

RESEARCH ARTICLE

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Prevalence of familial hirsutism in an albanian female populationARMIDA KOÇI^{1*}, TEFTA REXHA²¹University “Aleksandër Xhuvani” Elbasan, Department of Biology²University of Tirana, Faculty of Natural Sciences, Department of Biology**Abstract**

Eight hundred and twenty four Albanian female girls from 18 to 30 years of age, descending from different areas all over Albania, were considered as representative sample of Albanian female population. After the students filled the questionnaires, we estimated the prevalence of hirsutism in our sample and prevalence of hirsutism in family. The sample statistic prevalence value for hirsutism was 31.3%; 0.95% CI [28.13%, 34.47%]. By examining familial background, 27.5% of hirsute females mentioned their mother was also hirsute (91%) and 16.7 % of them mentioned their sisters were also hirsute (81.1%). The analyses proved the strong family influence on hirsutism. The data of χ^2 – test between hirsutism and family data 1 (mother hirsute), resulted 139.795 ($p < 0.0001$), and between hirsutism and family data 2 (sister hirsute), 91.746 ($p < 0.0001$).

Keywords: hirsutism, distribution in the familial line, Albanian female population

1. Introduction

Hirsutism is a clinical condition being characterized of the presence of excess terminal hair in women, facial and body and in that parts of the body which are dependent on androgen hormones. The way of hairs spreading in the females is the same as in males, but is distinguished from the frequency, density and their length. Regarding to the hairs growth and predisposition of hirsutism in different ethnic groups, there are quite morphological differences existed. There are also data that the tendencies of appearance of this syndrome are being characterized of the powerful influences, familial and racial [8].

Prevalence of hirsutism constitutes a qualitative variable, which data can be treated by the statistic way [3,6].

We saw it in interest, for the studied population, that next to prevalence evaluation in hirsutism families of albanian females, we analyze the possible relation between hirsutism and it's distribution in the familial line (mother hirsute and sister hirsute).

2. Material and Methods

Eight hundred and twenty four Albanian female, high school students of Elbasan city at the age of 18, as well as a group of daily and part-time students, (who belonged to the 18-30 years age range) of the Tirana, Elbasan and Durres districts, underwent an examination, thanks personal interviews based on the questionnaires. The questionnaires included demographic elements, as well as other elements too,

which had to do with physical examination of females who underwent analysis. The last ones have been partially filled from their side and partially from ours.

The fact that students came from rural and urban areas almost of every Albanian district and the sample relatively big in number, created us the possibility of issuing generalized results nationwide.

The data of hirsutism was calculated with the Ferriman & Gallway method [4] modified from Hatch [5] and then from R.Asis [1]. According to this last method, the quantity of facial and body hair is measured at nine body areas which are under the hormonal influence as: upper lip, chin, chest, the upper part of the abdomen, the lower part of the abdomen, the upper part of the back, the lower part of the back and the legs. In the nine areas, based on the density of hairs the evaluation is done from 1 – 4 points (score). Based on the amount of the points accumulated at the nine body areas, then became classification in four groups: norma < 8 points (score); mild hirsutism 8-16 points; moderated hirsutism 17-25 points and severe hirsutism > 25 points.

The elaboration and statistical analysis is done according to it's relevant literature cited in the beginning of the paragraph. The evidence of the association or the independance evaluation is done through χ^2 test, whereby is analysed the difference between observed numeric frequencies (O) of each cell of the contingent table, with the expected corresponding numeric frequencies (E), for the case of independance taken as hypothesis 0. In the estimates

we have also putted the Yates revision obliged by the table contingency 2x2.

For the acceptance of the 0 hypothesis, or it's fall, we have followed the criteria of common practise. When evaluated statistics of the χ^2 test, has a smaller value than the value of the critic allocation χ^2 table, (which correspond to the level of the significance 0,05, for the given number of the grades of freedom), the difference is considered non-significant (NS), hypothesis 0 is accepted, so variable independance is accepted. However when the evaluated statistic of the χ^2 test, has a value bigger than the value of the critic allocation table which correspond to the significant level 0,01 (for the given number of the grades of freedom), the difference is considered significant (S), hipoteza 0 falls and the variable association is accepted.

3. Results and discussion

Table 1: Hirsutism * Hirsute mother Crosstabulation

<i>Classification</i>	<i>Non hirsute mother</i>	<i>Hirsute mother</i>	<i>Total</i>
Non hirsute	559	7	566
Hirsute	187	71	258
Total	746	78	824

Table 2: Chi-Square test of hirsutism vs hirsute mother

	<i>Value</i>	<i>df</i>	<i>Asymp. Sig. (2-sided)</i>	<i>Exact Sig. (2-sided)</i>	<i>Exact Sig. (1-sided)</i>
Pearson Chi-Square	142.846 ^a	1	.000	.000	.000
Continuity Correction ^b	139.795	1	.000		
Likelihood Ratio	137.133	1	.000	.000	.000
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	142.672 ^c	1	.000	.000	.000
N of Valid Cases	824				

Table 3: Hirsutism * Hirsute sister Crosstabulation

<i>Classification</i>	<i>Non sisters</i>	<i>Non hirsute sisters</i>	<i>Hirsute sister</i>	<i>Total</i>
Non hirsute	236	320	10	566
Hirsute	142	73	43	258
Total	378	393	53	824

Table 4: Chi-Square test of hirsutism vs hirsute sister

	<i>Value</i>	<i>df</i>	<i>Asymp. Sig. (2-sided)</i>	<i>Exact Sig. (2-sided)</i>	<i>Exact Sig. (1-sided)</i>
Pearson Chi-Square	94.969 ^a	1	.000	.000	.000
Continuity Correction ^b	91.746	1	.000		
Likelihood Ratio	82.633	1	.000	.000	.000
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	94.756 ^c	1	.000	.000	.000
N of Valid Cases	446				

From the analysis it came that from 824 females who screened in this study, 258 (31.3%) recorded hirsute; SE = 0,0162 and 95% CI [0,2813, 0,3447]. This means that we are 95% confident that for the population issued, prevalence of hirsutism is located in the interval between 28.13% and 34.47%.

In the familial environment associated with the population being analysed, the scale of the prevalence of hirsutism is presented high. So 27.5% of the Albanian females being analyzed, have accepted that they have a hirsute mother (91%)(table 1), while 16.7% of the subjects have hirsute sisters (81%)(table 3).The correlation between hirsutism and it's distribution in the familial line (hirsute mother) was significant enough (value of $\chi^2 = 139.795$), while $p < 0.000,1$ a value smaller than the table value threshold $p = 0.01$ (table 2).

As it is shown from the table 4, the values of χ^2 and the significant of the χ^2 test between hirsutism and its presence on hirsute sisters, are respectively 91.746 and 0.000, therefore in this correlation can be considered quite significant (table 4).

4. Conclusions

In a summarized way we can note that hirsutism was quite encountered among analyzed subjects. The prevalence of hirsutism in our population was 31,3% and its characteristic was that it was generally shown in a light scale (mild hirsutism- 8-16 score). The data of our study confirmed the results of other studies [2].

The study confirms the fact that even in our population, as well as in other Mediterranean populations, exist a familial relation in the screening of hirsutism, which could be an indication of the existence of genetic bases of this [7]. We support this with the fact that in our study, the correlation between hirsutism and its distribution in a familiar line (hirsute mothers $\chi^2=139.795$; sig=0.0001; hirsute sisters $\chi^2=91.746$; sig=0.0001).

5. References

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