

# 26-year Follow-up of Screw-retained Fixed Dental Prostheses Supported by Machined-surface Brånemark Implants: A Case Report

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## Introduction

Dental implants supporting prosthetic rehabilitations of edentulous jaws have become one of the most significant breakthroughs in dentistry during the past 30 years, and several clinical studies have indicated high implant survival rates after 5-10 years (1,2). The original implant treatment protocol introduced by Brånemark and colleagues included machined-surface titanium implants and two-stage surgery, which has been documented extensively and proven to be a reliable treatment option in the rehabilitation of edentulous jaws (1).



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This article has been peer reviewed.

## Abstract

**Background:** Rough-surface implants have become very popular during the last 10 years due to greater reported bone-implant-contact and bone volume between implant threads compared to machined-surface implants.

**Purpose:** The aim of this clinical report is to present the 26-year clinical outcomes of machined-surface implants supporting screw-retained fixed dental prostheses in a 77-year-old woman. A 51-year-old woman received five mandibular and six maxillary implants supporting screw-retained fixed dental prostheses. The original machined-surface regular platform Brånemark implants were placed using a two-stage surgical approach.

**Materials and Methods:** No implants were lost, and average marginal bone levels between the implant platform and the first bone-implant contact for maxillary and mandibular implants were  $3.3 \pm 0.6$  mm and  $1.7 \pm 0.3$  mm after 26 years. The following prosthetic complications were recorded during the follow up period; a) broken acrylic denture tooth (four times), b) loose prosthetic screw (three times), c) loose abutment screw (two times).

**Conclusion:** This case report shows that machined-surface dental implants can successfully support screw-retained fixed dental prostheses over 26 years, which makes dental implants an important dental treatment option compared to the traditional prosthetic treatment methods, especially in elderly edentulous patients.

**KEY WORDS:** implant, maxilla, mandible, prosthesis, screw-retained

Tex Dent J 2010; 128(1):15-19.