

CORRELATION BETWEEN VARIOUS SKIN DISEASES AND ABO BLOOD GROUPS

Physiology

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ABSTRACT

Introduction: This study was conducted to evaluate correlation between ABO blood group system and various skin conditions like acne vulgaris, urticaria and certain autoimmune skin conditions like, alopecia areata, lichen planus, psoriasis vulgaris, pemphigus vulgaris and vitiligo. **Methodology:** In this cross-sectional study total 150 patients were examined on the OPD basis with various skin conditions like acne vulgaris, urticaria, alopecia areata, lichen planus, psoriasis vulgaris, pemphigus vulgaris, vitiligo and their blood groups were investigated. Prior consent was taken from the patients. **Results:** It was noticeable that among all the blood groups, most of the patients had blood group B followed by O and A and lastly AB blood group. However it was observed that blood group AB-ve, O-ve, B-ve and A-ve were less likely to develop skin diseases. This study suggests that there might be Rh factor associated with the development of above diseases. Individually acne vulgaris, urticaria and vitiligo were more seen with B blood group. Psoriasis was more seen with blood group A. other diseases show no significant correlation with blood groups. **Statistical analysis:** It is noticeable from the distribution of the data that among all the most common blood group is B+ve with 41% patients and then percentages decrease in order of blood group O+ve, A+ve, Ab+ve. Rh negative blood groups in our study are only about in the range of 0 to 2 %. B+ve blood group is also most commonly seen with auto immune skin diseases. It is also observed that females are more prone to skin diseases (54%) than males (45.55%). **Conclusion:** Overall, the study showed that people with blood group B are more commonly seen with various skin diseases. There is no correlation between autoimmune skin diseases and ABO blood group system.

KEYWORDS

ABO blood group, autoimmune conditions, skin diseases, Rh factor

Introduction:

Statistical association between various diseases like malignancy, peptic ulcer etc. with blood groups are available but there is paucity of literatures which correlate various skin diseases with blood groups in Indian population.

Several studies in the last two decades have shown association between various infections and particular ABO blood group.

So this study was conducted to evaluate the relationship between ABO blood groups and different non infectious skin diseases like acne vulgaris, urticaria which are much more common and some autoimmune skin diseases like alopecia areata, lichen planus, psoriasis vulgaris, pemphigus vulgaris and vitiligo.

AIMS AND OBJECTIVES:

To assess the relationship between ABO blood grouping and various non infectious skin diseases.

MATERIALS AND METHODS:

This cross sectional study done by examining 150 patients of non infectious skin diseases attending Dermatology OPD at civil hospital, Ahmedabad.

Patients of urticaria, acne vulgaris and other autoimmune skin diseases like, alopecia areata, lichen planus, psoriasis vulgaris, pemphigus vulgaris and vitiligo; above the age of 13 years were included in the study. Pregnant ladies were excluded.

Diagnosis of skin diseases were confirmed by qualified Dermatologists at the OPD clinics. Informed consent from all study participants were taken.

After eliciting history, performing clinical examination and recording vital data patients blood samples were collected and sent to hospital laboratory for determination of blood groups.

RESULT AND DISCUSSION:

As per below table, out of 150 patients; 68 were males and 82 were females.

TABLE 1: Distribution of patients according to gender.

Skin disease	A+ve	B+ve	O+ve	AB+ve	O-ve	AB-ve
Acne vulgaris	4 2.6%	14 9.3%	8 5.3%	4 2.6%	0	2 1.3%
Urticaria	3 2%	10 6.6%	6 4%	0	0	2 1.3%
Lichen planus	5 3.3%	6 4%	5 3.3%	2 1.3%	0	0
Pemphigus	5 3.3%	6 4%	5 3.3%	3 2%	1 0.6%	0
Psoriasis	6 4%	6 4%	4 2.6%	3 2%	0	0
Alopecia areata	4 2.6%	10 6.6%	3 2%	2 1.3%	0	0
Vitiligo	4 2.6%	10 6.6%	4 2.6%	3 2%	0	0
TOTAL	31 20.67%	62 41.33%	35 23.33%	17 11.33%	1 0.6%	4 2.6%

TABLE 2: Distribution of patients according to skin diseases.

TOTAL PATIENTS	MALES	FEMALES
150	68 45.33%	82 54.67

TABLE 3: Table showing association between blood groups and skin diseases.

Skin disease	Total no of patients
Acne vulgaris	32 (21.33%)
Urticaria	21 (14%)
Lichen planus	18 (12%)
Pemphigus	20 (13.33%)
Psoriasis	19 (12.67%)
Alopecia areata	19 (12.67%)
Vitiligo	21 (14%)
TOTAL	150

Our study showed that acne vulgaris patients are most associated with blood group B+ve followed by O+ve, A+ve, AB+ve and lastly AB-ve

For urticaria sequence was B+ve then O+ve, A+ve, Ab+ve in descending order

Lichen planus and pemphigus vulgaris showed predominance of blood group B+ve followed by equal distribution of blood group O+ve and A+ve and lastly AB+ve

Alopecia areata showed that it was seen commonly with blood group B+ve, A+ve, O+ve and AB+ve in descending order.

Blood group A+ve and B+ve were predominant in Psoriasis followed by blood group O+ve and AB+ve.

Lastly vitiligo has shown association with B+ve blood group in most of the cases

In our study group 45.33% were male and 54.67% were female subjects

It was noticeable that among all the blood groups, most of the patients had blood group B+ve followed by O+ve and A+ve and lastly AB+ve blood group.

The data showed that highest 41.33% of the patients had B+ve blood group followed by O+ve (23.33%), A+ve (20.67%) and AB+ve (11.33%). It is also observed that females are more prone to skin diseases (54.5%) than males (45.5%).

96.8% of the patients had Rh positive blood group whereas 3.2% had Rh negative blood group.

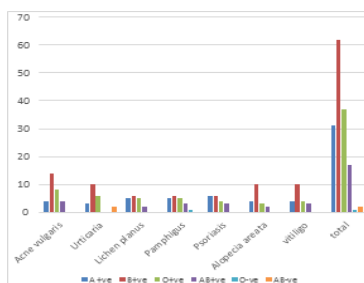
CONCLUSION:

Our study showed statistically significant correlation between non infectious skin diseases and blood group B.

There is statistically significant correlation between non infectious skin diseases and presence of Rh antigen.

There is no statistically significant correlation between autoimmune skin diseases and ABO blood group system.

Chart showing association between blood groups and skin diseases



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