

BLOODGROUP CHARACTERIZATION OF BULGARIAN POPULATION FROM THE REGIONS OF PANAGURISHTE AND STRELCHA

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Summary: It were studied 200 persons (men and women) about their bloodgroup belonging to the systems ABO and Rezus factor. The investigated contingent is of Bulgarian population from the regions of Panagurishte and Strelcha. At bloodgroup system ABO is observed the next distribution: A group - 38.5%, O-group - 30.5%, B group - 20.5% and AB group - 10.5%. It is established at Rezus factor a presence of 84% positive types and 16% negative types. It is not observed sexual differences. The obtained rezults do not distinguish essentially from the middle values characteristic for our country. It is observe some increasing of the groups B and AB, that probably can be due to some mongoloid admixture in the ethnogenesis of this population.

Key words: Bloodgroup systems ABO, Rezus faktor, fenotip and genotip frequencies.

Introduction

The examination of the serological systems is of a large meaning at determination of the anthropological characterization of the population. At the carrying out from us investigations in order with the other directions of the anthropology, a definite share takes up the tracing out the blood group belonging. These investigations, the most frequently, are in connection with the searching of a predisposition of persons with a definite blood group to some illness (Vizev, St., V. Todorov, 1987; Maximova, S., V. Todorov, A. Timceva, 1997; Todorov, V., 1998; Timceva, A., S. Maxsimova, V. Todorov, 1998-1999; Тимчева, А., В. Тодоров, С. Максимова, 2001; Максимова, S., V. Tododrov, A. Timceva 2002; Тодоров, В., С. Максимова, В. Христова, Д. Цветков, 2004; Maximova, S., V. Tododrov, V. Hristova, 2007). The investigations in ethnical aspect are in a smaller degree (Todorov, V., K. Jordanova, Tz. Liposhlieva, 1982; Tododrov, V., M. Rubljova, 1987, Tododrov V., M. Rubljova, C. Minkov, 1991; Tododrov, V., S. Maximova, M. Radkova, 1993, Todorov, V., 1998). The investigations in aging aspect take up too small share (Todorov, V., 1981, 1998) and particularly investigations of a regional character (Todorov, V., V. Daskalova, S. Maximova, 1996, Minkov, C., N. Paraskova, V. Todorov, 2004).

The purpose of this study is to be done characterization of the bloodgroup belonging, blood groups from the system ABO and Rezus factor in a excerpt of Bulgarian population from Panagurishte and Strelcha.

Material and method

It were studied 200 bulgarians (100 men and 100 women) from the regions of Panagurishite and Strelcha. It was traced out their blood group belonging to the systems ABO and Rezus factor. The explorations were carried out in laboratory conditions with standart test serums. It was traced out the distribution of the separate groups by means of the alternative analysis. The fenotyp and genotyp frequency was examined by the formuls of Bernsbin (1921). Besides, it was used the method of t-kriterium for establishing of significant differences. The obtained results are presented on the tables 1 and 2.

Results and discussion

From the obtained results we established the follow: the most frequently blood group is A - 38.50%, after that is the group O - 30.50%, follows group B - 25.80% and the group AB - 10.50%. At comparison with the middle values for the country (Todorov, 1998) we established a bigger frequency at the blood groups B (20,50% towards 18.04%) and AB (10.50% towards 7.59%), at the expense of a blood group A (38.50% towards 43.70%).

On the basis of the obtained results for the gen frequency, it was established, that the most frequently observes a gen r - 0.540, after it - gen p-0.280, and the most rarely gen q - 0.140. At comparison with the middle values for the country /p-0.315, q-0.123 and r-0.572/ there are no particularly differences. At calculation of the fenotyp frequency of the studied population from us, it were obtained the following rezults: for blood group A - 39.20, for group O - 31.36, for group B - 20.48 and for blood group AB - 8.96. These values are closely to the results, obtained during the investigation.

The observed higher values at bloodgroup B and AB in comparison with the controls is possible to due of "eastern" (mongoloid) elements, took part at the ethnogenesis of this population.

Rezus factor

The obtained results are presented on Table 2. It was established that the positive Rezus factor in the studied population is observed at 34.0%, and the negative Rezus factor - at 16.0%. At comparison with the middle values for the bulgarian population of the country (Todorov, 1988) it is establishing fully coincidence of data (34.0% and 16.0% towards 34.81% and 15.19%).

At calculation of the gen frequency it is reporting p-0.600 and q-0.40, that is nearly fully coincidence with the control - p-0.625 and q-0.38. After a calculation of the fenotyp frequencies it was noticed respectively the data - 84.0% and 16.0%.

Conclusions

At ABO bloodgroup system it is observed the following distribution of the separate bloodgroups: A - 38.50%, O - 30.50%, B - 20.50% and AB - 10.50%.

In comparison with the middle values for the country it was observed some increasing of the frequency of the groups B and AB, that is more strongly expressed at AB group.

At Rezus factor was established an almost fully coincidence of the values towards the middle values for the country.

Because of the different character of the ethnogenesis of the population in the separate regions of our country, it is necessary to be carried out regional investigations was well, according to the examined traits.

Table 1. Frequency of Bloodgroup systems ABO in the population from Panagurishte and Strelcha

	0		A		B		AB		p	q	r
	n	%	n	%	n	%	n	%			
Populations from Panagurishte and Strelcha	61	30.5	77	38.5	41	20.5	21	10.5	0.280	0.160	0.560
Kontrol	342	31.67	472	43.7	184	18.04	82	7.59	0.315	0.123	0.572

Table 2. Frequency of Bloodgroup systems Rezus factor in the population from Panagurishte and Strelcha

	Rh (+)		Rh (-)		p	q
	n	%	N	%		
Populations from Panagurishte and Strelcha	84	84.0	16	16.0	0.600	0.400
Kontrol	916	84.81	164	15.19	0.625	0.375

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KARAKTERIZACIJA KRVNIH GRUPA POPULACIJE BUGARA IZ REGIONA PANAGURISHTE I STRELCHA

Izvod

Proučavano je 200 osoba (muškaraca i žena) u pogledu pripadnosti ABO sistemu krvnih grupa i Rezus faktoru. Istražena je skupina bugarske populacije iz regiona Panagurishte i Strelcha. U pogledu ABO krvno grupnog sistema uočena je sledeća distribucija: A grupa – 38.5%, O grupa – 30.5%, B grupa – 20.5% i AB grupa – 10.5%. U pogledu Rezus faktora je utvrđeno prisustvo 84% pozitivnih tipova i 16% negativnih tipova. Nisu uzimane u obzir polne razlike. Dobijeni rezultati se ne razlikuju značajno od srednjih vrednosti karakteristika za našu zemlju. Uočeno je povećanje krvnih grupa B i AB, što se verovatno može pripisati nekim mongoloidnim primesama u etnogenezi ove populacije.

Ključne reči: ABO sistem krvnih grupa, Rezus faktor, frekvencije fenotipova i genotipova