

Can Dimple on Face is Affected by Blood Group?

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Abstract

The objective of the present study was to correlate dimples on face with blood group system in humans. Total 180 subjects were participated in this activity. The subjects were student at Bahauddin Zakariya University Multan, Pakistan. Blood is to be checked against three types of antibodies, antibody A antibody B and –Rh serum. I took the blood group of the subjects and checked their blood type. Then we made list of subjects with their blood group types and asked them do they have dimple on their face or not one by one. Then we mentioned whether they have dimples or not after their blood group type in the list. It was concluded from the present study that O+ blood group people have maximum chance of having dimples and AB- have minimum chance of having dimples.

Keywords: ABO blood group system; Face dimples; Dimples and Blood grouping

Introduction

The most important blood group system in human blood transfusion is ABO blood group system. It is also present in some other animals like chimpanzees, bonobos and gorillas. ABO blood group system is discovered by Karl Landsteiner who discovered three different blood types in 1900. Our blood contains white blood cells, red blood cells, platelets and plasma. A person with blood group A, he have antigen A on red blood cells surface and antibodies B on his blood plasma. On the otherhand a person with blood group B have B antigen on red blood cells surface and A antibodies in his plasma. If he have blood type AB, then he have both antigen A and B on his red blood cells surface and no antibodies. If he has O blood group than neither he have antigen A nor B on red blood cells and both A and B antibodies present in plasma. A person having blood group A can donate blood to the person having blood group A. B blood group can only be donates to a person having blood group B and so on. If a person receive another type of blood or donate blood to a person with another type of blood than antibodies will match to the donors blood antigen. Red blood cells will clump in donated blood. Antibodies bind with the foreign red blood cells which cause agglutination.

Agglutinated red blood cells will break after a while and their content will leak out. Persons having AB blood are universal receivers and they receive blood from all blood groups. Persons

with O blood group are universal donors and they donate blood to all types of blood groups. Rh blood group system is another and important blood group system after ABO [1]. Term Rh is abbreviation of “Rhesus factor” discovered in 1937 in rhesus monkey red blood cells. Rh blood group system related with many antigens, one of which is antigen D. Rh+ blood type have antigen but Rh- do not have antigen. Those individuals who lack antigen D do not make it naturally. Rh+ antigen lack the antigen and pose a danger for Rh- persons. Adverse effects may not be occur the after first time when blood with Rh+ is given to the person having Rh- blood group. But the immune system produces anti Rh antibodies by responding to the foreign Rh antigen. If we give again Rh+ blood then after forming antibodies they cause agglutination because foreign red blood cells cause them to clump together. Hemolysis occur which cause destruction of red blood cells and also cause serious illness [2].

Dimple is a small hollow area on a part of human body mostly noticed on the cheek or on chin. There are two kinds of dimples, chin and cheek dimples. Cheek dimples shown when a person make a face expression. But in the case of chin dimple there is a small line on the chin that stays without making any face expression. Dimples may be appear or disappear for an extended period of time. Some researchers conclude that dimples are genetically inherited and as

a dominant trait. But some said that they are irregular dominant trait controlled by one gene that may be influenced by some other genes. It is a genetic defect that cause irregular growth of certain facial muscles during embryonic development. They are formed by structural variation in facial muscle which is zygomaticus major. Presence of double zygomaticus major muscle form cheek dimples. The muscle that is shortened is responsible for stretching or pulling our lips behind into corners when we smile. They occur in those persons having dominant dimple gene. If both parents have dimples than there would be 50% chance that this deformity passed into next generation. Dimples are incredibly attractive and so many people wish that they could have dimples. If a person feels uncomfortable with their dimples than there are some ways to help them. They can never be removed but there are procedures that can reduce dimple size. The objective of present study was to correlate dimple on face with blood group system in humans.

Materials and Methods

Blood Grouping

In order to check blood group of any person, a blood sample is needed. First of all sterilize finger with alcohol wipes then take blood from fingertip by pricking it. Blood is checked by mixing it with three types of antibodies in test tube against Antibody A, Antibody B and anti-Rh serum. Cells clumps, or blood clotting tells about the type of Blood group. Then I Put blood group sample in test tube then add antibodies in it. After adding antibodies to blood

Results and Discussion

Table 1: Dimple on face with respect to blood group.

Blood Group	Males % (Yes)	Males % (No)	Females % (Yes)	Females % (No)
A ⁺	11.76	88.23	20.00	80.00
A ⁻	No Subject	100	No Subject	100
B ⁺	10.00	90.00	21.81	78.18
B ⁻	No Subject	100	No Subject	100
AB ⁺	0.00	100	12.50	87.50
AB ⁻	No Subject	No Subject	No Subject	100
O ⁺	16.66	83.33	26.83	73.17
O ⁻	0.00	0.00	40	60

Following Table 1 shows the percentage of dimples in A+ males is 11.76% while in A+ females is 20%. Percentage of dimples in both A- males and females is 0%. B+ males have 10% and B+ females 21.81% dimples. B- males and females both have 0% dimples. AB+ males have 0% dimples while AB+ females have 12.50%. AB- both males and females have 0% dimples. O+ males have 16.66% and females have 26.83% dimples. O- males have 0% and females have 40% dimples on their face. Questionnaire based studies have given an important advancement in recent studies. Four scientists in 2015 work on five different Genetic Traits in Association with the Distribution Pattern of ABO and Rhesus Phenotypes among Families in Calabar and Nigeria one of which was dimples [3-10].

sample wait for few seconds to observe precipitates formation. If blood is clot it means one of the antibody will react to the blood. If blood cells do not clot on antibodies A or Antibodies B then it is blood group O, If it clots on both antibodies A and B then Blood group is AB. If blood cells clot against Antibodies A then it is Blood Group B and if blood cells clot against Antibodies B then it is Blood Group A. After this blood sample is checked against anti-Rh serum which confirms the positivity and negativity of that blood group. Drop anti-Rh serum on blood sample if blood cells clot on Rh antibodies then blood group type is positive and if do not clot then it is negative blood group type.

Project Designing

Firstly, we took consent from each subject to take their blood sample and collected information by making questionnaire that do they have dimples on their face or not? Then we took blood sample of each subject and checked their blood group type by the procedure mentioned above. Then we made list of subjects with their blood group types and asked them do they have dimple on their face or not one by one. Then we mentioned whether they have dimples or not after their blood group type in the list. Total 180 subjects were participated in this activity. The subjects were students in Bahauddin Zkariya University Multan, Pakistan.

Statistical Analysis

MS Excel is used to perform stational analysis.

Conclusion

It was concluded from the present study that O+ blood group people have maximum chance of having dimples and AB- have minimum chance of having dimples.

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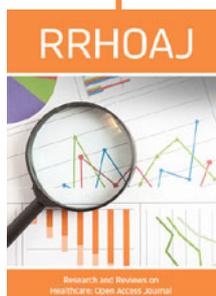
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