

Rotational Path Removable Partial Denture with Attachment: A Case Report

Saijai Lertwattanachai¹, Samkwan Charoenbhakdee², Pornpot Jiangkongkho³

¹Thayang Hospital, Thailand

²Tha Wang Pha Hospital, Thailand

³Department of Restorative, Faculty of Dentistry, Naresuan University, Thailand

Received: June 8, 2020 • Revised: July 1, 2021 • Accepted: November 11, 2021

Corresponding Author: **Dr. Pornpot Jiangkongkho**, Department of Restorative, Faculty of Dentistry, Naresuan University, Phitsanulok 65000 Thailand. (E-mail: jiangkongkho@hotmail.com)

Abstract

Currently, removable partial denture (RPD) is a desirable treatment option in partial edentulous patient to restore function and esthetic. Efficient function and esthetic of fixed partial denture and implant options are superior to RPD. However, they require more financial. In case of mesial shift posterior abutment, the RPD design is difficult to fulfill the requirement concept of conventional RPD. Therefore, the rotational path RPD with precision attachment is the design that gain proper retention and acceptable esthetic outcome than the conventional RPD design. This case report was shown the rotational path RPD design with precision attachment in clinical method and laboratory technique.

Keywords: partial edentulous patient, precision attachment, removable partial denture, rotational path RPD

Introduction

Prosthetic dentistry involves the restoration and maintenance of oral functions, comfort, appearance, and health of the patient by the replacement of missing teeth. Rehabilitation of partial edentulous patient can be done by several methods. Fixed partial denture and implant are preferable options. However, they are alternative limit due to economic reason. Therefore, removable partial denture is restored for patients faced with financial, anatomical, and esthetic limitations.^(1,2)

Rotational path designs may minimize periodontal problem from removable partial denture by reducing plaque accumulation and may be applied in esthetically demanding situations. In addition to, rotational removable partial denture with extra coronal precision attachment is a proper treatment that gain retention of denture by using of rigid retentive components in undercut area and reducing the conventional clasps.⁽³⁾

Principles of rotational removable partial denture

Designing the components of rotational removable partial denture that differ from conventional removable partial denture are

1. Proximal plate that likes retentive component, is designed to gain retention at undercut area of mesial surface of posterior abutment teeth. Proximal plate of rotational removable partial denture is rotated following path of rotation, allowing the rigid components access to undercut adjacent to the edentulous spaces. Then, the other components are rotated into its final position.^(3,4)

2. The rests should extend more than half the mesio-distal dimension of the posterior abutment tooth, and its buccal and lingual walls should be nearly parallel. The walls of the rest seats should be parallel bilaterally across the arch to permit seating of the rests.^(6,7)

3. Designed abutment tooth like as direct retainer requires.

- 3.1 Support is achieved through proper rest design.
- 3.2 Retention is provided by proximal plate.