

Maxillary Sinus Augmentation via Palatal Wall Approach in a Previously Poorly Grafted Case

Joohee Julie Kim, Dai Lao Rodriguez, Stuart Froum, Sang-Choon Cho, Leena Palomo

Ashman Department of Periodontics and Implant Dentistry, New York University, College of Dentistry

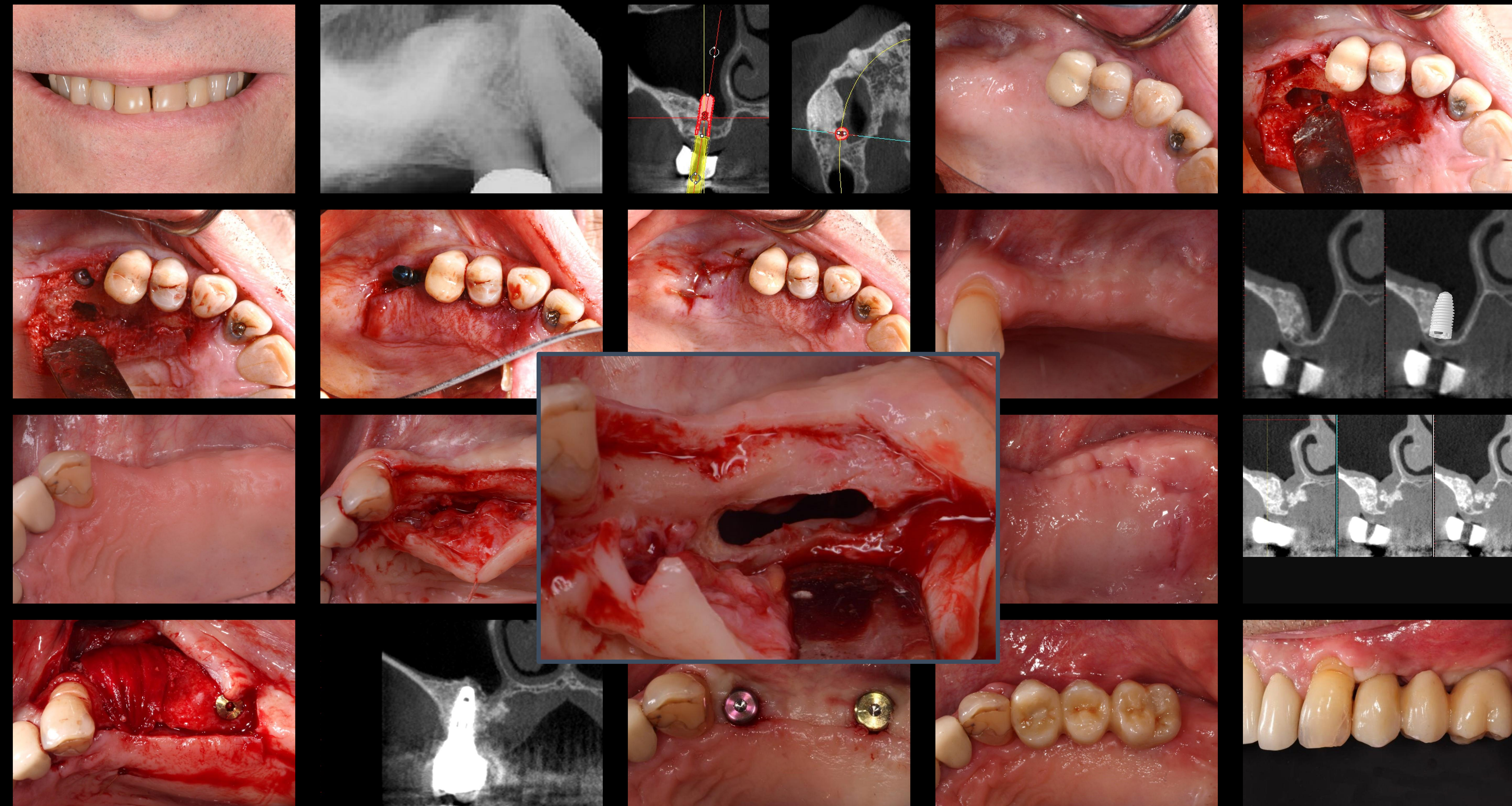
...Reentering through the lateral window is difficult due to thickened buccal bone from prior grafting. The palatal window technique preserves bone and ensures optimal sinus access, enabling successful grafting and implant placement...

Maxillary sinus augmentation is a well-established and effective procedure for increasing vertical bone height in the posterior maxilla, allowing implant placement in cases where bone volume is insufficient due to sinus pneumatization and post-extraction bone remodeling. The lateral window technique is the most widely used and documented approach for this augmentation. A critical aspect of this procedure is the proper elevation of the sinus membrane, which is essential for generating sufficient regenerated bone to support implants in an ideal prosthetically driven position. The elevation must extend to the medial wall of the sinus, ensuring adequate graft material placement. This technique not only provides the necessary volume of regenerated bone but also improves periosteal blood supply by bringing the graft material into direct contact with the medial bony wall, ultimately reducing healing time and increasing the amount of new, vital bone. When sufficient elevation is not achieved, the

resulting bucco-lingual dimension of regenerated bone may be inadequate for implant placement, necessitating a secondary augmentation procedure. Reentering through the lateral window can be challenging due to the increased thickness of the buccal bony wall from the previous graft. In such cases, the palatal window technique offers a viable alternative. It provides improved access to the sinus cavity without compromising the bone regenerated during the first surgery on the buccal side. In the two cases presented in this report, there was insufficient bone height for implant placement, and the thickened lateral bony wall from a previous sinus augmentation made reentry difficult. The favorable anatomy of the medial bony wall allowed for the creation of a palatal window, facilitating successful grafting and implant placement in prosthetically optimal positions.

Key words: Maxillary sinus augmentation, poorly grafted, palatal approach

SEQUENCE OF PROCEDURE



1. Florio S, Suzuki T, Cho SC. The Palatal Window for Treating an Incompletely Augmented Maxillary Sinus. *Implant Dent* 2017;26:328–331.
2. Ueno D, Kurokawa T, Maruo K, Watanabe T, Jayawardena JA. Palatal window osteotomy technique improves maxillary sinus augmentation in previously insufficient augmentation case. *Int J Implant Dent*. 2015 Dec;1(1):19.
3. Tatum H., Jr Maxillary and sinus implant reconstructions. *Dent Clin North*

- Am. 1986;30:207–29.
4. Cabezas-Mojón J, Barona-Dorado C, Gómez-Moreno G, Fernández-Cáliz F, Martínez-González JM. Meta-analytic study of implant survival following sinus augmentation. *Med Oral Patol Oral Cir Bucal*. 2012;17:e135–9.
5. Stübinger S, Saldamli B, Landes CA, Sader R. Palatal piezosurgical window osteotomy for maxillary sinus augmentation. *Int J Oral Maxillofac Surg*. 2010;39:606–9.