



The Use of an Angle Corrected Implants in Edentulous Sites with Buccal Resorption: A Case Series.



Katherine S. Hanser, D.M.D; Eric Egan, D.M.D, Mohamed Tarek A. Omran, B.D.S, M.S; Robert L. Blackwell, D.D.S

Introduction:

The edentulous site undergoes three-dimensional changes as the alveolar process remodels and heals. Studies report approximately **50% reduction in buccal-lingual width of the extraction site within the first 12 months of healing**. Therefore, long term edentulism often results in such severe buccal resorption that **dental implants are often tilted off the long axis of the occlusal force to accommodate for the compromised anatomy** and to avoid the additional need for bone grafting. **Tilted implants often require an angled abutment or a cement retained restoration to compensate for the poor prosthetic access**. Both options can easily lead to either a mechanical or biological failure of an implant if not properly executed. The angle corrected implant is designed so the off-axis correction is within the implant platform, allowing for a screw-retained restoration without the use of an angled abutment. Studies have shown that the sub-crestal angular correction as opposed to an angled abutment not only decreases the occlusal stress on the fixture but also places the stresses at a more favorable position on the implant.

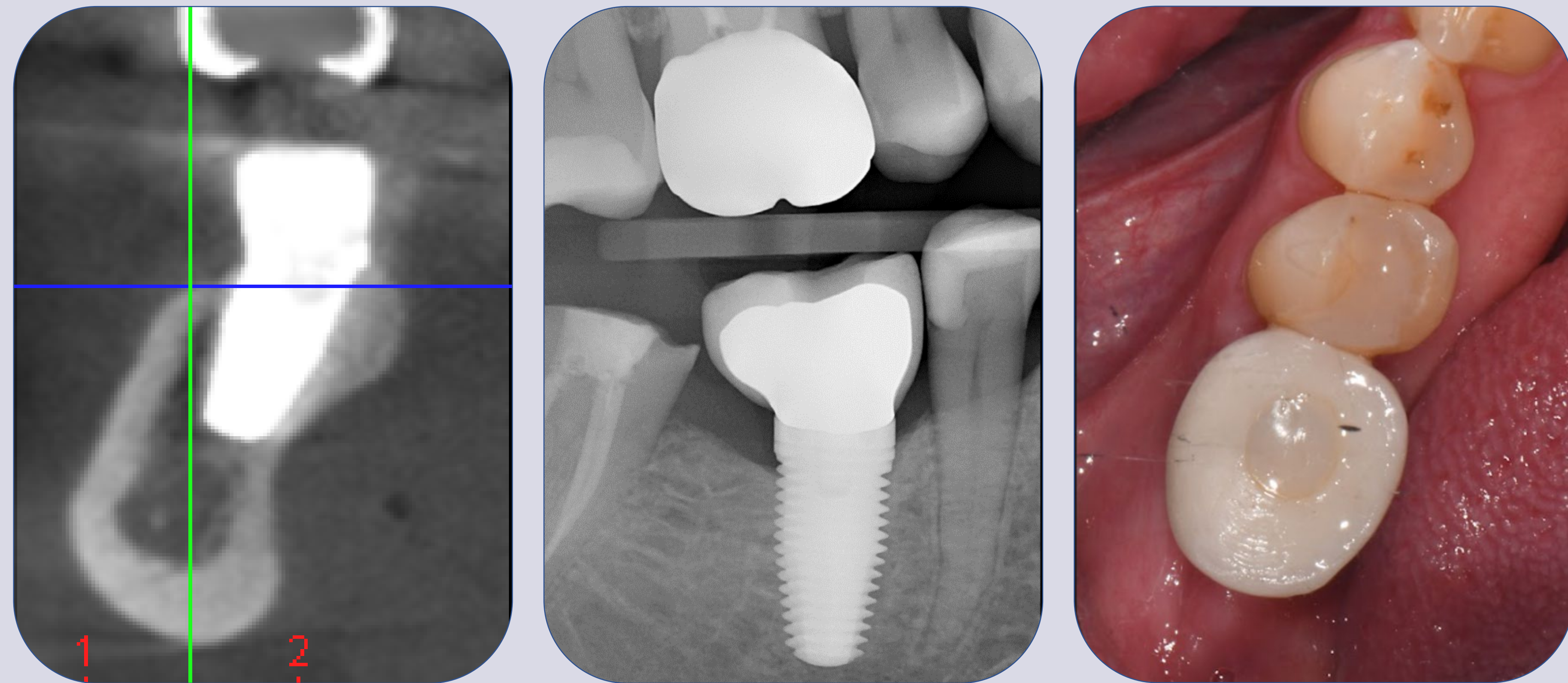
The following is a series of cases that document the use of angled corrected implants in severely resorbed mandibles in order to avoid ridge augmentation while achieving optimum prosthetic outcomes.

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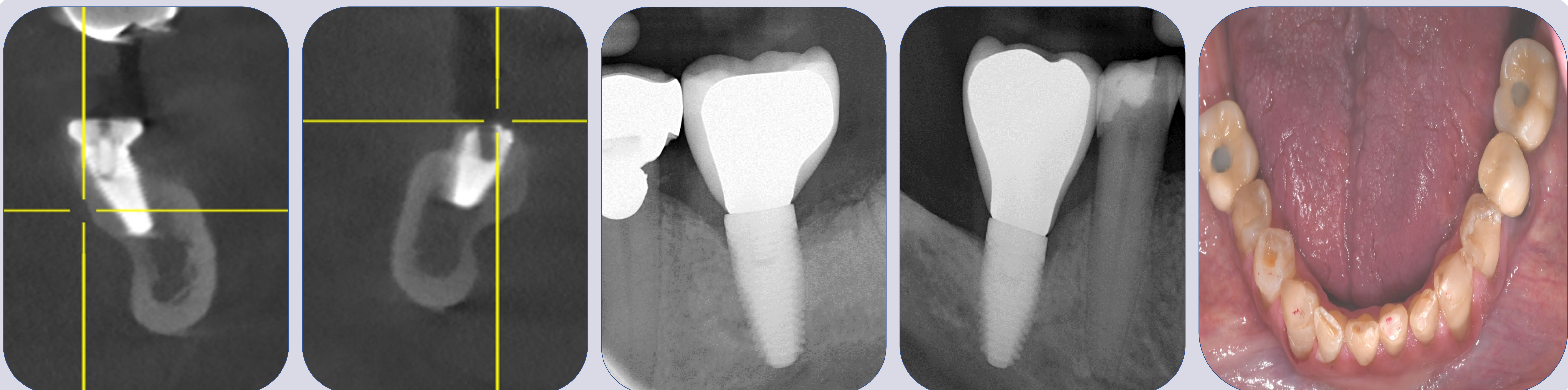
Case 1: 24 Degree 6.0 x 10 mm



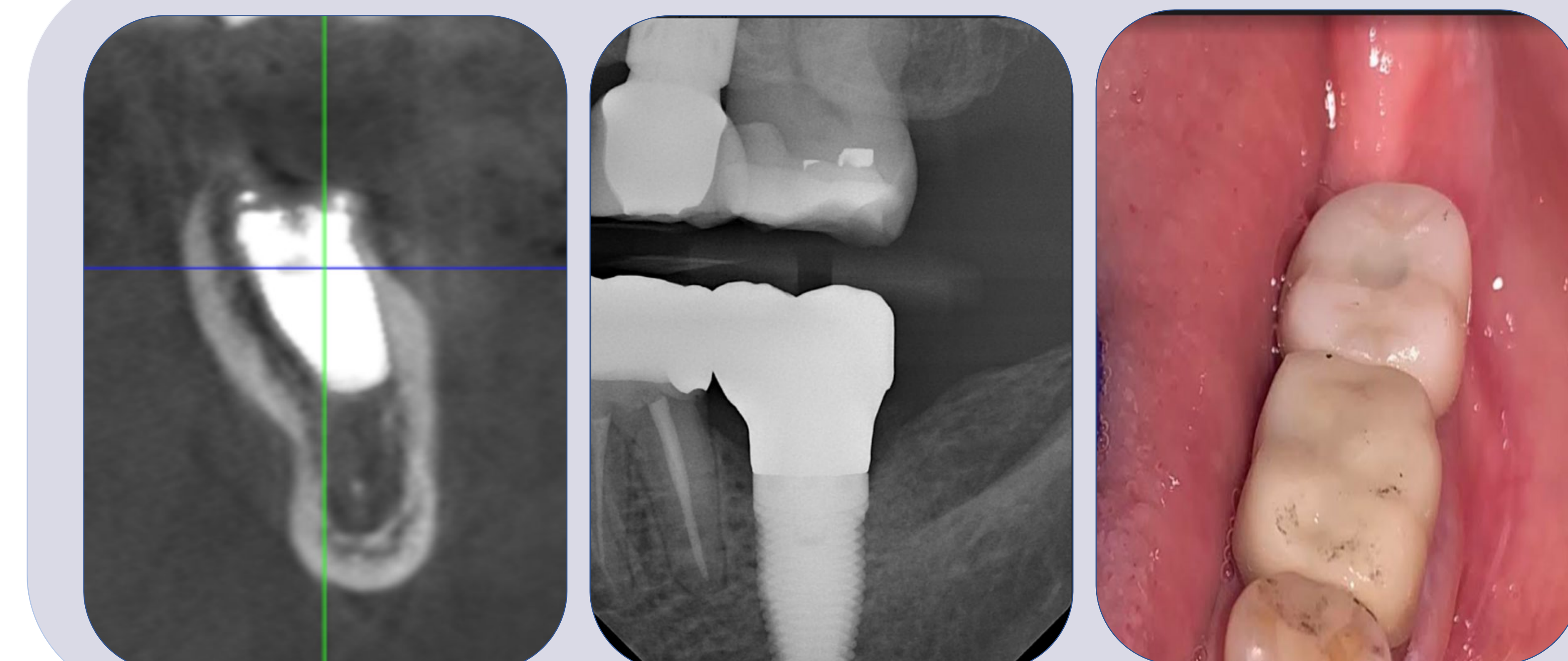
Case 3: 12 Degree 4.0 x 11.5 mm



Case 4: 24 Degree 5.0 x 10 mm



Case 2: 24 Degree 6.0 x 10 mm





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Conclusion:

Sub-crestal angle corrected implants can be successfully placed in resorbed mandibles without the need for additional ridge augmentation procedures. This case series demonstrates a successful additional use of angled corrected implants that resulted in less surgery, time, and expense for the patients.