

A Prospective Clinical Study on the Performance of a Platform Switched, Multi-Level Surface Implant System – 2 Year Follow Up

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INTRODUCTION

Implant systems with increased thread depth that allow higher bone to implant contact and insertion torque^{1,2} (IT) have become popular to increase the success in immediate and early loading protocols³. Exposure of these threads due to marginal bone loss in the long term creates a clinical challenge. Thus, an implant system was developed by increasing the thread depth at the apical portion while maintaining shallow thread depth at the coronal portion of the implant.

The aim of this prospective observational clinical study is to evaluate the performance of this implant design for up to a two years follow-up.

MATERIALS AND METHODS

This clinical study (IRB# 4572) included patients with edentulous areas who required dental implants. The implant was placed using standardized protocols. IT and Implant Stability Quotient (ISQ) values were recorded. Demographic details, as well as clinical measurements such as probing depth (PD) and a patient satisfaction survey was collected at the time of prosthesis delivery, 1-year and 2-year follow-up. Additionally, standardized radiographs taken at implant placement, prosthesis delivery, and 1-year and 2-year follow up were used to measure crestal bone levels, with the data analyzed using descriptive statistics and paired t-test for all parameters.

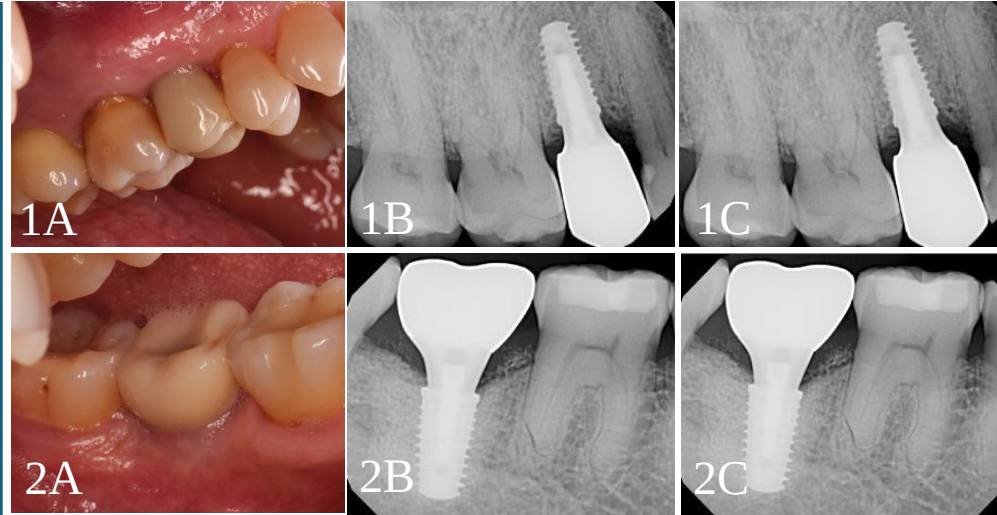
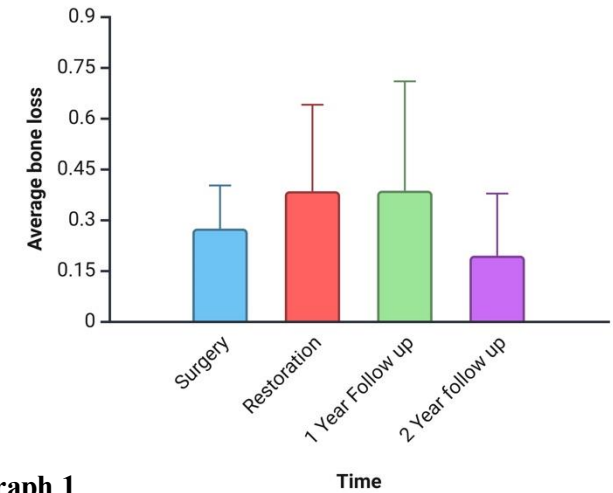


Image 1A and 2A picturing the final restoration and x-rays at 1 year follow up (1B, 2B) and 2 year follow up (1C, 2C).

RESULTS

A total of 30 patients (14 male; average age: 61.5) were recruited and 31 implants were placed with an average torque of 40 Ncm. The ISQ values were found to significantly increase from implant placement (mean:71.53±14.71) to the time of restoration (80.96±4.18) ($p<0.001$). Mean marginal bone loss at two years was 0.19±0.18mm [n=15] (**graph 1**). The probing depths at the 2 year follow up remained stable with a mean of 2.85±1.22mm with minimal changes from one year ($p>0.05$). Patients reported high satisfaction with prosthesis at 2 year follow up. The 2-year patient follow up is still ongoing.



graph 1

CONCLUSION

This study demonstrated that the platform-switched progressively deep threaded implant system managed to achieve both high IT and ISQ values along with acceptable clinical performance.

FUNDING

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