

***Review article*****PAIN IN KNIFE EDGE EDENTULOUS RIDGE TREATED WITH COMPLETE DENTURE****Abil Kurdi<sup>1\*</sup>, Jenny Sunariani<sup>2</sup> and Primanda Nur Rahmania<sup>1</sup>**<sup>1</sup>Department of Prosthodontics, Faculty of Dental Medicine, Universitas Airlangga, Surabaya, Indonesia.<sup>2</sup>Department of Oral Biology, Faculty of Dental Medicine, Universitas Airlangga, Surabaya, Indonesia.

\*e-mail : abilkurdi@gmail.com

**(Received 7 March 2020, Revised 9 May 2020, Accepted 11 May 2020)**

**ABSTRACT :** Extreme bone resorption of the mandible and maxilla may produce an unstable or a non-retentive denture and is associated with pain and discomfort. Knife edge ridge is one of compromised ridge due to resorbition ridge process. Knife edge ridge is a ridge with sharp bones and is a frequent problem in edentulous patients. Influence in the bone structure of the residual ridge may be the cause of chronic pain under the denture, especially when performing mastication movements. When this ridge knife edge is loaded, the existing mucosa is pinched between the denture base and the bone which then causes the pain. To find out the mechanism of pain occurring in the edentulous knife edge ridge given complete denture treatment. Knife edge ridge that was given a complete denture treatment can trigger the occurrence of pain. The process of the occurrence of pain occurs in 4 phases of transduction, transmission, perception and modulation, which in the process requires neurotransmitters such as substance P (sP) and ATP as messenger pain.

**Key words :** Knife edge ridge, complete denture, pain, illness.

**INTRODUCTION**

Complete denture prosthesis functioning to replace lost teeth in a toothless jaw in order to restore aesthetic function, mastication and speech (Nallaswamy, 2017). Making complete dentures can be influenced by ridges who experienced atrophy. Atrophy is derived from the presence of resorption in the edentulous ridge (Prasad and DivyaMehra, 2014). Residual ridge resorption is a complex biophysical process and often occurs after tooth extraction. Extreme bone resorption from the mandible and maxilla can produce unstable or retentive dentures and is associated with patient pain and discomfort (Prasad and DivyaMehra, 2014).

One of the compromised ridges due to the resorption ridge process is the knife-edge ridge. This type of ridge is a ridge with sharp bones and is a problem that often occurs in edentulous patients. The knife-edge ridge is formed due to the rapid resorption of the labial and lingual sides of the anterior lower jaw ridge<sup>2</sup>. The influence in the bone structure of the residual ridge can be a cause of chronic pain under the denture, especially when performing masticatory movements. When the knife-edge ridge is given a load, the existing mucosa will be wedged between the base of the denture and bone, which will

then cause pain (Prasad and DivyaMehra, 2014).

The purpose of this paper is to determine the mechanism of pain in the edentulous knife-edge ridge given complete denture treatment.

It is hoped that this paper can provide practitioners with knowledge about the process of pain in the edentulous knife-edge ridge that is given complete denture treatment so that the practitioner can better understand and treat the patient.

**LITERATURE REVIEW**

Complete denture or complete denture prosthesis can be defined as the replacement of natural teeth in the arch and other parts associated with an artificial replacement. The function of complete denture is the treatment of replacing the missing teeth as a whole in the jaw to restore aesthetic function, mastication, and speech (Nallaswamy, 2017).

The Knife-edge ridge is included in one of the compromised ridges due to the process of resorption ridge. A knife-edge ridge is a ridge with sharp bones and is a problem that often occurs in edentulous patients. The knife-edge ridge formed because of the rapid resorption of the labial and lingual sides of the anterior lower jaw