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Blood grouping and tendency of flu compatibility

Abstract

The objective of our present study was to co-relate the tendency of flu and blood grouping. The number of subjects that took part in this research was 177. We determined the blood grouping of every subject in a way that we pricked finger for the little bit flow of blood, after placing on glass slide I poured drops of anti A,B and D. The blood group of every subject was identified by this method. Our project was to find a relation between blood group and tendency of flu. Every subject involved in this marked their own compatibility. By the assistance of every subject we completed our survey. It was concluded that B positive O positive were more sensitive towards flu.

Keywords: subjects, antigen, flu

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Introduction

Blood grouping involves two types of systems. ABO Multiple Allelic system(1) and Rh system(2). ABO system was introduced by a Karl Landsteiner in 1901.[1] Antigens on RBC decide the phenotype of a person. ABO has four phenotypes. There is a coat found on RBC. The coat is usually of oligosaccharide. Person having antigen A has A blood group. Person having B antigen has B blood group. A person both of these A and B antigens has AB blood group while the person with neither A nor B has O blood group. Then after antigens the role of antibodies is very important.[2] RBC which lacks antigen are their antibodies. Anti A is present in persons with blood group of antigen B. Similarly persons with blood group B have anti A bodies.[3] A person having phenotype AB has neither A nor B antibodies and persons with O blood group systems have both anti A and B antibodies. The blood serum which has antibodies is called as antiserum. A person should only receive their own kind of blood to reduce the chance of reaction in any case. For this purpose cross matching should be done before the transfusion of blood. This is the reason O blood group persons are universal donor while AB are universal recipient. Rh meaning Rhesus differentiated by negative and positive signs. D is considered to be the most important antigen of it.[4] There are also other antigens as well like C and E. It has two genes D and d. persons with the presence of this gene has positive Rh^+ factor while those who lacks this has Rh^- factor. Person having Rh negative do not has anti Rh antibodies so Rh positive is totally not suitable for Rh negative recipient. Incompatibility also occurs during transfusion. Moreover maternal foetal Rh incompatibility also occurs when Rh negative women married to Rh positive man and their child is Rh positive. The child is anaemic in this case which leads to still birth and other complications as well. Influenza virus is the respiratory infection; it is the viral infection that causes fever, cold, cough and runny or stuffy nose.[5] It was first termed as epidemic after many years scientists discovered Orthomyxoviridae family of viruses which cause flu. There are four types of viruses which are responsive for flu. Influenza has subtypes based on two antigens hemagglutinin (H) and neuraminidase(N).[6] It is an enveloped virus including the genome which has segments of RNA negative strands. They are vulnerable to damage environmental effects as it is by coted nucleotide protein. Influenza B virus is only found in human. is caused by A(H1N1) cause the study of association of ABO blood group with influenza response. Objective of present study was to co-relate blood grouping with tendency towards flu.[7]

Materials and methods

The total numbers of subjects were 177. We took their acceptance to enquire about their blood group for the sake of our project.

Blood grouping

To do a blood grouping test we use blood lancets to take a blood sample from a finger and we applied three drops of blood on glass slide. Pour one drop of anti A, anti B and monoclonal D on blood drops respectively also label the slide portions as A, B and D.[8] Mix it well. When RBC carrying one of the antigen were exposed to antibodies the agglutination occurs which meant they clump together. This clumping in one of the spot decides the blood group of an individual.

Project designing

We had to design a project regarding our own specific topics. Our project was to find the blood grouping and tendency of flu compatibility.[9] For this, the first step was the identification of the blood group of every subject in this project. Then, we asked every subject having different blood groups to mark their tendency of flu, that either they were sensitive towards flu or not. Every subject marked accordingly and then we proceeded for further tasks of this project.[10]

Statistical analysis

The analysis was done by using the Microsoft Excel.

Results and discussion

The result of blood grouping and tendency of flu compatibility is given in the following graph.

A+ male had 2.82% resistance towards flu and had 3.95% tendency of flu while female had 3.95% resistance and7.34% tendency. A-Male had 0.56% resistance and 0% favourability and female had 0.56% resistance ability and 0% favourable. B+ male had 3.95% chance of resistance while 2.25 were resistant; female had 18.64% chance of being infected while 9.60 were free from this. B-Male had 0% chance of sensitivity and resistant value was 1.12% and female had 0.56% sensitivity and 1.12% was non sensitive. AB+ male had 1.12% chance of sensitivity while 0.56% was resistant. AB-Female 0% chance of resistance and sensitivity. O+ male had 2.82% tendency towards flu while 7.34% were resistant and O+ female had 12.42% chance of flu

and 8.47% resistance. O-Male had 0% sensitivity and 0% resistance and female had 338% chance of being infected and 2.25% chance of non-sensitivity (Figure 1).

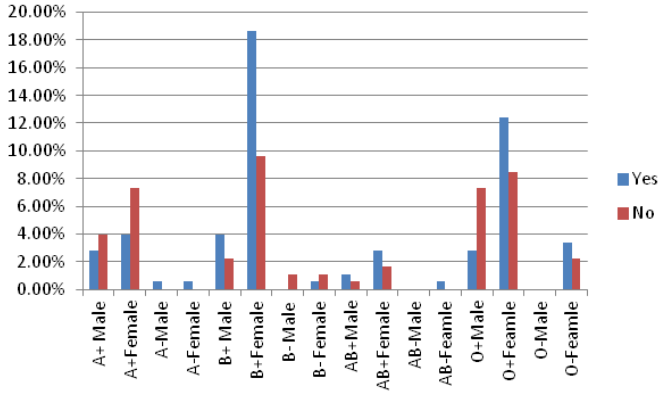

Figure 1 This graph shows the relation between blood grouping and tendency of flu.

Disscusion

In recent researches the questionnaire based studies have given prime value (3-10). In 1981, J.D.Kark worked on the relationship between epidemic influenza and ABO blood group. An epidemic which is caused by A (H1N1) causes the study of association of ABO blood group with influenza response. There was no distribution of influenza by blood groups. Titre was equal to 20 was higher in Groups A and B than O and AB. Then it was confirmed that clinical influenza is higher in groups of A and B than AB and O.

Conclusion

The recent studies concluded that B positive and O positive females have maximum tendency of flu while AB negative and O negative males have the minimum tendency towards flu.

Acknowledgments

None.

Conflicts of interest

The author declares there is no conflict of interest.

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