in ambulatory settings. Dr. Patel prioritizes surgical precision, optimal patient positioning, and OR efficiency, frequently incorporating innovative tools that minimize interruptions to the sterile field and support stable anesthesia conditions during spontaneous-breathing cases.

Case Overview

This case highlights efficiencies gained with the xchange™ nasal dock during an upper extremity procedure under TIVA/deep sedation. The device supported unobstructed surgical access, stable oxygenation/ventilation, and reduced airway-related interruptions, enhancing overall OR flow for precision hand surgery.

Patient Profile

Age / Sex	55-year-old male
BMI / History	32 kg/m²; mild-moderate OSA, history of snoring
Procedure	Distal radius fracture fixation (upper extremity) under TIVA/deep sedation

Efficiencies Gained in Orthopedic Surgery

In hand and upper extremity cases, airway management can complicate arm positioning, draping, and surgical access. The xchange™ nasal dock provided:

- Unobstructed operative field — low-profile nasal interface allowed optimal arm/shoulder positioning without mask interference or frequent adjustments
- Rapid setup (<20 seconds) during TIVA induction, preserving spontaneous breathing with positive pressure support
- Stable conditions throughout: consistent oxygenation and EtCO₂ monitoring with minimal provider interventions
- Reduced case interruptions — fewer airway maneuvers meant less disruption to surgical flow and team coordination
- Improved OR turnover in ambulatory ortho setting by maintaining patient stability into recovery without additional equipment swaps

Outcomes & Surgeon Feedback

“For upper extremity procedures under sedation or TIVA, the xchange™ nasal dock has been a significant efficiency booster. It keeps the surgical field clear for precise work on the hand/wrist while providing reliable airway support. We experience fewer

interruptions, smoother cases, and better overall flow in our ORs. This is especially valuable in moderate to deep sedation where maintaining spontaneous ventilation without compromising positioning is key.” — Amar Patel, MD

Key Results: No desaturations, stable vitals, efficient 45-minute procedure with excellent surgical conditions.

Conclusion

The xchange™ nasal dock enhances efficiencies in orthopedic hand and upper extremity surgeries by facilitating unobstructed access, seamless TIVA/sedation compatibility, and reduced airway-related delays. It supports Dr. Patel and teams at SCOS Orthopedic Specialists in delivering high-quality, time-efficient care.