



RELATIONSHIPS BETWEEN BLOOD GROUPS AND DENTAL CARRIES IN 10-80 AGE GROUP AMONG

Shunmugam Kumar C Mangal and Preetha S

Saveetha Dental College, Chennai 77

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ABSTRACT

Aim: To find the blood group with most probability of dental carries

Objective: To use blood grouping methods to find relationship of blood groups with dental carries

Background: Dental caries, also known as tooth decay, cavities, or caries, is a breakdown of teeth due to activities of bacteria. Symptoms may include pain and difficulty with eating. Complications may include inflammation of the tissue around the tooth, tooth loss, and infection or abscess. There are several causes for dental carries so it's done to see the relationship between blood groups

Reasons: To find whether there is a relationship between blood group and dental carries

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INTRODUCTION

ABO is the most commonly used blood grouping system to determine certain factors like blood transfusion and histocompatibility of tissues for tissue grafting and organ transplants. It also determines the antigens and antibodies present in the body (3). This system has 4 blood groups A, B, O & AB (3). In which O group has no antigen but has both A and B antibodies hence called universal donor. While AB blood group has no antibodies while it has both A & B antigen making it a universal recipient. Other important type of blood grouping is Rh factor. This system is based on the presence of several proteins present on the surface of the erythrocytes (1). This study deals with the relationship between blood groups and dental carries in patients in South India (Tuticorin).

Antigens A and B are present on the surface of the cell membrane of the RBC. While the antibodies are present in blood plasma. Immunohistochemical studies have demonstrated the presence of A/B antigens on spinous cells in the non-keratinized oral epithelium of blood group A and B persons, where basal cells express precursor structures and the more-differentiated spinous cells express the A or B antigens. Blood group O persons who do not have the A and B gene-coded glycosyltransferase express a fucosylated variant (Ley) of the precursor structure (1). For blood type the genes are present on the chromosome 11 and 19. And are called blood sector genes. The blood type antigen is present in the blood cells.

While in some cases it's present in body fluids like saliva, mucous & semen (2). These people are called secretors while the former is called non secretors. For people with blood group A they secrete their antibodies through body fluids like saliva so they have low incidence of dental carries. This study is done to search for which blood group has the highest probability for dental carries.

MATERIALS AND METHODS

Inclusive criteria:(1)

- Patients of age 10-80 range have been taken.
- Both male and female patients were taken for the study
- Patients holding certificate of proper dental records were obtained from their dentist with their consent

Exclusive criteria:(1)

- Patients below and above the age group were not taken
- Patients who don't know their blood group were not taken in this study
- Teeth missing due to reasons other than that of dental carries are not included in the DMF score

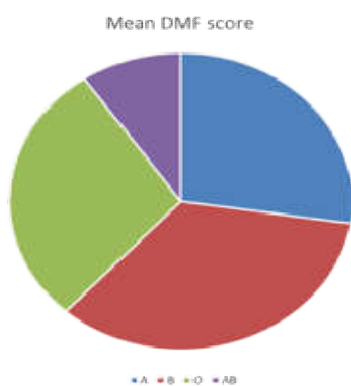
The patients of age 10-80 were selected at random for the study. The patients history was taken from a registered dental clinic in Tuticorin with the consent of the dentist and the patients.

The preliminary examination was done with the help of mouth mirror and a dental probe under dental light. The

carries status was assessed with the help of DMF index. And the blood groups was found with the help of k-sheets.

RESULTS

B blood group had the highest mean DMFT score for dental caries and AB had the lowest



Blood groups	Mean DMF score
A	8.62
B	10.81
O	9.05
AB	3

DISCUSSION

This research was done to show which blood group would have the highest probability of dental carries. It's also done to find out whether there is a relationship between dental carries and blood groups. As due to certain blood groups which have the ability to secrete their antibodies into the saliva and hence they can prevent dental carries. And also the fact that the blood groups are genetically transferred characters there could be a hereditary relationship to dental carries and blood groups. But if large number of patients were taken the result may slightly vary

CONCLUSION

B blood group had the highest mean DMFT score for dental caries and AB had the lowest but considering the small sample size and more prevalence of B blood group in the population the result may vary.

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