



RELATIONSHIP OF BLOOD GROUP ANTIGENS WITH FILARIASIS

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ABSTRACT:

Numerous irresistible maladies are observed to be related with the human blood aggregate antigens. In this investigation an endeavor was made to discover the connection between filarial disease and human blood gathering. Around 58 microfilaraemic, 95 subjects with elephantiasis and 378 endemic ordinary subjects were analyzed for their relationship with blood amass antigens. Around 45% microfilaraemic subject were found to have AB and around 42% subjects with elephantiasis were found to have B blood gathering.

KEYWORDS: microfilaraemic, elephantiasis, dehaemoglobinization, filariasis.

INTRODUCTION:

Event of a few transferable infections has been observed to be related with human blood bunch antigens. Patients with blood bunch 'An' are more powerless to a serious heptosplenic type of Schistosomiasis than those with blood aggregate 'O' who grew just milder type of the sickness (1, 11). Force and yearly occurrence of Schistosoma haematobium disease and related organ pathology was essentially higher among offspring of blood assemble 'An' and bring down among blood gather 'O'. Likewise, power and frequency of S. mansoni disease and related liver sores were high among offspring of blood assemble 'A' (9).

Kids with 'O' bunch were observed to be more influenced by jungle fever in Nigeria (7). Comparative perceptions were prior announced if there should arise an occurrence of grown-ups in Nigeria (19). If there should be an occurrence of falciparum intestinal sickness in India it was discovered that patients having blood amass 'A' were more defenseless to contamination contrasted with blood aggregate 'O' (19). There have been disputable reports in regards to the relationship of blood bunches with lymphatic filariasis (12, 13). It was accounted for as right on time as 1946 that people with blood aggregate 'An' are more helpless to filarial disease when contrasted with people of other blood gatherings (2). Amid ponder on Timorian filariasis it was accounted for that the pervasiveness of mf is observed to be higher in people with blood assemble 'An' and

'Abdominal muscle' (5). It was watched that people of blood gather 'B', when microfilaraemic, had an altogether higher likelihood of creating clinical filariasis (10). Be that as it may, people with 'Stomach muscle' blood gathering, when microfilaraemic had an altogether bring down likelihood of creating clinical indications. In the present investigation, an endeavor was made to discover the relationship, assuming any, between blood gatherings and frequency of microfilaraemia or potentially elephantiasis.

Materials and strategies

Educated oral assent was gotten from every one of the subjects who took an interest in this investigation. This examination was done under supervision of enrolled therapeutic professional.

Detection of microfilariae

Finger prick blood tests each of 20 l were gathered between 21:00 to 23:00 and thick spreads were made for parasitological examination. The dried smears were taken to the research center and recolored with Giemsa following dehaemoglobinization. The slides were flushed quickly in tap water to expel overabundance recolor and dried. The recolored slides were inspected under magnifying lens with amplification of 100x. Two smears were gathered from each subject and mean mf tally was recorded.

Clinical filariasis

Every one of the subjects were inspected for clinical signs and those which built up elephantiasis were just incorporated into the investigation.

Determination of blood gather antigens

Around 58 microfilaraemic subjects and 95 subjects with clinical appearances and 378 endemic typical subjects were analyzed for their relationship with blood assemble antigens. Blood aggregate antigens were dictated by latex agglutination test utilizing monoclonal antibodies (Stanclone, Monoclonal antibodies, Hyderabad) against red cell An and B antigens. Fresh blood was gone up against a tiny slide and a drop of hostile to red cell antigens (An or B) was included independently and blended with the assistance of a needle. The slide was watched for agglutination under magnifying instrument.

Results

Blood assemble antigens of three gatherings of subjects viz., ordinary, microfilaraemic and clinical filariasis were analyzed to discover the affiliation, if exists, between blood aggregate antigens and filarial disease. Of the 378 subjects from ordinary populace, 40.74% have a place with 'O' blood gather took after by 'B' (33.33%) and 'A' (15.61%). Just 10.32% of ordinary subjects in the examination district communicated 'Abdominal muscle' antigens. Of the aggregate 153 filarial subjects inspected for their blood antigens, 35.29% subjects were found with 'B' bunch took after by 'O' gathering (21.57%), 'Stomach muscle' gathering (22.22%) and 'A' gathering (20.92%). There was no variety among male and female subjects and they fit in with the aggregate appropriation (Table 1).

Table 1
Distribution of blood group antigens among normal and infected subjects.

Blood Group	Normal			Infected		
	Male	Female	Total	Male	Female	Total
A	32 (14.48%)	27 (17.20%)	59 (15.61%)	11 (21.15%)	21 (20.79%)	32 (20.92%)
B	75 (33.94%)	51 (32.48%)	126 (33.33%)	19 (36.54%)	35 (34.65%)	54 (35.29%)

AB	24 (10.86%)	15 (9.55%)	39 (10.32%)	12 (23.08%)	22 (21.78%)	34 (22.22%)
O	90 (40.72%)	64 (40.76%)	154 (40.74%)	10 (19.23%)	23 (22.77%)	33 (21.57%)
Total	221	157	378	52	101	153

Out of 58 microfilaraemic subjects analyzed, 44.83% were found to have 'Abdominal muscle' amass antigens, 24.14% had 'B' bunch antigen, 17.24% had 'An' and 13.79% had 'O' blood gathering (Table2). A sexual orientation variety is related with B and AB blood bunch antigens. While 32% guys were seen with B gathering, just 18.18% females were sure for B gathering. Among AB gathering, more females (48.48%) were seen when contrasted with guys (40%). Out of 95 elephantiasis subjects inspected, 42.11% had 'B' blood bunch antigens, 26.32% had 'O' blood assemble antigen, 23.16% had 'A' blood gather antigens and 8.42% had both 'Stomach muscle' blood amass antigen. Sex related variety was seen in subjects with AB gathering. More females (8.82%) than guys (8.42%) were seen with clinical manifestations in AB gathering (table 2).

Table 2

Distribution of blood group antigens among microfilaraemic & elephantiasis subjects.

Blood Group	Microfilaraemic			Elephantiasis		
	Male	Female	Total	Male	Female	Total
A	4 (16%)	6 (18.18%)	10 (17.24%)	7 (25.93%)	15 (22.06%)	22 (23.16%)
B	8 (32%)	6 (18.18%)	14 (24.14%)	11 (40.74%)	29 (42.65%)	40 (42.11%)
AB	10 (40%)	16 (48.48%)	26 (44.83%)	2 (7.41%)	6 (8.82%)	8 (8.42%)
O	3 (12%)	5 (15.15%)	8 (13.79%)	7 (25.93%)	18 (26.47%)	25 (26.32%)
Total	25	33	58	27	68	95

DISCUSSION

Not very many individuals living in filarial endemic zones are helpless to the nibbles of contaminated mosquitoes, while greater part of the endemic populace is impervious to filarial contamination regardless of the way that each individual in a surrendered set is similarly presented to the nibbles of tainted vectors. This is maybe because of intrinsic capacity of the subjects to oppose the contamination, which thus is credited to variety in hereditary variables among endemic group. So also, not very many microfilaraemic subjects create clinical indications at the appointed time of time while dominant part of them remain microfilaraemic for quite a long time together and now and again for the duration of the existence without building up any visual signs. The hereditary and immunologic variables that oversee the course of contamination in uncovered subjects remain the need point of filarial research even today. An endeavor has been made to think about the recurrence of significant blood bunch antigens in subjects with bancroftian filariasis. A sum of 531 subjects were analyzed for their relationship with blood assemble antigens. Around 41% of ordinary solid subjects communicated 'O' antigen took after by 'B' antigen (33%). A low rate (10.32%) of typical subjects communicated 'Abdominal muscle' antigens in the investigation locale. Conversely, essentially high extents (45%) of microfilaraemic subjects have a place with 'Abdominal muscle' gathering. The pervasiveness of blood amass antigens among microfilaraemic subjects is arranged by AB>B>A>O. This perception proposes that subjects with 'Stomach muscle' assemble living in Raipur district are at potential danger of getting filarial contamination. Around 24% of microfilaraemic subjects express 'B' antigen recommending that endemic subjects with this gathering are in danger next just to those with AB gathering. The appropriation of blood

bunch antigens on subjects with elephantiasis uncover that microfilaraemic subjects with 'B' amass are at more serious danger of creating clinical indications and specifically 'elephantiasis' at the appointed time of time. This gathering is trailed by subjects with 'O' and 'An' antigens. The outcomes additionally propose that low rate (8.42%) of microfilaria bearers with AB assemble are inclined to create elephantiasis regardless of the way that endemic subjects with this gathering are at potential danger of gaining microfilaraemia than subjects with some other blood gathering. At the point when dissected as a solitary gathering (Carriers + elephantiasis subjects), 'B' amass subjects are appeared to at high danger of obtaining filarial disease took after by people with 'O', 'Stomach muscle' and 'A' gatherings. The consequences of this examination certify with the prior perceptions found in Pondicherry (10). They watched that mf bearer with 'B' gather had altogether higher and those with 'Stomach muscle' assemble had an essentially bring down likelihood of creating clinical signs. Relationship amongst microfilaraemia and blood bunches An and AB were seen in before learns at different parts of India (12, 13). Opposite confirmation exists on the relationship amongst filariasis and the 'ABO' blood gatherings (6). In this examination, a factually critical relationship exists amongst microfilaraemia and AB aggregate antigens. The outcomes in this manner propose that in regions of filaria low endemicity like Raipur, preventive and prophylactic measures could specifically be focused to the subjects of 'Stomach muscle' aggregate as this gathering is helpless against obtain microfilaraemia, The most astounding predominance of 'B' amass among elephantiasis subjects warrant unique consideration on microfilariae bearers with 'B' assemble as they are inclined to create clinical appearances. It might be underscored that the investigation was completed in just urban filarial zone of low endemicity and the outcome could conceivably be material to filarial zones of other topographical districts with various degrees of endemicity. The component of relationship amongst filariasis and ABO antigens should be investigated to see how the conveyances of blood assemble antigens influence defenselessness/protection from disease. It isn't known yet, in the event that there is any homology between blood gather antigens and those communicated on filarial parasites or Wolbachia.

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