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DOLZARB PROBLEMS OF EPIDEMIOLOGY AND PREVENTION OF DEGENERATIVE SPINE INJURIES

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Abstract:

The scientific value of the research results, suggested suggestions and conclusions are that the epidemiological information provided to all levels of health care (medical brigade, general practitioners, family and polyclinic doctors, traumatology and neurosurgery inpatients/centers, vertebrology centers, emergency and ambulance research centers) – the clinical approach helps to understand the nature of degenerative spine damage and/or adaptation to it. On the scale of the regions of Uzbekistan, this causes or leads to the development and implementation of early safe detection, treatment, prognosis of the disease, as well as the development and implementation of regional specific complex preventive-prophylactic programs

Keywords: Chronic non-infectious diseases, pathologies of degenerative damage to the spine, degenerative damage to the spine, spinal cord injury, intervertebral disc herniation.

RELEVANCE AND NECESSITY OF THE DISSERTATION TOPIC. Previous studies have confirmed that most patients around the age of 30 consult a doctor for pain syndromes in the spine and joints. At the same time, therapy is often ineffective in people older than 45 years, so high-risk surgery is required in the treatment of large joints of the spine [1 p. 32-40; 2, p. 4].

On the other hand, the incidence rate is 2 times higher in older people than in young people, and 6 times higher in the elderly. The general disease structure in the elderly includes diseases of the musculoskeletal system (11%), surgical treatment of elderly patients is required 4 times more often, and the risk of developing complications after diagnosis is directly related to their condition before surgical intervention [4, p. 25-26].

Prevention of UDS remains one of the problems of modern science and applied medicine of urgent social importance. It is confirmed in the research that the increase in disability from UDS can be reduced only with the help of a set of scientifically based epidemiological and preventive studies conducted among different population groups with a high risk of the disease [6, p. 414].

In most cases, UDS is known in orthopedic practice, and in most cases, it is treated with surgery not in the spine, but in the veins.

Late diagnosis and late initiation of UDS therapy lead to increased comorbidity. The port of the spine performs the function of a "shock absorber" and practically controls all organs, and in its pathology, damage to semi-organs develops.

the reform of modern health care and world sciences should be based on a new definition of the principle of "health care of healthy people" [WHO, 2021].

Looking at the problem of UDS only in a clinical approach and being aware of it - activates a significant increase in the frequency of detection of spinal cord injuries in the world, this situation is observed in around 8-58 cases per 1 million people. UPSh is 3-5% in closed trauma structures and 5.5-17.8% among musculoskeletal injuries [5, p. 161-162].

Such a tense state of the epidemiological situation poses many issues related to early diagnosis, prevention, and treatment of this pathology before practitioners and researchers. It is worth noting that errors and shortcomings in determining the level of intervention in the diagnosis of the spine are urgent problems of modern meteorology. The frequency of these complications is one in 3110 diagnosed patients. Despite the widespread use of surgical interventions in the spine, there is still a similar approach to the incorrect determination and prevention of the level of intervention [3. b. 39-41].

LEVEL OF STUDY OF THE PROBLEM. This pathology is mainly related to the active working population and is highly prevalent among "masters of their profession". Late detection and/or elimination of risk factors (in the absence of intense and partial physical load, variable XO) provokes an increase in inter-hernial pressure and an overload in the arcuate ligament joints. This accelerates UDS and develops spondyloarthritis with spinal canal stenosis. All this leads to the termination of a professional career.

Therefore, it is necessary to study UDS at the population level and identify the traditional and non-

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traditional manifestations of this pathology and risk factors as early as possible through screening.

Therefore, population screening of identified risk factors, especially variable XO and UDP, among different population groups is needed. This is important because the distribution of XO and UDP is not the same in different countries, among different ethnic groups of the population [STEP WHO, 2014; Basankin I.V. et al., 2020; Afaunov AA et al., 2016].

The pharmacoepidemiology of degenerative damage was first assessed and studied in the conditions of the Fergana Valley of the Republic of Uzbekistan. Based on epidemiological and clinical research, the program and regional algorithm for the prevention, early detection, and treatment of degenerative spine injuries were developed for the first time.

THE PURPOSE OF THE STUDY is to develop a regional strategic direction of optimization of methods of early detection, treatment, and prevention of degenerative spine damage in the Fergana Valley of the Republic of Uzbekistan based on epidemiological and clinical research.

Research tasks :

- Epidemiological investigation of degenerative spine damage and its risk factors among the 18-75-year-old population living in the conditions of Fergana Valley using the standardized methods of WHO;
- Determination and study of the prevalence of degenerative lesions among representative groups of women and men in the Fergana Valley;
- Determining and studying the prevalence of risk factors for degenerative spinal cord injury in the conditions of the Fergana Valley;
- Assessment and study of the correlation of risk factors with degenerative spinal cord injury;
- To study the structure and prevalence of comorbid conditions in the population of patients aged 18 and older with degenerative spine injuries in a rural multidisciplinary emergency hospital;
- Analyzing and summarizing the results of minimally invasive surgery in the conditions of the Andijan branch of the Urgent and Urgent Care Center, evaluating the characteristics of the transition of surgical treatment tactics to the use of minimally invasive technologies;
- Assessment and study of pharmacoepidemiology of degenerative spinal cord injury;
- Development of an algorithm for the prevention, early detection, and treatment of degenerative spine injuries (in the example of the Uzbek population).

The subject of research. Blood and blood serum of patients were used for general clinical and biochemical tests to achieve the set goal and perform the tasks.

Research methods. Epidemiological, questionnaire, general clinical, biochemical, instrumental, and special as well as pharmacoepidemiological methods were used.

Reliability of research results. The reliability of the obtained results, the methodological correctness of the research, the use of theoretical-predictive and practical preventive-preventive approaches, the observation of sufficient population-patients, the duration and volume of the examination, the modernity of the examination methods used, the questionnaire-epidemiological, biochemical-laboratory and clinical-instrumental methods used in the research. based on the fact that one complements the other, the conclusion and the obtained results are confirmed by competent organizations.

Scientific and practical significance of research results. The scientific value of the research results, suggested suggestions and conclusions is that the epidemiological information provided to all levels of health care (medical brigade, general practitioners, family and polyclinic doctors, traumatology and neurosurgery inpatients/centers, meteorology centers, emergency, and ambulance research centers) – the clinical approach helps to understand the nature of degenerative spine damage and/or adaptation to it. On the scale of the regions of Uzbekistan, this causes or leads to the development and implementation of early safe detection, treatment, and forecasting of the disease, as well as the development and implementation of regional-specific complex preventive-prophylactic programs

MATERIAL AND METHODS. A 21-year (2000-2020) retrospective epidemiological study was conducted in Andijan. Its object was the population of residents who underwent a course of treatment in the departments of the Andijan branch of the Republican Emergency Medical Research Center.).

A total of 2994 patients with UDS were comprehensively studied in the prospective epidemiological-clinical study of 2000-2020. 1241 of them (41.1%) were men and 1753 (58.9%) were women.

Criteria for clinical-epidemiological monitoring: the population with a proven diagnosis of UDS of various genesis and nature.

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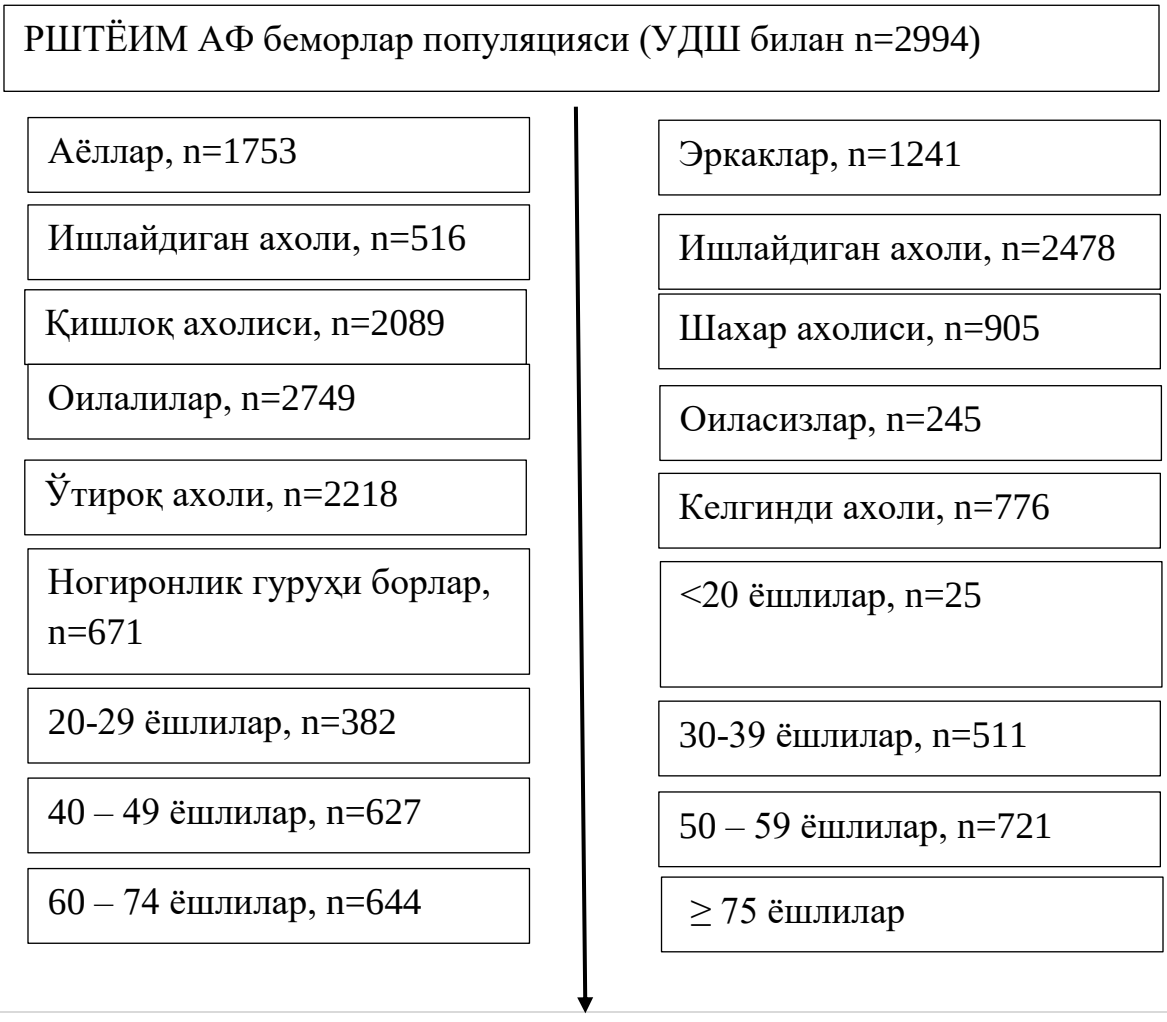
Description of population - patients involved in epidemiological-clinical research. A 21-year (2000-2020) retrospective epidemiological study was conducted in Andijan. Its object was the population of residents who underwent a course of treatment in the departments of the Andijan branch of the Republican Emergency Medical Research Center. A description of the subjects involved in the study is detailed and described in Figure 1.

A total of 2994 patients with degenerative spine injury (UDS) were comprehensively studied in the prospective epidemiological-clinical study of 2000-2020. 1241 of them (41.1%) were men and 1753 (58.9%) were women.

Criteria for clinical-epidemiological monitoring: population with a proven diagnosis of UDS of various genesis and nature.

The population of patients included in the study was divided into the following groups: working population - 516, non-working - 2478, rural population - 2089, urban population - 905, family members - 2749, family members - 245, persons with disabilities - 671, resident population - 171 and immigrant population - 776.

INVESTIGATION OBJECT



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УДШга нисбатан эпидемиологик тавсифлар ва шароитларни 21 йиллик хос динамикасини баҳолаш

1 – picture. Description of the test material

THE 21-year epidemiologic monitoring study (data is presented in Figure 1), the young people examined were described as follows: <20-year-olds - 25 (0.8%), 20-29-year-olds - 382 (12.8%), 30-39-year-olds - 511 (17.1%), 40-49-year-olds - 627 (20.9%), 50-59-year-olds - 721 (24.1%), 60-74-year-olds - 644 (21.5%) and ≥75 years old – 84 (2.8%).

From the description of the population with UDS included in the study, it is known that during the 21 years: women, working people, rural population, married people, disabled people, immigrants, 20-29 years old, 60-74 years old and ≥ 75 years old, with UDS, the number increased. The number of urban dwellers, < 20-year-olds, 30-39-year-olds, 40-49-year-olds and 50-59-year-olds with UDSh has decreased.

CHARACTERISTICS OF EPIDEMIOLOGY OF RISK FACTORS OF DEGENERATIVE SPINAL CORD INJURY IN VALLEY CONDITIONS

A 21-year description of the epidemiology of UDS risk factors (hereditary factor, age, OTV, smoking, hyperdynamic, alcohol consumption, MSMKI, occupational stress, strenuous sports-XTSBSH, surgical practice - JA) and the prevalence of UDS in related cases was studied and evaluated (Tables 1, 2 and 3)

From 2000-2020, the main risk factors of UDS in the general adult population - 27.5% and 31.7% prevalence (P>0.05), in men - from 28.2% and 34.2% (P>0.05), in women - 27.0% and 30.3% of the prevalence is determined. The description of the 21-year changes - in the general population -4.2%, in women - by 3.3% and in men - by 5.0% - is represented by an increase in the risk factors of UDS.

In men, in 2000-2020, the risk factors of UDS are confirmed in the following distribution frequencies: hereditary factor - 38.5% and 46.6% (P>0.05) ≤ 45 years old -20.5% and 57.5% (R< 0.001), OTV - from 7.7% and 6.8% (P>0.05), smoking - from 10.3% and 11.0% (P>0.05), hypodynamia - from 12.8% and 11.0% (P>0.05), alcohol addiction-23.1% and 23.3% (P>0.05), MSMKI-76.9% and 72.6% (P>0 .05), HTSB – from 12.8% and 27.4% (R<0.01), surgery - from 25.6% and 31.5% (P>0.05). It is confirmed that there is a correlation and correlation between genetic and other risk factors and the mechanism of epidemiological formation of UDS [x^2 =0.425; C=0.062; RR=0.823; 95% Cl=0.455-1.490; P>0.05].

1 – table
Epidemiological description of the prevalence and 21-year trends of degenerative spinal cord injury risk factors by gender in an elderly population

Age groups, years	Male population (n = 1209)			R	Women population (n=1711)			General population (n=2920)		
	N	UDSh =836			N	UDSh =1214		N	UDSh = 2050	
		n	%			n	%		n	%
Year 2000: Hereditary factor		15	38.5	>0.05		33	52.4		48	47.1
45 years old		8	20.5	>0.05		19	30.2		27	26.5
OTV	**39**	3	7.7	>0.05	**63**	10	15.9	**102**	13	12.7
Smoking		4	10.3	<0.05		1	1.6		5	4.9
Hypodynamia		5	12.8	>0.05		5	7.9		10	9.8
Alcohol consumption		9	23.1	<0.05		3	4.8		12	11.8

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MSMKI		30	76.9	<0.001		25	39.7		55	53.9
Professional download		19	48.7	>0.05		28	44.4		47	46.1
HTSBSh		5	12.8	<0.05		19	30.2		24	23.5
Surgical practice		10	25.6	>0.05		22	34.9		32	31.4
μ	**39**	**11**	**28.2**	**>0.05**	**63**	**17**	**27.0**	**102**	**28**	**27.5**
2020: Hereditary factor		34	46.6	>0.05		69	47.6		103	47.2
45 years old		42	57.5	<0.05		110	75.9		152	69.7
OTV		5	6.8	<0.05		30	20.7		35	16.1
Smoking		8	11.0	<0.05		3	2.1		11	5.0
Hypodynamia		8	11.0	>0.05		11	7.6		19	8.7
Alcohol consumption	**73**	17	23.3	<0.001	**145**	8	5.5	**218**	25	11.5
MSMKI		53	72.6	<0.001		58	40.0		111	50.9
Professional download		36	49.3	>0.05		56	38.6		92	42.2
HTSBSh		20	27.4	>0.05		44	30.3		64	29.4
Surgical practice		23	31.5	>0.05		47	32.4		70	32.1
μ	**73**	**25**	**34.2**	**>0.05**	**145**	**44**	**30.3**	**218**	**69**	**31.7**
2000-2020 _	χ2 = 0.425 S = 0.062 RR = 0.823 95%CI= 0.455 - 1.490 P >0.05				χ2 = 0.239 S = 0.034 RR = 0.889 95%CI= 0.552 - 1.430 P >0.05					

These factors are characterized by typical 21-year changes in the female population and are noted in the following distribution frequencies: genetic factor - 52.4% and 47.6% (P>0.05), ≤45 age factor - 30.2% and 75.9% (R<0.01), OTV-15.9% and 20.7% (P>0.05), smoking - 1.6% and 2.1% (P>0.05), hypodynamia-7.9% and 7.6% (P>0.05), alcohol consumption -4.8% and 5.5% (P>0.05), MSMKI-39.7% and from 40.0% (P>0.05), professional load-44.4% and 38.6% (P>0.05), HTSSBh-30.2% and 30.3% (P>0 .05), surgery-34.9% and 32.4% [x^2 =0.239; C=0.034; RR=0.889; 95% Cl=0.555-1.430; P>0.05].

The frequency of distribution of risk factors in the general population with UDS in 2000-2020 is described by the following indicators: hereditary factor - 47.1% and 47.2% (P>0.05), ≤45 age factor - 26.5% and from 69.7% (R<0.01), OTV - from 12.7% and 16.1% (P>0.05), smoking - from 4.9% and 5.0% (P>0, 05), hyperdynamic - 9.8% vs. 8.7% (P>0.05), alcohol consumption -11.8% vs. 11.5% (P>0.05), MSMKI - 53.9% and from 50.9% (P>0.05), occupational load - 46.1% and from 42.2% (P>0.05), HTSSBh-23.5% and from 29.4% (P> 0.05), surgery - 31.4% and 32.1% (P>0.05).

In general, it can be concluded that during 21 years, risk factors "accumulated" causing the risk of unfavorable epidemiological conditions for UDS increased by 4.2% in the general adult population, by 6.0% in men, and by 3.3% in women. The most frequent risk factors are genetic factors, MSMKI, and occupational load, which reach 70%, and the epidemiological mechanisms of UDS development are explained by them.

In the urban population, 10 confirmed factors of UDSh are confirmed in the frequency of 23.9% to 33.3% and/or 9.4% increase in 2000-2020 [x^2 =1.456; C=0.104; RR=0.716; 95% Cl=0.414-1.328; P>0.05].

In the rural population, the frequency of such changes is 31.4%

It is noted with a decrease of up to 27.6% and/or 3.8% [x^2 =0.202; C=0.033; RR=1.137; 95% Cl=0.654-1.977; P>0.05].

World Bulletin of Public Health (WBPH)
Available Online at: https://www.scholarexpress.net
Volume-32, March 2024
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this x aq is presented in Table 2.

From the analyses performed in the Aboriginal and non-native populations (Table 3), it was clear that the total risk of UDS in Aboriginal

Table 2
An Elderly Rural And Urban Population

Age groups, years	City population n = 882			R	Rural population n=2038			General population n=2920		
	N	UDSh =625			N	UDSh = 1425		N	UDSh = 2050	
		n	%			n	%		n	%
Year 2000: Hereditary factor	**67**	34	50.7	>0.05	**35**	14	40.0	**102**	48	47.1
45 years old		7	10.4	<0.001		20	57.1		27	26.5
OTV		10	14.9	>0.05		3	8.6		13	12.7
Smoking		2	3.0	>0.05		3	8.6		5	4.9
Hypodynamia		9	13.4	>0.05		1	2.9		10	9.8
Alcohol consumption		3	4.5	<0.05		9	25.7		12	11.8
MSMKI		34	50.7	>0.05		21	60.0		55	53.9
Professional download		35	52.2	>0.05		12	34.3		47	46.1
HTSBSh		9	13.4	<0.001		15	42.9		24	23.5
Surgical practice		20	29.9	>0.05		12	34.3		32	31.4
µ	**67**	**16**	**23.9**	**>0.05**	**35**	**11**	**31.4**	**102**	**27**	**26.5**
2020: Hereditary factor	**66**	34	51.5	>0.05	**152**	69	45.4	**218**	103	47.2
45 years old		48	72.7	>0.05		104	68.4		152	69.7
OTV		11	16.7	>0.05		24	15.8		35	16.1
Smoking		5	7.6	>0.05		6	3.9		11	5.0
Hypodynamia		5	7.6	>0.05		14	9.2		19	8.7
Alcohol consumption		14	21.2	<0.05		11	7.2		25	11.5
MSMKI		43	65.2	<0.05		68	44.7		111	50.9
Professional download		40	60.6	<0.001		52	34.2		92	42.2
HTSBSh		35	53.0	<0.001		29	19.1		64	29.4
Surgical practice		26	39.4	>0.05		44	28.9		70	32.1
µ	**66**	**22**	**33.3**	**>0.05**	**152**	**42**	**27.6**	**218**	**64**	**29.4**

World Bulletin of Public Health (WBPH)
Available Online at: https://www.scholarexpress.net
Volume-32, March 2024
ISSN: 2749-3644

2000-2020 _	$\chi 2 = 1.456$ S = 0.104 RR = 0.716 95%CI= 0.414 - 1.238 P >0.05	$\chi 2 = 0.202$ S = 0.033 RR= 1.137 95%CI= 0.654 - 1.977 P >0.05

3 – table
Epidemiological description of the prevalence and 21-year trends of risk factors for degenerative spinal cord injury in an elderly sedentary and migrant population

World Bulletin of Public Health (WBPH)
Available Online at: https://www.scholarexpress.net
Volume-32, March 2024
ISSN: 2749-3644

Age groups, years	Aboriginal population n = 2169			R	Alien Population n=751			General population n=2920		
	N	UDSh =1504			N	UDSh =546		N	UDSh = 2050	
		n	%			n	%		n	%
Year 2000: Hereditary factor	92	46	50.0	>0.05	10	2	20.0	102	48	47.1
45 years old		24	26.1	>0.05		3	30.0		27	26.5
OTV		12	13.0	>0.05		1	10.0		13	12.7
Smoking		4	4.3	>0.05		1	10.0		5	4.9
Hypodynamia		10	10.9	-		0	0.0		10	9.8
Alcohol consumption		8	8.7	<0.05		4	40.0		12	11.8
MSMKI		48	52.2	>0.05		7	70.0		55	53.9
Professional download		40	43.5	>0.05		7	70.0		47	46.1
HTSBSh		19	20.7	<0.05		5	50.0		24	23.5
Surgical practice		31	33.7	>0.05		1	10.0		32	31.4
μ	**92**	**24**	**26.1**	**>0.05**	**10**	**3**	**30.0**	**102**	**27**	**26.5**
2020: Hereditary factor	165	76	46.1	>0.05	53	27	50.9	218	103	47.2
45 years old		123	74.5	<0.05		29	54.7		152	69.7
OTV		30	18.2	>0.05		5	9.4		35	16.1
Smoking		8	4.8	>0.05		3	5.7		11	5.0
Hypodynamia		17	10.3	>0.05		2	3.8		19	8.7
Alcohol consumption		14	8.5	<0.05		11	20.8		25	11.5
MSMKI		84	50.9	>0.05		27	50.9		111	50.9
Professional download		69	41.8	>0.05		23	43.4		92	42.2
HTSBSh		37	22.4	<0.001		27	50.9		64	29.4
Surgical practice		52	31.5	>0.05		18	34.0		70	32.1
μ	**165**	**46**	**50.0**	**>0.05**	**53**	**17**	**32.1**	**218**	**68**	**31.2**
2000-2020 _	χ2 = 0.665 S = 0.051 RR = 0.844 95%CI= 0.558 - 1.275 P >0.05				χ2 = 0.017 S = 0.016 RR = 0.935 95%CI= 0.335 - 2.605 P >0.05					

factors in 2000-2020 - from 26.1% to 50.0% (by 23.9%) and in the case of the immigrant population - from 30.0% to 32.1% (by 2.1%).

The pathogenic effect of risk factors in aborigines is expressed by 1.7 times more intense manifestation in the formation of UDS [x^2 =0.665; C=0.051; RR=0.844; 95% Cl=0.558-1.275; P>0.05]. At

World Bulletin of Public Health (WBPH)
Available Online at: https://www.scholarexpress.net
Volume-32, March 2024
ISSN: 2749-3644

a relatively low level, such a pathogen "between UDSh and risk factors" is observed in the alien population [x^2 =0.017; C=0.016; RR=0.935; 95% CI=0.335-2.605; P>0.05].

In the population with UDS, the genetic factor is confirmed by age in 2000-2020 as follows: ≤20 years -100.0% and 0.00%, 20-29 -0.0% and 26.7%, 30-39 at - from 56.3% and 52.2%, at 40-49 - from 49.0% and 47.7%, at 50-59 - from 21.4% and 45.7% (R<0.01), at 60-74 – from 50.0% and 60.0% (P>0.05), at ≥75 years -0.0% and from 42.9% [x^2 =0.393; C=0.043; RR=1.098; 95% CI=0.823-1.466; P>0.05].

In men, the frequency of detection of a genetic factor increased to -40.7% and 50% (P>0.05), and to 65.2% and 62.5% in women.
with (P>0.05), depending on age, observed [x^2 =0.583; C=0.072; RR=0.837; 95% CI=0.524-1.336; P>0.05]. These results are presented in Table 4.11 (Appendix).

In the general population of Andijan, the detection of more than 2 risk factors (a large number of XO) at the same time in the population of Andijan, depending on age, in 2000-2020 - up to 100.0% (in <20 and ≥20-29 years old) and up to 70.0% (2020, in 60-74-year-olds) is confirmed in frequency [x^2 =0.293; C=0.037; RR=1.121; 95% CI=0.742-1.694; P>0.05].

CONCLUSIONS

1. According to 21 years of epidemiological monitoring, UDS is determined with a prevalence of 70.4% in the inpatient population and is confirmed by an increasing trend of 1.3% per year. and older population) is observed.
2. Age-related prevalence of degenerative spinal cord injury increases by 35.8% (2.3-fold increase in men and 1.3-fold increase in women). According to a 21-year analysis, the increase is sharp from the age of 30-39 and is confirmed at a prevalence of 79.8% after the age of 75.
3. According to 21 years of epidmonitoring, the risk factor of "accumulation" of risk factors and the risk of unfavorable epidemiological conditions about the pathology of degenerative spine damage - <20 years and older population -4.2% (in men - 6.0% and women - 3.3% ga) increased.
   The most frequently confirmed risk factors are genetic factors, low consumption of fruit and vegetable products, and occupational stress. Their contribution to the formation of UDSh is 70%.
4. Risk factors for non-infectious chronic diseases in the population of patients with degenerative spine injuries are confirmed according to the 21-year monitoring trend in the following prevalence and contributing to the incidence rate: genetic factor - 47.1%, OTV - 12.7%, smoking - 4.9%, hypodynamia-9.8%, alcohol consumption-11.8%, low consumption of fruits and vegetables-53.9%, professional load-46.1%, doing sports with extreme stress-23.5%. Simultaneously from 2 detection of an excess risk factor (multiple risk factors) is determined with an increase in the years 2000-2020, mainly up to 100.0% in ≤ 20 and ≥20-29 years old, and up to 70% in ≥ 60 years old.

USED LITERATURE

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