Management of Exposed Plate of Mandibular Fracture: A Case Report

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Abstract

Mandibular reconstruction is a trauma management to achieve good occlusal. Mandibular reconstruction plates are one of the post-ORIF reconstruction procedures that are often used at Hasan Sadikin Hospital. This article aims to determine how the management of plate exposure in mandibular fracture cases must be appropriate and according to indications for the administration. Cases of oblique area fractures that extend to the body of the mandible should be reduced and repositioned through an extra oral opening. Apart from that, modifications are needed in reconstructing cases where the mandibular bone is left thin by installing a mini plate at the champs line and mandibular margin. By modifying the attachment of the miniplate, it is hoped that the mandible will be more stable and function normally. It is hoped that the risk of plate exposure in patients can be minimized through appropriate management.
Kata Kunci: Rekonstruksi, Plat, Fraktur Mandibula

Introduction

The goal of mandibular reconstruction is trauma management to achieve good occlusal. There are several things that must be considered in the technique for mandibular reconstruction, such as soft tissue free flaps, reconstruction plates, and bone grafts. Mandibular reconstruction plates are one of the post-ORIF reconstruction procedures that is often used by Hasan Sadikin Hospital. Complications such as infection, open or broken plates, or loosening of the fixation may occur after this procedure. This article aims to carry out appropriate management of plate exposure according to indications and management.

Tujuan Penelitian

We report a 28-year-old man with a chief complaint of an exposed plate. Eight months before admission, the patient underwent ORIF at Karawang Hospital, and a reconstruction plate was installed. Five months later the patient complained that an object was coming out of his gums, and he felt pain in that area. The patient went to Karawang Hospital for treatment and was found to have an exposed plate with mobility of the right mandibular tooth with oral mucosal infection. Blood tests, panoramic and chest x-rays are performed before the procedure. The patient was given antibiotics and analgesics as well as
hyaluronic acid gel to reduce his complaints but nothing happened. Then the patient was referred to Hasan Sadikin Hospital for further treatment.

**Result**

The patient was diagnosed with plate exposure reconstruction after mandibular reconstruction with indications of an oblique fracture and grade 3 mandibular posterior tooth mobility. At the beginning of treatment, the reconstruction plate was removed from the mandible and a new miniplate was installed. Reconstruction was carried out and two 2.0 miniplates with 8 holes were installed for mandibular immobilization. The problem in this case is the lack of area to install a new plate because the mandibular bone is already very thin. This condition occurs due to the influence of a long-lasting infection. In addition, the installation of the old plate was too thick and the installation direction needed to be corrected. In the case of a patient experiencing an oblique fracture in an area that extends to the body of the mandible, it is best to reduce and reposition it through an extra oral opening. Apart from that, modifications are needed in carrying out reconstruction in cases where the mandibular bone is left thin, by installing a miniplate at the champy line and mandibular margin. By modifying the miniplate attachment, it is hoped that the mandible will be more stable and can function normally.

*Figure 1: Preoperative Mandibular Reconstruction*

*Gambar 2: Rekonstruksi Mandibula dengan Plat*
Figure 3: After 30 days of mandibular reconstruction with plates

Conclusion

The survival rate of mandibular reconstruction plates is significantly associated with mechanical and biological risk factors. Management of mandibular fracture cases must be appropriate and in accordance with the management. Through appropriate direction, it is hoped that the risk of plate exposure to patients can be minimized.

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