

## A classification for complete overdenture based on location of canine coping

Hiroshi Sakurai, DDS,<sup>a</sup> Keii Shou, DDS,<sup>a</sup> Tomohiko Ishigami, DDS, PhD,<sup>a,b</sup> Naoki Tsukimura, DDS, PhD,<sup>a,b</sup> and Tetsuo Ohyama, DDS, PhD<sup>a,b</sup>

<sup>a</sup>Department of Partial Denture Prosthodontics, and <sup>b</sup>Division of Oral and Cranio-maxillofacial Research, Dental Research Center, Nihon University School of Dentistry, Tokyo, Japan

Overdentures were classified into three groups based on the presence/absence of canine copings: Group I, those with a coping on the canine of one side; Group II, those with two copings on both sides of the canine; and Group III, those without any coping on the canines. Three groups were further sub-classified on the basis of number and location of other copings. This classification system (Sakurai Classification) is useful for the arrangement of root caps and designing of magnetically retained overdentures. (*Int Chin J Dent* 2006; 6: 93-95.)

**Key Words:** classification, complete denture, coping, overdenture.

### Introduction

Over the last decades, the use of magnetic attachment systems has increased considerably. Exchange of information between clinicians and researchers on the effectiveness of various dentures would be beneficial with the use of a simple method of denture classification. Several methods concerning the classification of missing teeth as well as removable partial dentures have been reported.<sup>1-4</sup> The authors propose a new and simple classification system for complete overdentures.<sup>5</sup>

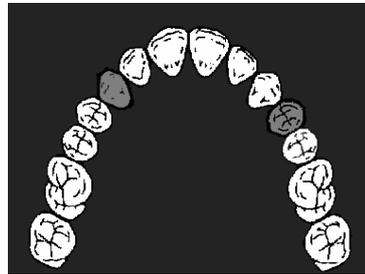
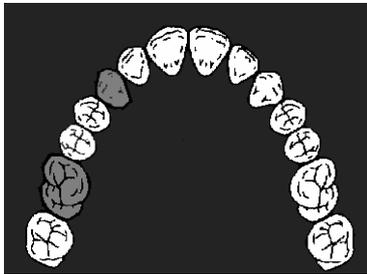
### Classification

This classification system identified as the Sakurai Classification comprises three major groups based on the presence/absence of canine copings: Group I, those with a coping on the canine of one side; Group II, those with two copings on both sides of the canine; and Group III, those without any coping on the canines (Table 1).

**Table 1.** Classification of complete overdentures based on location of canine coping.

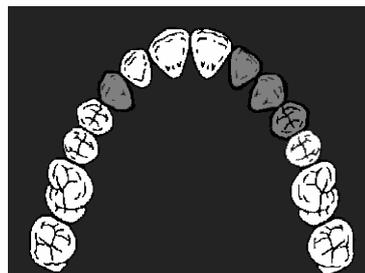
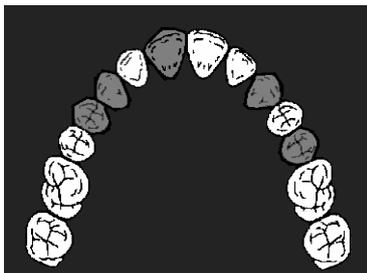
Group I	Coping on canine on one side
I	Coping on canine on one side
IA	Copings also present on anterior teeth
IB	Copings also present on bilateral molars
IU	Copings also present on unilateral molars. If the molar is opposite the canine, use IUO.
IAB	Copings also present on anterior teeth and molars on both sides
IAU	Copings also present on anterior teeth and molars on one side. If the molar is on the opposite side, use IAUO.
Group II	Copings on canines on both sides
II	Copings on canines on both sides
IIA	Copings also present on anterior teeth
IIB	Copings also present on bilateral molars
IIU	Copings also present on unilateral molars
IIAB	Copings also present on anterior teeth and molars on both sides
IIAU	Copings also present on anterior teeth and molars on one side
Group III	Canines without copings
III	No coping
IIIA	Copings present on incisors
IIIB	Copings present on bilateral molars
IIIU	Copings present on unilateral molars
IIIAB	Copings present on incisors and molars on both sides
IIIAU	Copings present on incisors and molars on one side

Further classification was performed based on the number and position, including bilateral or unilateral, of the copings. Where copings were present on the incisors, the case was classified as Anterior (A). Where copings were present on molars, the case was classified as bilateral (B) or unilateral (U). For Group I cases, opposite (O) was added if the molars exist on the opposite side of the canines. The number of copings was added after A, B or U. This classification consists of (1) the major classifications of Groups I, II, and III; (2) the minor classifications of A, B, U, and O; and (3) the number of copings.



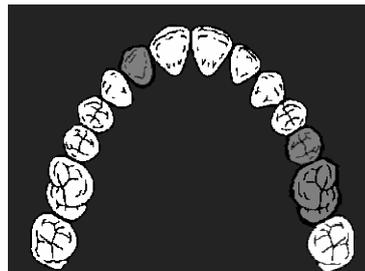
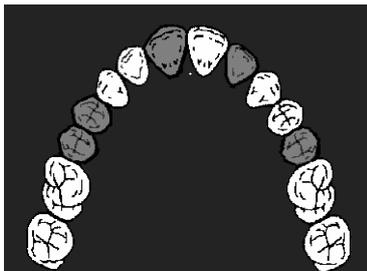
**Fig. 1.** Left IU<sub>1</sub>  
Group I, unilateral canine coping  
one posterior unilateral coping

**Fig. 2.** Right IU<sub>1</sub>O  
Group I, unilateral canine coping  
one posterior unilateral coping  
opposite side



**Fig. 3.** Left IIA<sub>1</sub>B<sub>2</sub>  
Group II, bilateral canine copings  
one anterior coping  
two posterior bilateral copings

**Fig. 4.** Right IIA<sub>1</sub>U<sub>1</sub>  
Group II, bilateral canine copings  
one anterior coping  
one posterior unilateral coping



**Fig. 5.** Left IIIA<sub>2</sub>B<sub>3</sub>  
Group III, no canine coping  
anterior two copings  
three posterior bilateral copings

**Fig. 6.** Right IIIA<sub>1</sub>U<sub>2</sub>  
Group III, no canine coping  
one anterior coping  
two posterior unilateral copings

Fig. 1 shows the Group I dentition, in which the coping is on the canine of one side. This case is further classified as IU because a molar on the same side also has a coping. The number of copings can be reported by adding an Arabic numeral after A, B, or U. According to our definition, the proper expression for the case of Fig. 1 will be IU<sub>1</sub>. The case of Fig. 2 is also classified as Group I since the canine coping is on one side. This case, however, can be classified as IU<sub>1</sub>O due to the molar coping located on the opposite side of the canine.

Figs. 3 and 4 show the cases classified as IIA since the copings are on bilateral canines and other anterior teeth. Fig. 3 can be categorized as Group II since the copings are on both canines. Further, the case is classified as IIA<sub>1</sub>B<sub>2</sub> since there are an anterior coping and two bilateral copings in the premolars. The case of Fig. 4 primarily classified as Group II is further classified as IIA<sub>1</sub>U<sub>1</sub>, since both of an incisor and a premolar have a coping.

Group III is used for the cases involving canines without copings. Fig. 5 is classified as IIIA<sub>2</sub>B<sub>3</sub> due to two anterior copings and three bilateral posterior copings. Fig. 6 should be classified as IIIA<sub>1</sub>U<sub>2</sub> because there are three copings in each of a lateral incisor, a premolar, and a molar. Both the premolar and molar were located on the left side, and the U-B category is judged as unilateral (U).



**Fig. 7.**  
 IU<sub>1</sub>O  
 Group I, unilateral canine coping  
 one posterior unilateral coping  
 opposite side

Fig. 7 demonstrates a typical IU<sub>1</sub>O case, in which a coping is on the right canine and an opposite molar. This case is exactly the same category as the case of Fig. 2.

The original Japanese version of the Sakurai Classification has been published in reference 5 (Sakurai et al. 2002).

## References

1. Godfrey RJ. Classification of removable partial dentures. J Am Coll Dent 1951; 18: 5-13.
2. Skinner CN. A classification of removable partial dentures based upon the principles of anatomy and physiology. J Prosthet Dent 1959; 9: 240-6.
3. Avant WE. A universal classification for removable partial denture situations. J Prosthet Dent 1966; 16: 533-9.
4. Miller EL. Systems for classifying partially dentulous arches. J Prosthet Dent 1970; 24: 25-40.
5. Sakurai H, Ishigami T, Takagi Y, et al. A proposal for complete denture of overdenture (Sakurai Classification). J J Mag Dent 2002; 11: 9-13.

## Correspondence to:

Dr. Tomohiko Ishigami  
 Department of Partial Denture Prosthodontics, Nihon University School of dentistry  
 1-8-13 Kanda-Surugadai, Chiyoda-ku, Tokyo 101-8310, Japan  
 Fax: +81-3-3219-8350 E-mail: ishigami-t@dent.nihon-u.ac.jp

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