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Is There any Relation between Blood Groups and Flu Treatment with or without Medication?

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Abstract

Influenza virus is an RNA enveloped virus and consists neuraminidase, hemagglutinin and matrix protein. Each component has own role to lead infection. Different methods especially reverse transcription PCR is more appropriate to diagnose influenza. ABO blood group system is most common methods among 33 blood group system. It helps to check compatibility between donor and recipients especially in blood transfusion and transplantation. By using blood group determining kit we checked which type of blood group is in all blood samples. Antibody serum A, B and D helped to determine blood group via displaying agglutination in respective portions. B+ is observed commonly 42% males and 21% females shown B+ blood while they did not prefer medication for flu treatment. AB- is not observed in collected sample and moreover B- and A- is also least common. There is not any prominent relationship between type of blood group and treatment of flu with or without medication.

Keywords: *Flu, Influenza virus, ABO blood group, Agglutination*

Introduction

Influenza virus is one of the members of Orthomyxoviridae, which lead influenza. Influenza has different types like A, B and C while type A and B are most common strains [1]. It leads contagious respiratory infection with common symptoms just like cold. Influenza has RNA enveloped structure which is characterized by three enveloped glycoprotein neuraminidase (NA), hemagglutinin (HA) and matrix protein (M1 and M2). NA facilitate its separation and HA act as attachment protein to enter in host cells. Antibodies are produced by targeting NA and HA and provide protection and reduce illness also [2]. M protein is also integral to lead infection because it is structural protein. People suffer with lung infectious disease and neurological impairment are at high risk to get easily infected with influenza virus. Reverse transcription PCR act as reliable test to check influenza as compare to rapid antigen test which lack specificity and reliability in case of low influenza activity.

Blood Group mean entire blood group system which is characterized by gene. Moreover, these genes are closely linked or allelic. Blood type which used to test antisera within any given system. Karl Landsteiner has awarded by noble prize to discover ABO blood group system. It is most common blood group among 33 different blood group systems. It is not only important in transplantation and transfusion even it is able to discriminate blood type in child who are above the age of 6 years. ABO blood group is categorized in four types A, B, AB and O. Blood group A and B have opposite antigen i.e. B blood group individual shown A antigen on its RBCs and its vice versa. A person who has AB blood group contain both type of Antigen while O blood group has no any A and B antigen but both antibodies are present. Due to the presence of specific antibodies against specific antigen declared O blood group as universal donors and AB as universal recipients. Cross matching is performed to check compatibility and to avoid agglutination (clump formation) [3].

Materials and methods

Material used

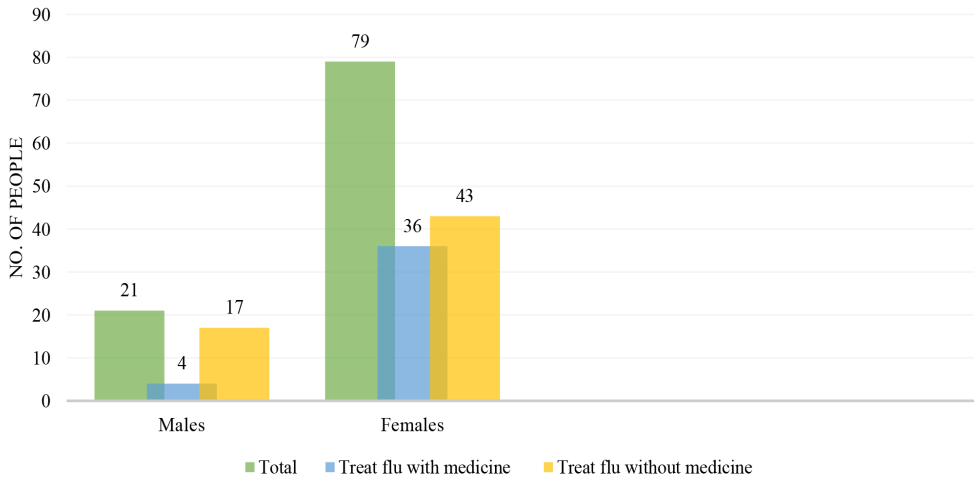
Blood group kit, Lancet, Alcohol, Cotton, Blood sample

Methodology

In order to determine blood group firstly lay out all blood group kit's components. This kit contains three portions in which antibody serum A, B and D present. Moreover, D helps to determine further positive and negative blood group type. On other side, sterilized the finger with alcohol, pricked it by using lancet and squeezed the finger to take out blood. Then added three drops of blood in these portions and named as 1st, 2nd and 3rd respectively. Here agglutination determined blood group type of individual like in some cases if agglutination occurs in second portion where antibody serum B was present, not occur in Antibody A and D containing which further declared clearly blood group of individuals is B-. Likewise, A+ blood group showed agglutination in 1st and 3rd portion as well. AB blood group showed agglutination in both 1st and 2nd portion while agglutination further determine blood group is positive or negative.

Results and Discussion

Firstly, we calculated the numbers of individual who preferred the treatment of flu with medication. Out of 21 males and 79 females 17 males and 43 females who did not preferred the use of medicine



Graph 1.*Number of individuals who treat flu with and without medicines*

Blood Group	Treat flu with Medicine		Treat flu without Medicine	
	MALES%	FEMALES%	MALE %	FEMALES%
A+	4.76	5.06	4.76	8.86
A-	0	0	0	1.26
B+	4.76	22.7	42.85	21.51
B-	0	0	0	2.53
O+	4.76	11.39	19.04	15.1
O-	0	2.53	4.76	1.26
AB+	4.76	3.79	9.52	3.79
AB-	0	0	0	0

Table 1.*Relation of blood group with flu medicine dependent treatment and independent treatment*

while remaining use medicine for flu treatment as shown in Graph 1. Those individuals who prefers the use of medicine for flu treatment in which 4.76 % males and 5.06%, 22.7%, 11.39%, and 3.79% females shown A+, B+, O+ and AB + blood group respectively. On the opposite side in which individual not use medication for flu 4.76%, 0%, 42.85%, 0%, 19.04%, 4.76% and 9.52 % and 0% males and 8.86%, 1.26%, 21.51%, 2.53%, 15.1%, 1.26%, 3.79% and 0% females displayed A+, A-, B+, B-, O+, O-, AB+ and AB- blood group as shown in Table no.1. B+ is most commonly observed and AB- is not observed in our randomly collected sample.

Conclusion

There is not any clear relationship between different blood groups and flu treatment individuals with or without medicine.

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