

AWARENESS OF PEDIATRIC ZIRCONIA CROWNS AMONG DENTISTS

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ABSTRACT:

AIM: The aim of the study is to evaluate the knowledge about the pediatric zirconia crowns among the dentists .

OBJECTIVE: To assess the awareness of the pediatric zirconia crowns among the dentists.

BACKGROUND: Early childhood caries is a pandemic problem affecting the children. There are several options available for the full coronal coverage of the affected primary dentition. Paediatric zirconia crowns do not contain metal and more esthetic. Zirconia crowns are not new to the field of dentistry but is a dominant type of ceramic used in dentistry. Newer generations of zirconia crowns are used in primary dentition. This study focuses on the knowledge of dentist on zirconia crowns used in paediatric dentistry.

REASON: To evaluate knowledge about the awareness of p zirconia crowns among the dentists.

INTRODUCTION:

Dental decay in children's teeth is one major problem affecting the children in a greater percentage, which is pandemic. Oral health in consistency have evolved as a major public health issue as low income and socially disadvantaged groups experience in even levels of oral disease(1). Detection of dental decay during the early stages among the young children group is now an important challenge in the process of diagnosis. By understanding the nature and the process of dental caries, we can be able to arrest and control disease from producing further severe effects through the remineralization process which ultimately leads to dental decay (2).The existence of dental caries does not vary depend upon the age, sex, geographic location, food habits etc but also within the oral cavity. When there is more carious involvement of the primary crowns then it requires the restoration by means of coronal coverage. The enamel and dentin in the primary dentition is much thinner than the primary dentition and so there is increased risk of caries in the primary dentition (3). Zirconia crowns are not new to the field of dentistry but it is the dominant type used in the dentistry. Newer generations of zirconia are used in pediatric dentistry.

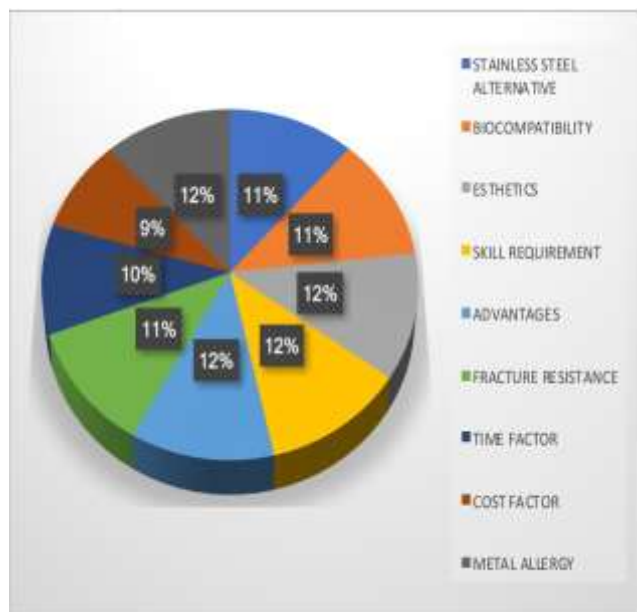
MATERIALS AND METHOD: The study was conducted among 150 dentists in Tamil Nadu, during the month of December. A questionnaire consisting of 10 questions was designed with YES or NO options. The questionnaire consisted of distinct sections related to zirconia such as its biocompatibility, its advantages, and how aware the dentist is and regarding the stainless steel alternatives, allergic reactions due to the metallic crowns, fracture resistance and its cost and time factors. The results were calculated statistically.

ADVANTAGES:

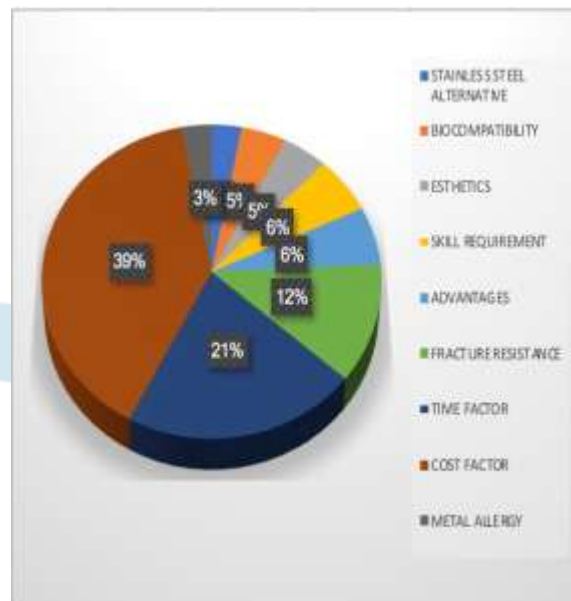
The most obvious advantage of zirconia crowns is that they have excellent esthetics property, which is far higher than the other pediatric crown options available and the custom-fabricated crowns zirconia crowns exhibits exceptional durability(4). Moreover, zirconia crowns will not break or chip as the veneered stainless steel crowns do on occasion, they will not discolor and break down over usage like the other resin strip crowns often do.

DISADVANTAGES:

One greatest disadvantage of zirconia crowns is that the exposure of the zirconia crowns to saliva and blood during the try-in stage can affect the of the bond between the crown and the cement(5).. The Phosphate groups present in the saliva will bond with the zirconia surfaces, thereby results in less reactivity of the zirconia bonding to the phosphate groups found in the which are the mostly suggested cements for use with zirconia. Zirconia crowns will not be exact for cases that involves severe crowding or space loss(6). The skill requirement and the ability to manipulate the size, shape, and fit of the zirconia crown is very limited, so in the areas of crowding, the use of a crown which can be easily adapted by means he shape and size is suggested.

RESULTS :

PIE CHART 1: POSITIVE RESPONSE



PIE CHART 2: NEGATIVE RESPONSES

DISCUSSION:

The results shows that there is significant percentage showing that the dentist has more knowledge about the pediatric zirconia crowns . And it is evident that the use of zirconia is not limited because of the cost or the time factor(7). It's use in pediatric dentistry is predominant due to the esthetic properties . Zirconia crowns not only gives us esthetic but it also allows minimal tooth reduction and thus, aids in preservation of the tooth structure. And so zirconia has maximum advantages.

CONCLUSION:

The results shows that the knowledge about the stainless steel alternative is 11%, biocompatibility is 11%, 21% of the dentists says that time factor is not a reason to avoid the use of zirconia, 39% of the dentists also says that cost factor is not a factor to avoid the use of zirconia crowns and only 9% of the dentists avoid the use of zirconia 11% of the dentists suggests zirconia use because of its esthetics. Awareness about the fracture resistance is 12%. The other alternatives considered for zirconia includes metal ceramic, all ceramic, E max etc.

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