

## GRANULOMA VENEREUM AND A. B. O. BLOOD GROUPS

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This study has been undertaken to see whether there is any significant relationship between the blood groups and the susceptibility of the individuals to granuloma venereum which might throw some light on the understanding of the epidemiology of the disease.

**Epidemiology :**

Much progress has been made in the recent years in the understanding of various aspects of the disease but the epidemiology still poses a problem in spite of extensive studies.

Goldberg<sup>3</sup> gave the following data as not supporting the venereal nature of the disease.

- “(1) Occurrence of the disease in very young and sexually inactive persons.
- (2) Rarity of the disease in prostitutes.
- (3) Occurrence of non genital lesions in both homosexuals and heterosexuals.
- (4) Rarity of the disease in the sexual partners of patients with open lesions.”

In a five year study from January, 1962 to December, 1966, we have examined in detail 867 cases of Granuloma venereum confirmed by demonstrating the Donovan bodies and we have

not come across a single case in a child. The youngest patient in our series was a 13 years old female with a history of repeated sexual exposures. There were 25 cases with extragenital lesions, 23 in anal and perianal regions, one on the mandible, and one in the oral cavity. All the males with anal lesions gave history of habitual passive paederasty. All the males with genital lesions gave extramarital exposures.

Because of the rarity of conjugal granuloma venereum and the absence of the disease in one of the sexual partners, the venereal nature of the disease is questioned. There were 14 conjugal cases in our series in 867 cases. Very few males bring their wives for examination and most of our 202 female patients were of the prostitute class. Hence it is difficult to assume that the disease is rare in the sexual partners on the prostitutes, although some of the sexual partners may be free from the disease.

Rake (1948) suggested that *D. Granulomatis* may be related to the *Escherichiae* group and may be of faecal in origin. Goldberg<sup>1</sup> also stressed the faecal origin of the organism because the factors necessary for growth was furnished by the intestinal tract. If the organism responsible for granuloma venereum was faecal in origin, the majority of the lesions should be anal or perianal and there is no necessity for rectal coitus for transmission of the disease. If friction and trauma are predisposing causes, there is enough of both in almost every human being in normal defaecation. The disease would

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have been much more, widely prevalent irrespective of social barriers or sexual perversities. After a detailed study of cases and case histories, we are of the opinion that Granuloma Venereum is a venereal disease transmitted by sexual intercourse, heterosexual or homosexual.

Undoubtedly, granuloma venereum is of low infectivity when compared to the other venereal diseases. More than one factor may be responsible for this peculiar nature of the disease. The aetiological agents of all the other venereal diseases are either superficially situated in the lesions or abundantly present in the discharge and are more easily transmitted during sexual intercourse. Even in these diseases, not every sexual partner becomes infected. The causative organism of granuloma venereum is situated inside the mononuclear cells and often the organisms are located in the deeper part of the lesions and hence the chances of infectivity becomes much less even after repeated sexual intercourse. Rajam and Rangiah<sup>2</sup> have suggested that the disease may be infectious only during a brief phase of its evolution. Finally the individual susceptibility plays a greater part in the epidemiology of any disease.

#### Granuloma Venereum and A. B. O. Blood Group :

In 1900 Landsteiner made the surprising discovery that the red cells of human beings are not immunologically identical. The four blood groups were first described by Jansky in 1907 and later by Moss in 1910.

This study comprises of 100 consecutive cases of granuloma venereum whose diagnosis was confirmed by demonstrating the Donovan organisms.

The details of their blood groups are given below :—

TABLE I

Blood Group	Andhra Pradesh (Thayuman 25,000) percent	Government General Hospital, Guntur (Blood 3156) (1969) percent	Granuloma Venereum 100 cases under Review percent
A.	22	18	21
B.	33	32	30
AB.	7	4	5
O.	38	46	44

Table I shows that there is no significant difference in the percentage of A, B, O blood groups in Andhra Pradesh, Government General Hospital, Guntur, and the Granuloma Venereum cases under review. 74% of cases of Granuloma Venereum occurred in "B" and "O" groups.

#### Conjugal Cases :

We examined 10 married couples regarding the blood groups when one or both partners were infected with granuloma venereum.

From Table II, it is seen that 3 of the married couples were infected. The most interesting finding is that in all the three instances, the blood group of both the wife and the husband are the same. It would appear from this study that there is greater susceptibility of conjugal transmission when both belong to the same blood group.

Often it is stated that conjugal Granuloma Venereum is rare but from our study, it is not uncommon; and the only difficulty is that we are not able to examine both the partners simultaneously.

#### Summary :

1. 100 consecutive cases of granuloma venereum were studied regarding their A, B, O, Blood groups.

2. There is no significant difference between the percentage of A, B, O blood groups of Granuloma Venereum

TABLE II

S. No.	HUSBAND				WIFE		
	Code No.	Blood group	Infected or not	Code No.	Blood group	Infected or not	
1	M V 14/70	B	Infected	F V 22/70	B	Infected	
2	M V 356/70	B	Infected	F V 96/70	O	Not Infected	
3	M V 3156/70	O	Infected	F V 219/70	O	Infected	
4	M V 884/70	A	Infected	F V 257/70	A	Not Infected	
5	M V 1053/70	AB	Not Infected	F V 269/70	B	Infected	
6	M V 1232/70	B	Infected	F V 320/70	A	Not Infected	
7	M V 2103/70	O	Not Infected	F V 517/70	A	Infected	
8	M V 2657/70	A	Not Infected	F V 607/70	O	Infected	
9	M V 3550/70	O	Infected	F V 72/70	O	Infected	
10	M V 1870/70	B	Infected	F V 522/70	A B	Not Infected	

cases in our series under review and the population in Andhra-Pradesh or the blood donors attending the Government General Hospital, Guntur.

3. 74% of cases of Granuloma Venereum occurred in "B" and "O" blood groups. Whether persons belonging to these two blood groups are more susceptible to the disease is difficult to decide.

4. 10 married couples were examined in the series and there were 3 conjugal cases. The interesting finding is that in all the three instances both the husband and the wife belonged to the same blood group.

#### Conclusions :

From the above study, we are of the opinion that there is a greater predisposition and higher susceptibility to granuloma venereum if both the sexual partners belong to the same blood group as seen in the three conjugal cases under review.

This may be a significant finding in understanding the epidemiological vagaries of Granuloma Venereum.

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#### TRUE or FALSE ?

Vitiligo is associated with several autoimmune diseases and circulating antibodies to Melanin are seen in patients with vitiligo.

(Answer page No. 184)