



BLOOD GROUP PREDILECTION IN CHOLECYSTITIS

Abhigna Panda*, Kabali Murthy J., Gopi Krishna D and Stalin Raja C

Department of Surgery, Rajah Muthiah Medical College Hospital Annamalai University, Chidambaram - Tamil Nadu

ARTICLE INFO

Article History:

Received 12th, August, 2015

Received in revised form 22th, August, 2015

Accepted 16th, September, 2015

Published online 28th, September, 2015

Key words:

Cholecystitis, ABO Blood Group

ABSTRACT

Objective: To study the predilection of ABO blood group in cholecystitis.

Methods: 50 patients of ultrasonography proven Cholecystitis were confirmed on operation. The ABO grouping and Rh typing of all the patients were done by standard agglutination technique and results were analysed.

Results: Cholecystitis is more common in female (74%) and age group of 41-50 yrs. has the maximum number of patients. Patients with blood group 'O' has maximum number (56%), followed by blood group 'B' (24%).

Conclusion: Patients with blood group 'O' has maximum number in our study. As the number of the patients in our study is too less, it cannot be concluded that blood group 'O' is a risk factor for Cholecystitis.

Copyright © Abhigna Panda, This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

Recently, quite a good number of studies have appeared in the medical literature linking certain blood groups and rhesus typing as risk factor for cholecystitis, in addition to the established factors such as parity, obesity, and diet, socio-economic and geographic allocation. ABO blood groups have been shown to be associated not only with various diseases but also with metabolic process including cholesterol metabolism [1]. The findings of different authors are however not uniform. Some studies revealed the incidence of cholecystitis is highest in blood group 'A', another study points towards 'AB' group; whereas a few other studies are of the opinion that there is no definite relationship between gall stones and any particular blood group. Whatever the results may be, the findings of these authors have generated an area of interest wherein lots of future research can be undertaken. In the midst of these controversies, we have taken up a prospective study on 50 patients of cholecystitis to ascertain whether such a relationship exists or not.

MATERIALS AND METHOD

During the period of 01/10/2013 to 30/09/2015, we did this study on 50 patients whose ultrasonography revealed cholecystitis. The ultrasound findings of gallstones in all patients were confirmed on surgery. The ABO grouping

and Rh typing of all patients were done at the Blood bank department, RMMCH, Chidambaram, by standard agglutination technique.

RESULTS

The incidence of cholecystitis was found to be more in females (n=37, 74%) as against male (n=13, 26%). The maximum number of patients belongs to the age group of 41-50 years of age. Coming to the main theme of our study, the number of patients belonging to the blood group 'O' is 28 (O +ve: 27, O-ve: 1; 56%) highest in the series which is followed by blood group 'B' with 12 patients (24%).

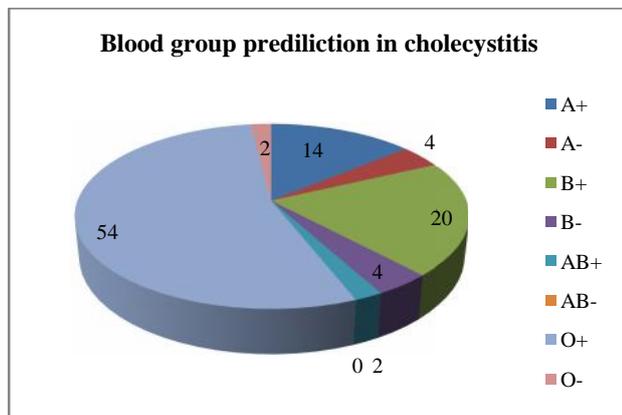
Table 1 Age and sex incidence

Age	Male	Female	Total
21-30	3	7	10
31-40	4	5	9
41-50	2	17	19
51-60	3	4	7
61-70	1	3	4
71-80	0	1	1
Total	13	37	50

*Corresponding author: **Abhigna Panda**

Department of Surgery, Rajah Muthiah Medical College Hospital Annamalai University, Chidambaram - Tamil Nadu

Blood Group	No	%
A+	7	14
A-	2	4
B+	10	20
B-	2	4
AB+	1	2
AB-	0	0
O+	27	54
O-	1	2
Total	50	100



DISCUSSION

The fact that blood groups are inherited according to definite laws is a temptation To associate with them other conditions that has been laid at the door of heredity[2]. A good number of studies have come up recently to include blood group as one of the risk factors for gallstone disease. All studies have been inconclusive as different authors are giving different conclusions. Chakravarti and Chakravarti [3] did a study on 321 patients and 688 controls in order to search a probable association between ABO blood groups and cholecystitis. They were of the opinion that blood group 'A' subjects are having somewhat higher risk for gallstone. Kratzer et al [4] had a study on 1030 blood donors and within that blood 'AB' was highest (12.1%) in their series. Another study on 171 consecutive patients with symptomatic gallstone was carried out by Tatu Juvonen and Onni Niemela [5] and revealed a predominance of blood group 'A' (44%) followed by 'O' (31%) and 'B' (17%). They also further commented that blood group A had more stones with less than 25% cholesterol or no cholesterol than those with other groups.

Group 'A' patients tended to have more numerous gallstones of smaller size. Chen et al [6] in their series of 236 subjects having gallstone did not however show any co-relation between blood group and cholecystitis.

A group of 174 hospital patients was studied by Monaci et al [7] to discover the incidence of blood group in comparison, with a similar analysis of a representative sample (1872 people) of the Amiata Community as a whole and it is felt that there is no statistical proof that one or more of these blood groups is more prone to gall stone, at least in Amiata. In our limited series of 50 patients of gall stones 28 (56%) belong to blood group 'O', 9 (18%) belong to 'A' group, 12(24%) to 'B' group and 1 (2%) belong to blood group 'AB'. Though 'O' group is having the highest number, it will be premature to conclude that a particular blood group is related to gall stone diseases. It is definitely an area of interest for further research.

CONCLUSION

A study about the probable relationship of ABO blood group and cholecystitis was conducted on 50 patients, which revealed highest incidence of cholecystitis among the patients of blood group 'O', rhesus positive. However, in view of the less number of patients in the sample size, it is inconclusive at this juncture to state that blood group 'O' is one of the risk factors for gall stone diseases.

Reference

- Whincup PH, Cook DG, Philips AN, Shaper AG. ABO blood group and ischaemic heart disease in British men. *BMJ* 1990; 300: 1679-82.
- Blood groups in clinical investigation*by frank n. Walker, M.A., M.D., Toronto
- Chakravarti MR, Chakravarti R. ABO blood groups in cholelithiasis. *Ann Grnet* 1979; 22(3): 171-2.
- Kratzer W, de Lazzer K, Wiensneth M, Muche R, Kachele V. The effect of ABO, Rhesus and Kell blood group antigens on gall stoneprevalence. A sonographic study of 1030 blood donors. *Dtsch MedWochenschr* 1999 May 14; 124(19): 579-83.
- Tatu Juvonen, Onni Niemela. ABO blood group and gallstone disease. *BMJ* 1992; 305:26-7.
- Chen CY, Lu CL, Lee PC, Wang SS, Chang FY, Lee SD. The riskfactors for gallstone disease among senior citizens: an Orientalstudy. *Hepatogastroenterology* 1999 May-June; 46(27): 1607-12
- Monaci R, Meoni S, Bini D, Morganti G. Association between ABO blood groups and gall bladder calculi: a dissenting opinion. *Minerva Med* 1984 Oct. 6; 75(38): 2221-6
