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Studying the Prevalence of Psoriasis

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Introduction

Psoriasis is characterized by the presence of two peaks of incidence and, in accordance with this, two types of dermatosis: The first type is characterized by a hereditary predisposition and early onset of the disease (usually at 15-25 years), the second type is characterized by a late onset of the disease (after 40 years) and the absence of genetic predisposition [2, 3, 5, 8, 11]. A large amount of data has been accumulated on the presence of an association of type 1 psoriasis with hla antigens of classes I and II [4, 10, 12, 13, 15]. 8 loci have been identified to date predisposition to psoriasis, which mapped on 8 chromosomes and designated psors1—psors8. it was established that the locus psors1, located on the short arm of the 6th chromosomes (6p21.3), is the main one, because it contains several linked genes actively expressed in skin keratinocytes. This locus represents the area in which there are five genes [hla-c, tcf19(sc1), otf3 (pouf5f1), hcr(pg8), cdsn], from of which two (hcr u cdsn) have an association with psoriasis [6, 11—15]. However with what type psoriasis, these genes are associated is not clear, which determined the need to carry out of this study.

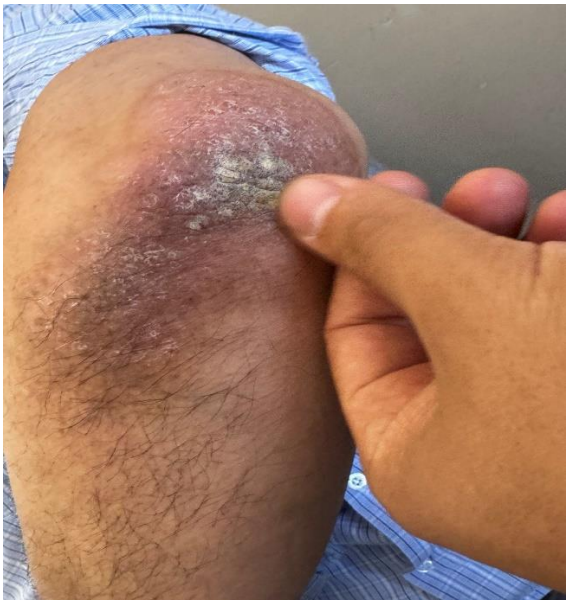
Material and methods

As a result of analysis of 250 case histories patients with psoriasis - residents of the Bukhara region – was collected. Results were assessed by vertical electrophoresis in 8% polyacrylamide gel (initial ratio of acrylamide and methylene bisacrylamide - 29:1.3 at a voltage of 300V). Mathematical processing of results research was carried out using packages statistical analysis programs rows x columns (Roff, Bencen, 1989), assessing significance of Monte Carlo comparisons(Sham, Curtis, 1995), spss ver. 13.0 for windows, statistica ver. 6.0 (statsoft, inc., 2003) with using the nonparametric Spearman rank correlation method, x test 2 ,simple linear regression method analysis, as well as calculation of indicators odds ratio, relative relative risk and their trust intervals (with Yates correction for continuity).

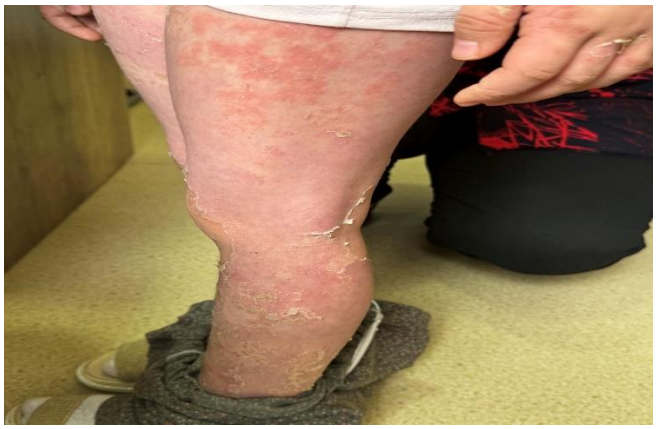
Results and its discussion

All observed patients (n =140), depending on the presence or absence of relatives suffering from psoriasis, were divided into two groups: group 1 (n =47) consisted of patients who had such relatives (group with genetic predisposition, or family savings group; 33.6% of volume samples); group 2 (n = 93) included patients who had no relatives, those suffering from this dermatosis (group with sporadic cases; 66.4% of volume samples). In the 1st and 2nd groups residents of the Bukhara region made up 84.53 and 88.55%, respectively, people of the Kogon region - 7.14 and 3.03%, patients of other regions - 8.33 and 8.44% respectively. Genealogical analysis of families of probands 1st group revealed that in the majority of patients (53.13%), psoriasis occurs among relatives of the first degree of kinship (parents, siblings, children),less often - among relatives of the second degree of relationship (uncles, aunts, nephews, half-siblings, grandchildren) – in 30.20% of cases and III degree of relationship (cousins siblings, great-grandparents, great-

grandchildren) – in 16.67% of cases. this information is consistent with literature data on the prevalence of patients psoriasis among 1st degree relatives [7, 11].



1 picture- Patient 55 years old with duty plaques of vulgar psoriasis



2 picture- Patient 7 years old with pustular psoriasis

Psoriasis occurred on the maternal side in 41.7% of patients with family accumulation dermatosis, on the paternal side - in 39.3%, according to maternal and paternal line - in 2.3%, in siblings and nephews - 16.7%. established that in families burdened with this pathology, in 41.67% of parents were in endogamous marriage, and in families with sporadic cases of the disease - 60.24%. When exploring possible trigger factors appearance of the first psoriatic rashes the majority of patients in group 2 indicated psistatistical documentation. Clinical and anamnestic data about studied patients were included in registration cards developed by us patient with psoriasis, on the basis of which there was an electronic database in the form of tables was created microsoft excel 2007 programs. when collected istory of the disease used methods surveys and questionnaires, with the help of which determined the spectrum and value of triggers factors of debut and exacerbation of psoriasis. The severity of clinical symptoms of the disease – prevalence degree of severity, nature of course and activite psoriatic process, presence complicated variants of the disease. Used to assess the skin process standardized and reproducible method assessments - determination of the pasi index (psoriasis area and severity index), integral index area and severity of psoriatic lesions. Pasi values up to 9.9 points inclusive considered as mild severite clinical manifestations of psoriasis, 10—15.9 points - as moderate severity, 16 points or more - as a severe degree psoriatic process. Molecular genetic studies were carried out in 107 patients, predominantly Russian ethnic background. the control sample

consisted of healthy volunteers (n = 93) with no clinical manifestations psoriasis. Some of the research was carried out in Laboratory of Molecular Genetics of the Ural scientific center of the Russian Academy of Sciences. DNA extraction was carried out using the method sequential phenol-chloroform Matthew extraction from venous whole blood [Mathew, 1984]. studied in the work polymorphisms c325t, g1723t, c2327g gene hcr, hla-cw of the hla-c gene, c1243t of the cdsn gene, and also four microsatellite locus markers psors1 (m6s145, m6s190, m6s172, tnfβ), the sequences of which are taken from computer database gdb (genome database http://gdb.org). analysis of polymorphic psors1 locus genes were carried out using the method polymerase chain reaction (PCR) for amplifier "tertsik" production dna-technology company using DNA polymerases thermus aquaticus produced by Silex. after PCR DNA synthesis to identify polymorphisms genes hcr, hla-c, cdsn was carried out restriction analysis, the results of which estimated by electrophoresis at 7% polyacrylamide gel followed by ethidium bromide staining and visualization under UV rays. number of nucleotide repeats microsatellite markers of the psors1 locus determined by sequencing on automatic sequencer abi prism model 310 (applied biosystems) using fluorescent labeling kit dyenamictmet according to company protocol manufacturer [amersham emotional tension (56.63%), which statistically significant ($p < 0.05$, assessment method differences between shares provided $25\% < p < 75\%$) differed from the same indicator in 1- group of patients with family accumulation(40.48%). The results obtained correspond data from other studies [5, 7, 12]. By other trigger factors statistically No significant differences were established.When analyzing the age of manifestation of the first manifestations of psoriasis, it has been established that in men in group 1 it was statistically significantly lower (23.94 ± 11.86 years) than in men of group 2 (30.30 ± 14.48 years; $p < 0.05$). similar differences in groups were found in women: 23.21 ± 11.38 and 32.68 ± 16.04 years, respectively; $p < 0.05$. this indicates that genetically predisposed to psoriasis men and women first rash observed at an earlier age than in patients who do not have a predisposition that confirmed by studies of other authors [7, 12, 14]. When analyzing the structure of concomitant and past diseases in groups 1 and 2 patients it was revealed that most often gastrointestinal diseases occurred tract (in 40.23 and 35.50%, respectively), less often - ENT diseases (in 28.74 and 26.63% respectively) and cardiovascular pathology (in 13.79 and 15.38%, respectively). Reliable differences in the compared groups were revealed only by the frequency of occurrence of diseases respiratory tract in 1.15% in group 1 and 8.88% patients in group 2. When assessing the severity of skin lesions 41 The patient was diagnosed with a mild degree of severity (pasi - up to 9.9 points), in 141 patients – average degree of severity (pasi - 10.0-15.9 points), in 68 patients - severe severity (pasi > 16.0 points). A4verage value of the pasi index patients of group 1 was 14.97 ± 4.58 points, in patients of group 2 - 13.51 ± 4.26 points. Statistically significant difference between this indicator has not been established. when studying features of the clinical picture of psoriasis It was revealed that for patients of group 1 there was an earlier onset of psoriasis is typical. Patients in this group indicated less number of factors contributing to emergence or exacerbation of the disease. A number of studies have shown that potential candidate genes responsible for the presence of sensitivity to psoriasis are cdsn a hcr genes in the psors1 locus [5, 10, 12, 14]. In our work in a sample of patients1 Krasnodar population studied three polymorphic microsatellite markers (m6s172, m6s190, m6s142), as well as options genotypic polymorphism of four genes hcr, hla-c, cdsn, tnfβ for the psors1 locus. Analysis of polymorphism of the c1243t gene cdsn in patients with familial accumulation psoriasis did not reveal any dependence allele frequency distributions from phenotypic characteristics (family history, age of manifestation and form diseases), and analysis of the hla-cw6 locus revealed association of the cw6(+)/cw6(+) genotype with more early onset of the disease in **Conclusions**

Genealogical analysis of families carried out with the presence of psoriasis in the pedigree revealed this disease among relatives I degree of relationship in more than half of the cases (53.13%), among 2nd degree relatives kinship - in 30.20%, among relatives III degree of relationship - in 16.67%.

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