Original Article

A simplified classification system for partial edentulism: A theoretical explanation

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We have introduced a simplified classification system for partial edentulism in this article. This is a numerical system that has six rules: 1) An edentulous area is coded from the right to the left, 2) The code "0" shows the midline, 3) A distal extended area is denoted by the code "1", 4) A tooth-supported edentulism is illustrated by the code "3", 5) The code "4" indicated a tooth-supported edentulism that crossing the midline, 6) The code "5" is used to illustrate distal extended edentulism that crosses the midline. Potential benefits of the system include: 1) Determination of the position of the edentulous area in the arch with respect to the midline, 2) Simplified imagination of the partial edentulous arch, 3) Improved professional communication, 4) Facilitated data transformation from the edentulous arch to the computer.

Key words: Classification system, numerical system, partial edentulism

It has been estimated that there are over 65000 possible combinations of teeth and edentulous spaces in opposing arches.[1] Several methods of classification of partially edentulous arches have been proposed and are in use. Classification assigns names and symbols which can aid in visualization and discrimination, which in turn can help in interdependent properties of a scientific domain.[2]

A useful classification is one, which depicts information in a simple, logical and vivid manner.[3] A classification system must be dynamic[3] and should enable visualization of the partially edentulous arch. As no single method of classification could suffice, an attempt should be made to combine the best features of all classification methods so that a universal classification can be adopted.[1]

Today, the Kennedy's method of classification is probably the most widely accepted classification of partially edentulous arches. This classification would be difficult to apply to every situation without certain rules governing the application of Kennedy's method.[1] Therefore, there was some uncertainty regarding its application. In this article, we attempt to provide a simpler classification of partially edentulous arches while considering most of Kennedy's and all of Applegate's rules in this system. Our system is based on numerical codes and is designed to enable quick visualization of the partial edentulous arch.

RULES OF THE SYSTEM

This system has six rules that include:

Rule 1. Edentulous spaces are coded from the most posterior right side of the arch toward the left side.

Rule 2. The midline has been determined in this system. "0" Code is used to demonstrate the midline [Figure 1]. According to rule 1, the number(s) located before the "0" code refer to the right side of the edentulous space(s) in the mouth or the cast while the number(s) after the "0" code describe(s) the edentulous space(s) on the left side of the arch.
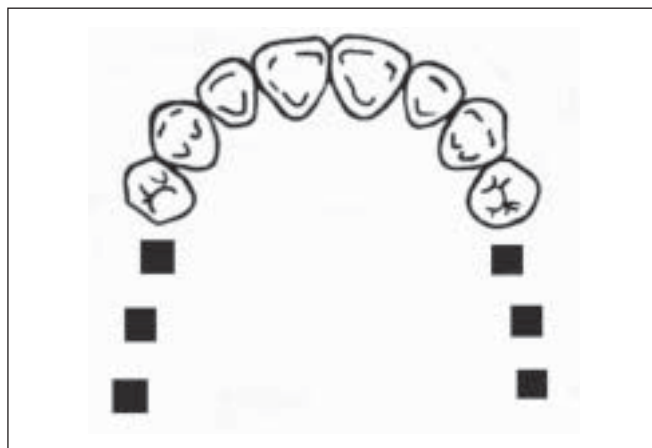

Figure 1: (101) is the code of the case

Rule 3. In this classification, the code "1" indicates the distally extended edentulous spaces [Figure 1]. Therefore, Kennedy's class I representing bilateral distal extensions has been shown by double "1" on each side of the midline symbol.

Note: The code "2" is not used in this system, therefore, any possibility of confusion between this numeral code and Kennedy's class II has been eliminated. Thus, if Kennedy's class II rule is being used to represent a unilateral distal extension located on the left side of the arch, the code "01" is used to describe the existing state of edentulism according to our classification system [Figure 2].

Rule 4. Every tooth-supported edentulous area was given the code "3". For example, an edentulous area to the left side of the arch falling under Kennedy's class III rule, has been given code "03" in our system. For more example, going by Kennedy's class II mod1 nomenclature, the code of the main edentulous space is expressed by "1" in our system and the modification by code "3" [Figure 3]. Thus, our classification system assists a practitioner in imagining the exact location of the main edentulous area and the modification in the arch.

Rule 5. Code "4" denotes an anterior edentulous area that crosses the midline [Figure 4]. This code could determine the midline alone, therefore in these cases the code of the midline has been eliminated.

Rule 6. Sometimes, a distal extension edentulous space crosses the midline. The code "5" is used to describe this situation [Figure 5]. The code has been located before or after "0" according to the position of the edentulous area.

BENEFITS OF OUR NEW CLASSIFICATION SYSTEM

This new classification system is intended to offer the following benefits:
1. This system determines the position of an edentulous space in the arch with respect to the midline, enabling a practitioner or technician to imagine the partially edentulous arch easily.
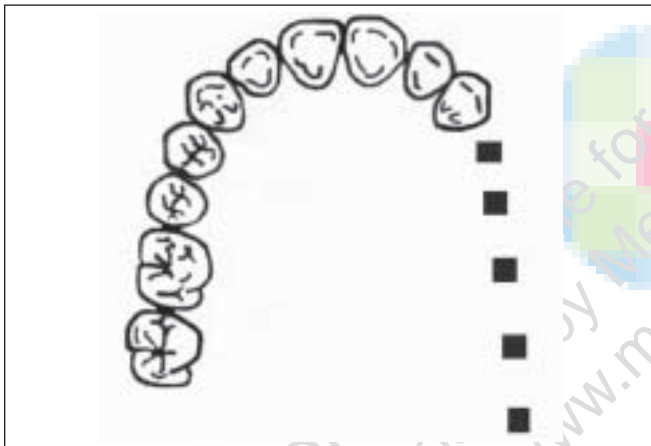2. Easy visualization of the partially edentulous arch

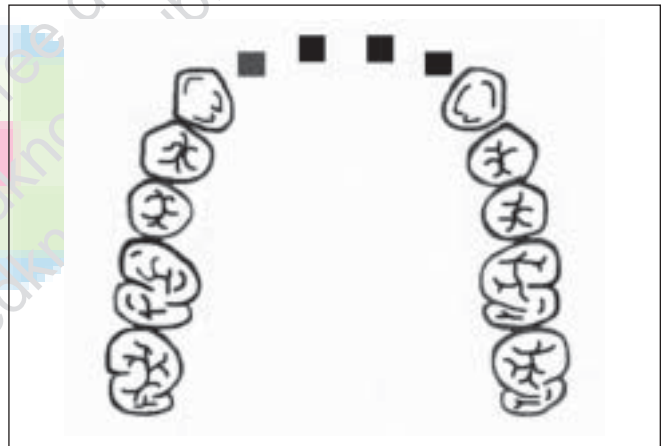**Figure 2:** (01) is the code of the case

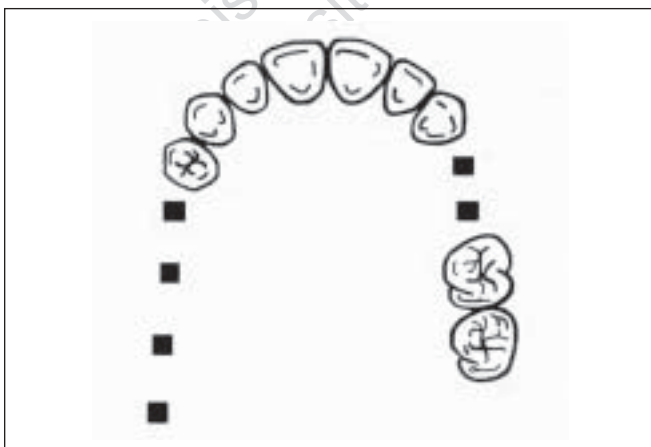**Figure 4:** (4) is the code of the case

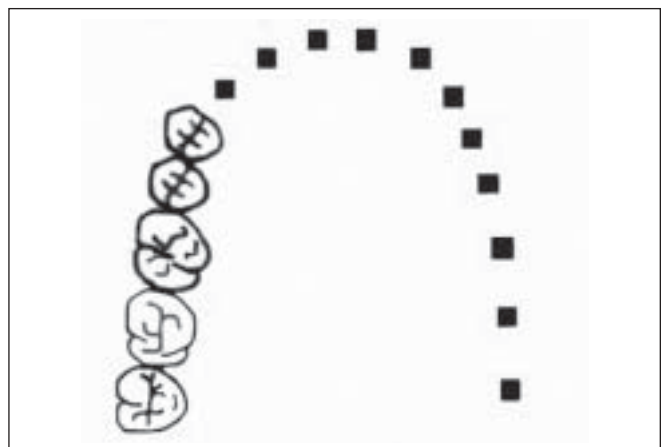**Figure 3:** (103) is the code of the case

Figure 5: (05) is the code of the case

will faciltate the planning and consultation for primary treatment.

3. In this system, all of Applegate's classification rules have been considered.
4. There was no conflict between Kennedy's classification and our system.
5. Our classification system is a numerical one, which makes translation to digital data easy. Nowadays, software applications have been written to design removable partial denture frameworks. Thus, our new coding system could facilitate the transformation of data to the computer.

REFERENCES

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DENTAL EVENTS

35th Indian Prosthodontic Society Conference,
8th - 11th September, 2007.
India Habitat centre, New Delhi.

Canadian Academy of Restorative Dentistry and Prosthodontics
12th - 16th September, 2007.
The Fort Garry Hotel, Winnipeg, Manitoba.

Association of Prosthodontists of Canada
27th - 29th September, 2007.
Grand Okanagan LakefrontResort and Conference Centre, Kelowna, British Columbia.

The International Academy of Gnathology-American Section.
17th - 20th October, 2007.
The Hotel Del Coronado, Coronado, Calif.

American Academy of Maxillofacial Prosthetics,
27th - 30th October, 2007.
The Westin Kierland Resort and Spa, Scottsdale, Ariz.

Northeastern Gnathological Association
16th November, 2007.
Chelsea Piers, New York, NY.

Korean Academy of Prosthodontics,
Fall Scientific Symposium
16th - 17th November, 2007.
Lotte Hotel, Seoul, Korea.

Greater New York Academy of Prosthodontics
30th November - 1st December, 2007.
The Jazz at Lincoln Center, Broadway at 60th St, New York, NY.