

50th International conference on
Prosthodontics & Restorative

November 17-18, 2025 | Paris, France

Comparative Clinical Evaluation of Open and Closed Sinus Lifting Techniques in Dental Implantation

Shodi R Sultanov

Department of Prosthetic Dentistry, Avicenna Tajik State Medical University, Dushanbe, Tajikistan

Background: The surgical stage of implant placement determines long-term osseointegration and implant stability. Comparative evaluation of open and closed sinus-lifting techniques helps optimize outcomes.

Objective: To assess implant stability (ISQ), cortical bone thickness, and complication frequency after open versus closed sinus lifting.

Methods: Sixty-two patients (86 implants) were examined: Group I - open sinus lift (n = 32), Group II -closed (n = 30). Grafting materials: Bio-Oss, Collapan L, β -TCP. CBCT and Osstell ISQ analysis were performed at 3, 6, and 12 months. Data were analyzed using t-test, χ^2 , and Pearson correlation ($p < 0.05$).

Results: Osseointegration succeeded in 96.8 % (open) and 100 % (closed) cases ($p > 0.05$). Cortical bone thickness was 1.15 ± 0.12 mm vs 1.28 ± 0.10 mm ($p < 0.05$). ISQ strongly correlated with bone thickness ($r = 0.72-0.75$, $p < 0.01$). Early complications (sinusitis, inflammation) occurred in 9.4 % (open) and 3.3 % (closed) ($p < 0.05$). No implant loss or

recurrence observed.

Conclusions: Cortical bone thickness and ISQ are key predictors of successful osseointegration. The closed sinus-lifting technique reduces postoperative complications and ensures greater primary implant stability.

Keywords: sinus lifting, dental implantation, implant stability, cortical bone, CBCT, osseointegration.

Biography

Sultanov Shodi Rahimovich is a dental surgeon and prosthodontist, a graduate of the Bukhara Medical Institute (2012). He completed advanced training in prosthodontics and maxillofacial surgery in Tajikistan and has been practicing at the Eurodent Clinic (Dushanbe) since 2012. He is the author of more than 50 scientific publications and the developer of an innovative atraumatic sinus-lifting forceps, awarded internationally in Saudi Arabia, Germany, and Indonesia. He has completed professional internships in Germany, South Korea, Uzbekistan, and Thailand. Currently, he is a PhD candidate in the Department of Orthopedic Surgery at the Avicenna Tajik State Medical University. His professional interests include modern prosthodontics, implantology, minimally invasive surgery, and advanced clinical restorative techniques.