ANALYSIS OF THE PREVALENCE OF VARIOUS FORMS OF ATRIAL FIBRILLATION AND COMPLIANCE OF PREVENTION OF THROMBOEMBOLIC COMPLICATIONS ON THE TERRITORY OF FAMILY POLYCLINICS IN SYRDARYA REGION

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Introduction: Atrial fibrillation (AF) is the most common cardiac arrhythmia that complicates the course of various cardiovascular diseases, and is also accompanied by the frequent development of thromboembolic complications (TEC), primarily ischemic stroke.

Purpose study is to obtain data on the prevalence of various forms of AF and compliance of the prevention of TEC on the use of anticoagulant agents on the territory of individual family polyclinics (FP) of Syrdarya region (Uzbekistan).

Methods: To achieve this goal, FP№3 of the city of Gulistan and FP№14 of the Gulistan district of the Syrdarya region were randomly selected (urban and rural). With the help of electronic mathematical program were allocated by random selection method for FP№3 -1064 persons, and for FP№14 -812 persons.

Results: in FP№3 in the age group of 40-49years, AF was detected in 1.11%, in the group of 50-59years, AF was detected in 0.56%, in the age category of 60-69years - in 2.27% of those examined. It should be noted that the detection of AF increased with age, reaching a maximum in the category of 90-91years (50%). In the age group over 80years, the prevalence of AF was 12.5%. And when analyzing rural areas (FP№14) in the age group of 50-59 years, AF was detected in 1.31%, and in the group of 60-69years 1.47%. At the outpatient stage, insufficient adequacy of the prevention of TEC was revealed in patients with AF studied both in urban (27%) and rural (25%) clinic.

Conclusion: The prevalence of AF among the adult population of individual clinics in the city of Gulistan (1.03%) is 2 times higher than among the population of a rural clinic (0.49%). At the outpatient stage insufficient adequacy was revealed both in individual urban and rural AF. Thus, more than 70% of patients with AF have a high risk of death and disability.

Keywords: atrial fibrillation, prevalence, anticoagulant therapy, thromboembolic complications, DOAC.

Currently, the estimated prevalence of Atrial fibrillation (AF) in the adult population ranges from 2% to 4%. The prevalence is expected to increase 2.3 times due to the increase in life expectancy of the general population, as well as due to the active search for undiagnosed AF [1,2,3,4].

The problem of ischemic strokes (IS) in patients with AF due to inadequate prevention of thromboembolic complications (TEC) seems to be relevant medically and socially. It was found that the risk of developing IS is considered the highest in the valvular (rheumatic) etiology of AF, 17 times higher than the corresponding indicator of people without AF, and this category of patients is obliged to take warfarin [1,2,5]. In the non-valvular etiology of AF the risk of IS increases up to 5-7 times depending on the presence of risk factors determined by the CHA_2DS_2-VASc score, and the most effective prevention of TEC is carried out by DOAC [2,6,7,8,9]. Thus, determination of the etiologic factor is the key to choosing between warfarin and DOAC. The necessity and choice of the type of pharmacological prevention of TEC depends on etiology and comorbid factors determined by the CHA_2DS_2-VASc score, as well as economic feasibility. The burden of the TEC in AF feasibility study on healthcare caused by thousands of fatal and disabling complications of ischemic stroke amounts to billions of dollars per year in the USA [9,10].

All over the world, the results of registries [3,4,11.12], reflecting the real state of the prevalence of clinical forms of AF and compliance of TEC prevention with recommended standards are widely used in solving these problems. Unfortunately, in Uzbekistan, this problem is poorly studied at the population level. So, according to calculations, in Uzbekistan, as a complication of AF annually up to 20 thousand strokes [13,14,15] 1/3 (7-8 thousand) of them die, and only 10-15% return to full life, the rest (another 8-10 thousand) have various limitations of usual life activities, including severe disability - the need for nursing care. Timely identification of persons suffering from AF and prevention of ischemic stroke in patients with its various clinical forms throughout Uzbekistan could reduce mortality and disability associated with AF by 50% or more.

The purpose study is to obtain data on the prevalence of various forms of AF and compliance with the prevention of TEC on the use of anticoagulant agents with the current recommendations of the ESC (2020) on the territory of individual family polyclinics of Syrdarya region.

Materials and Methods of the Study. Study of data on the prevalence of various forms of AF and compliance of prevention of TEC by the use of anticoagulant agents with current recommendations in the territory of family polyclinics (FP) №3 and

№14 of Syrdarya region. To achieve the set goal, (urban and rural) FP№3 of Gulistan city and FP№14 of Gulistan district of Syrdarya province with a total population of 29577 people (22165 (FP№3) and 7412 (FP№14) population, respectively) were randomly selected.

Random selection was performed using computer programs with the function of random number generator in Microsoft Excel program. Taking into account the table (Table №1 [16,17]), not exceeding 5% error of the number of observation units at the accuracy of the total set of 29577 persons (22165 (FP№3) and 7412 (FP№14)) of the population with the help of electronic mathematical program were allocated by random selection method for FP№3 of Gulistan city 1064 persons, and for FP№14 of Gulistan district 812 persons.

The scheme of the study formation is shown in Table №2. In order to assess compliance of TEC prevention with the current ESC recommendations at the outpatient stage, we studied outpatient records of selected adult patients (over 18 years of age) of FP№3 and FP№14, as well as through active calls and consultations

Table №1.
The units of observation do not exceed 5% error in the accuracy of the overall survey complex.

	0,01-1%	0,02-2%	0,03-3%	0,04-4%	0,05-5%
1000	909	714	526	286	286
2000	1667	1111	714	476	333
3000	2308	1364	811	517	353
4000	2857	1538	869	540	364
5000	3333	1667	909	555	370
6000	3750	1765	937	566	375
7000	4118	1842	959	574	378
8000	4444	1905	976	580	381
9000	4737	1956	989	584	383
10000	5000	2000	1000	588	385
11000	5238	2037	1009	591	386
12000	5454	2069	1017	594	387
13000	5652	2097	1024	596	388
14000	5833	2121	1029	598	389
15000	6000	2143	1034	600	390
16000	6153	2162	1039	601	390
17000	6296	2179	1043	603	391
18000	6429	2195	1046	604	391
19000	6552	2209	1050	605	392
20000	6667	2222	1059	606	392
30000	7500	2308	1071	612	395
40000	8000	2353	1081	615	396
50000	8333	2381	1087	617	397
60000	8571	2400	1091	618	397
70000	8750	2414	1094	619	398
80000	8889	2424	1096	620	398

We analyzed the main etiological factors in the development and progression of AF, the prevalence of the main clinical forms of AF (paroxysmal, persistent, long-standing persistent and permanent) depending on the presence of COVID-19.

Patients without valvular heart disease were assessed for risk of TEC using the CHA_2DS_2-VASc score recommended by the ESC [1,2,18].

Bleeding risk was assessed using the HAS-BLED score also recommended by the ESC [1,2,18,19].

 The study of the situation regarding the compliance of anticoagulant use with the current ESC recommendations (2020) was conducted by analyzing the structure of pharmacological prevention of TEC at the time of the study.

Objective data obtained through instrumental and laboratory examinations at the screening stage include: measurement of blood pressure (BP) and heart rate, anthropometric parameters (height, body weight, waist and hip circumference), ECG recording in 12 leads at rest and daily Holter ECG monitoring in case of suspected AF.

ECG registration at rest was performed in a specially adapted and equipped room, using a computer system "CardioSys" (KAI-MEDICA, Ukraine). Immediately before the scheduled ECG registration, the patient should not eat, smoke, or drink stimulating drinks (tea, coffee, "energy drinks").

In persons with clinical and ECG signs of AF, Holter ECG was performed in conditions of free movement of the patient using the computer system "CardioSens+" (KAI-MEDICA, Ukraine) in the laboratory of Cardiac Arrhythmias of RSCSPMC. A 5-channel recorder was used, allowing to form 3 monitor leads corresponding to leads III, V1-2, and V5 of the standard ECG. During the study, patients filled out a diary in which they noted the nature of activity, their sensations, and the time of medication administration. The diary was used for a retrospective comparison of the patient's sensations and the character of heart rhythm disturbance at a certain moment of the day. The number and severity of heart rhythm disturbances were assessed during Holter ECG.

Table №2.

The scheme of the formation of the study

Step 1	The (urban and rural) FP№3 of Gulistan city and FP№14 of Gulistan district of Syrdarya province with a total population of 29577 people (22165 (FP№3) and 7412 (FP№14) population, respectively) were randomly selected.
Step 2	Using an electronic mathematical program, 1064 persons were randomly selected for FP№3 of Gulistan city and 812 persons for FP№14 of Gulistan district.
Step 3	Determination of the prevalence of cardiovascular diseases including CVDs including AF by screening 1064 persons from the selected FP№3 of Gulistan city and 812 persons from FP№14 of Gulistan district.
Step 4	Identified patients with AF underwent in-depth examination to review data on the prevalence of various forms of this arrhythmia and compliance of TEC prevention by anticoagulant use with current recommendations.

Statistical processing of the obtained results was carried out using the standard data analysis package "Microsoft Office Excel 2010", program "Statistica 10.0". The conformity of the data to the normal law of distribution was evaluated. We determined: sample arithmetic mean X; sample standard deviation (standard deviation) - SD. The results are presented as X±SD. Using the methods of parametric and nonparametric statistics, Student's t test, Mann-Whitney test, $\chi 2$ test were

determined at different levels of significance (p). p<0.05 was taken as statistical reliability of differences.

Results of the study. According to the results of the study in FP№3 of Gulistan city, it was found that (Table №3) the mean age of the examined persons was 45.11 ± 16.63 years, while the mean age of women was higher: 45.57 ± 16.68 years vs. 44.69 ± 16.58 years, and the male/female ratio was 51.97% and 48.03%, respectively.

In 532 (50%) out of 1064 persons examined, medical documents did not contain information on diseases of cardiovascular and other systems, and therefore they were qualified as practically healthy persons. The proportion of practically healthy individuals was 55.1% among men and 44.4% among women ($\chi2=5.949$; p=0.0147). The most frequently detected diseases were hypertension (HTN) and/or ischemic heart disease (IHD) - in 28.38% of the residents; indications for chronic rheumatic heart valve disease (RHVD) were detected in only 0.19% of the examined persons.

A history of post-infarction cardiosclerosis (PICS) was found in 1.13% and 0.85% of patients, respectively, and while PICS morbidity was slightly higher in women ($\chi2=3.548$; p=0.0596), the rates of stroke were higher in men ($\chi2=2.446$; P=0.1179). At the same time, women had a slightly higher group mean BMI than men: 26.95 ± 5.7 vs. 26.42 ± 4.14 (P=0.0813), while men were slightly more likely (1.5-fold) to have type 2 diabetes mellitus. It should be noted that 207 (19.5%) of the examined persons noted the fact of COVID-19 infection, with different degrees of exposure: discharge from hospital, MSCT/ chest X-ray, positive results of PCR/immunoglobulin G or M test, or from the words. As shown in Table №3, 20.1% of men and 18.8% of women reported having COVID-19 (Table №3).

Simplified analysis of medical documents, standard ECG, and Holter ECG as needed in a random sample of 1064 adults (over 18 years old) of polyclinic №3 in Gulistan city revealed the presence of cardiovascular diseases in 28.57% of the examined, another 21.43% had a record of diseases of other systems (gastrointestinal, respiratory, endocrine, oncological and other diseases). Every fifth person surveyed noted the fact of having suffered COVID-19. Consequently, 50% of residents qualified as practically healthy.

Table №3. Clinical characteristics of the examined persons in FP No 3 of Gulistan city						
General group (n=1064)		**Men (n=553 (51,97%))**		**Women (n=511 (48,03%))**		
Age (years)	45,11 ± 16,63		44,69 ± 16,58		45,57 ± 16,68	
Height (cm)	1,64 ± 0,08		1,68 ± 0,08		1,60 ± 0,07	
Weight (kg)	72,00 ± 13,93		74,62 ± 12,85		69,21 ± 14,50	
BMI	26,68 ± 4,96		26,42 ± 4,14		26,95 ± 5,7	
Diagnosis						
Healthy people	532	50,0%	305	57,33%/ 55,15%	227	42,67%/44,42%
CHD/HTN	302	28,38%	149	49,34%/ 26,94%	153	50,66%/29,94%
RHVD	2	0,19%	2	100,0%/ 0,36%	0	0/0
Others	228	21,43%	97	42,54%/ 17,54%	131	57,46%/25,64%

Associated diseases and/or complications					
Presence of PICS (from CHD/HTN patients)	12	1,13%	3	25,0%/ 0,54%	9	75,0%/1,76%
History of STEMI	9	0,85%	7	77,78%/ 1,27%	2	22,22%/0,39%
Type 2 DM	33	3,10%	20	60,61%/ 3,62%	13	39,39%/2,54%
Covid-19	207	19,45%	111	53,62%/ 20,07%	96	46,38%/ 18,79%

Similar analysis of the data from FP№14 of Gulistan district, Syrdarya province showed that the average age of patients was 47.01 ± 15.06 years, while the average age of men was higher: 48.27 ± 15.19 vs. 46.97 ± 15.09, and the male/female ratio was 51.97% and 48.03%, respectively (Table №4).

In 272 (33.5%) out of 812 subjects, medical documents did not contain information on diseases of cardiovascular and other systems; therefore, they were qualified as practically healthy persons. The proportion of practically healthy individuals was 36.49% among men and 30.26% among women ($\chi2=3.527$; $p=0.0604$).

Table №4. Clinical characteristics of examined persons in FP No 14 of Gulistan district					
General Group (n=812)			**Men 422 (51,97%)**		**Women 390 (48,03%)**
Age (years)	47,01 ± 15,06		48,27 ± 15,19		46,97 ± 15,09
Height (cm)	1,66 ± 0,08		1,71 ± 0,07		1,66 ± 0,10
Weight (kg)	73,94 ± 15,15		77,75 ± 15,39		73,87 ± 15,28
BMI	26,77 ± 5,07		26,69 ± 4,8		26,74 ± 5,12
Diagnosis					
Healthy people	272	33,50	154	56,62%/ 36,49%	118	43,38%/30,26%
CHD/HTN	279	34,36	163	58,42%/ 38,63%	116	41,58%/29,74%
RHVD	0	0,00	0	0/0	0	0/0
ILC	0	0,00	0	0/0	0	0/0
Others	261	32,14	105	40,23%/ 24,88%	156	59,77%/40,0%
Associated diseases and/or complications					
Presence of PICS (from CHD/HTN patients)	12	4,30	8	66,67%/ 1,90%	4	33,33%/1,03%
History of STEMI	3	0,37	1	33,33%/ 0,24%	2	66,67%/0,51%
type 2 DM	26	3,20	14	53,85%/ 3,32%	12	46,15%/3,08%
Covid-19	47	5,79	27	57,45%/ 6,40%	20	42,55%/ 5,13%

Hypertension (HD) and/or IHD were the most frequently detected diseases in 34.36% of residents, while no indication for chronic RHVD disease was found. A history of post-infarction cardiosclerosis (PICS) was detected in 4.30% and cerebral circulatory disorders in 0.37% of patients, respectively; while PICS morbidity was slightly higher among men ($\chi2=1.049$; $p=0.3057$), the rates of STEMI were higher among women ($\chi2=0.401$; $p=0.5267$). At the same time, women had a slightly higher group-average BMI than men: 26.74 versus 26.69 (p=1.0000), while men were slightly more likely (1.17-fold) to have type 2 diabetes mellitus. It should be noted

that 47 (5.79%) of the examined persons noted the fact of COVID-19 infection, with different degrees of exposure: discharge from hospital, MSCT/ chest X-ray, positive results of PCR/ immunoglobulin G or M test, or by words. As shown in Table №4, 6.40% of males and 5.13% of females reported having COVID-19.

Thus, simplified analysis of medical documents, standard ECG, as well as Holter ECG as needed in a random sample of 812 adults (over 18 years old) of polyclinic №14 of Gulistan district. Gulistan revealed the presence of cardiovascular diseases in 34.36% of the examined, another 32.14% had a record of diseases of other systems (gastrointestinal, respiratory, endocrine, oncological, and other diseases). Every fifth person surveyed noted the fact of having undergone COVID-19— consequently, 33.50% of residents qualified as practically healthy.

Table №5. Clinical characteristics of patients with AF

	FP №3 of Gulistan city. Gulistan			FP №14 of Gulistan district		
	Total	Men	Women	Total	Men	Women
AF	**11 (1,03%)**	7 (63,60%)	4 (36,40%)	**4 (0,49%)**	2 (50,0%)	2 (50,0%)
Age (years)	64,91 ±14,30	63,71 ± 11,86	67,0 ± 19,78	58,8 ±2,6	60,5 ± 0,7	57,0 ± 2,8
Height (cm)	1,68 ±0,10	1,71 ± 0,10	1,61 ± 0,06	1,60 ±0,0	1,7 ± 0,0	1,6 ± 0,0
Weight (kg)	97,36 ±26,99	109,43 ± 25,83	76,25 ± 12,61	86,3 ± 18,9	80,0 ± 28,3	92,5 ± 10,6
BMI	34,4 ± 7,62	37,32 ± 7,84	29,28 ± 3,98	32,7 ± 7,8	28,9 ± 10,04	36,6 ± 3,5
Diagnosis						
CHD/HTN	10	90,9	7	70	3	30	4	100	2	50	2	50
RHVD	0	0,0	0	0	0	0	0	0,0	0	0	0	0
PICS	4	40,0	2	50	2	50	0	0,0	0	0	0	0
Obesity	7	63,6	6	85,7	1	14,3	3	75,0	1	33,3	2	66,7
type 2 DM	2	18,2	2	100	0	0	1	20,0	1	100	0	0
STEMI	2	18,2	1	50	1	50	0	0,0	0	0	0	0
CHF stage						
CHF 0.	3	27,27	2	66,67	1	33,33	0	0	0	0	0	0
CHF 1	2	18,18	2	100,0	0	0,00	2	50,0	1	50,0	1	50,0
CHF 2A	5	45,45	2	40,0	3	60,00	2	50,0	1	50,0	1	50,0
CHF 2B	1	9,091	1	100,0	0	0,00	0	0	0	0	0	0
NYHA class of CHF						
FC 1	0	0	0	0	0	0	0	0	0	0	0	0
FC 2	2	18,18	2	100	0	0	2	50,0	1	50,0	1	50,0
FC 3	6	54,55	3	50	3	50	2	50,0	1	50,0	1	50,0
FC 4	0	0	0	0	0	0	0	0	0	0	0	0
AF types						
Paroxysmal	0	0	0	0	0	0	0	0	0	0	0	0
Persistent	3	27,27	2	66,67	1	33,33	1	25,0	0	0	1	100
Long-standing Persistant	0	0	0	0	0	0,00	1	25,0	1	25,0	0	0
Permanent	8	72,73	5	62,5	3	37,50	2	50,0	2	100,0	0	0

The main objective of our study was to determine the compliance of pharmacological prevention of thromboembolic complications to the requirements of

the current ESC recommendations 2020 and the standards of diagnostics and treatment of AF of the Ministry of Health of the Republic of Uzbekistan 2022.

Table №6. Age characterization of AF occurrence with regard to gender:
(a) FP №3 of Gulistan city, Syrdarya province;

Age (18-91)	Number of people surveyed	AF in the general group		AF in women		AF in men	
		Absolute	%	Absolute	%	Absolute	%
18-19	42	0	0	0	0	0	0
20-29	190	0	0	0	0	0	0
30-39	216	0	0	0	0	0	0
40-49	180	2	1,11	1	0,56/50,0	1	0,56/50,0
50-59	177	1	0,56	0	0	1	0,56/100
60-69	176	4	2,27	1	0,57/25	3	1,70/75
70-79	67	2	2,99	1	1,49/50,0	1	1,49/50,0
80-89	14	1	7,14	0	0	1	7,14/100,0
90-91	2	1	50,0	1	50,0/100,0	0	0
Total	**1064**	**11**	**1,03**	**4**	**0.7%**	**7**	**1.27%**

b - FP №14 of Gulistan district of Syrdarya province;

Age (18-94)	Number of people surveyed	AF in the general group		AF in women		AF in men	
		Absolute	%	Absolute	%	Absolute	%
18-19	12	0	0	0	0	0	0
20-29	94	0	0	0	0	0	0
30-39	186	0	0	0	0	0	0
40-49	175	0	0	0	0	0	0
50-59	153	2	1,31	2	1,31	0	0
60-69	136	2	1,47	0	0	2	1,47
70-79	43	0	0	0	0	0	0
80-89	10	0	0	0	0	0	0
90-94	3	0	0	0	0	0	0
Total	**812**	**4**	**0,49**	**2**	**0,25**	**2**	**0,25**

As can be seen from Table №6 (a), in FP №3 of Gulistan city, Syrdarya region, in the age group up to 40 years old, AF was practically not detected. In the age group, 40-49 years AF was detected in 1.11%, in the group 50-59 years AF was detected in 0.56%, in the age category 60-69 years - in 2.27% of the surveyed. It should be noted that the detection rate of AF increased with age, reaching a maximum in the category of 90-91 years (50%). In the age category over 80 years, the prevalence of AF was 12.5%. When analyzing rural areas, as indicated in Table 5 (b), AF was practically not detected in the age group up to 50 years and above 70 years. In the age group of 50-59 years, AF was found in 1.31% and in the age group of 60-69 years, AF was found in 1.47%.

In general, the trend of increasing prevalence of AF with age in our sample is consistent with the well-known fact [1,2,3]. However, the prevalence percentages in our sample were lower than in European and North American countries.

The main etiologic factor of AF in both urban (FP №3) and rural (FP №14) areas was HTN and/or CHD - in 90.9% and 100%, respectively. Surprisingly for us, the rheumatic etiology of AF was not revealed in either FP№3 or FP№14. As is

known, a high proportion of valvular etiology is characteristic of developing countries, where primary and secondary prevention of rheumatic heart disease is not at an adequate level. In this regard, in developing countries, and in particular in Uzbekistan, the ratio of patients requiring prevention of TEC with warfarin is significantly higher.

When analyzing the data of FP№4 in urban areas, a higher (more than 1.5 times) prevalence of AF among men was revealed both in absolute (7 vs. 4) and relative values (63.6% vs. 36.4%). The high prevalence of AF among men in our sample coincides with the data of Revishvili A.Sh. indicated in thematic monographs. At the same time, the detection rate of AF in many studies is higher among women [20]. At the same time, in rural areas (FP №14), no gender difference between the detection of AF among men and women was found (2 vs. 2). The explanation for this may be the detection of a small number of patients with AF.

The question of the adequacy of TEC prevention is of certain interest. As it follows from Table 7, the risk of TEC assessed by CHA_2DS_2–VASc score, and varied from 2 to 6 points, and on average in the group for FP№3 was $3,64\pm1,80$ points and slightly lower $2,8\pm1,0$ points for FP№14, while the risk of bleeding according to HAS-BLED score on the background of antithrombotic therapy was $1,73\pm1,1$ points and $1,0\pm0,0$ points for the compared outpatient clinics, respectively. These data indicate that absolutely all patients with AF had indications for anticoagulant therapy (ACT).

Table №7. Assessment of the CHA2DS2-VASc and HAS-BLED depending on gender

	FP №3 of Gulistan city, Syrdarya region			FP №14 of Gulistan district of Syrdarya region		
	General group	**Men**	**Women**	**General group**	**Men**	**Women**
CHA_2DS_2-VASc	$2,8\pm1,0$	$2,5\pm0,7$	$3,0\pm1,4$	$3,64\pm1,80$	$3,14\pm1,35$	$4,5\pm2,38$
HAS-BLED	$1,0\pm0,0$	$1,0\pm0,0$	$1,0\pm0,0$	$1,73\pm1,1$	$1,57\pm0,98$	$2,0\pm1,41$

The analysis of the characterization of pharmacological prevention of TTE showed that at the moment of treatment even though almost all patients with AF had a high risk of TTE according to scale CHA_2DS_2-VASc>2 points, only every fourth patient in both urban (27%) and rural (25%) polyclinics of Syrdarya region received ACT (Table №8).

At the same time, 9.1% in FP№3 and 25% of patients in FP№14 who were on ACT reception took DOACs (rivaroxaban). VKAs, in particular warfarin, were taken by 18.2% of patients in FP№3 of Gulistan city, while in rural areas the prescription of this drug was not revealed. Both in urban (54,5%) and rural (50%) polyclinics more than 50% of patients took antiplatelet therapy (acetylsalicylic acid or clopidogrel) not included in the ESC recommendations as a prevention of TEC in AF. In addition, 25% of patients in rural areas were not taking any antithrombotic therapy.

Table №8. Characteristics of pharmacological prevention of TEE at the prehospital stage depending on the etiologic factor.

	FP №3 of Gulistan city, Syrdarya region			FP №14 of Gulistan district of Syrdarya region		
	General group n=11 (100%)	The valvular etiology of AF n=0	Non-valvular etiology of PD n=11 (100%)	General group n = 4 (100%)	Valvular etiology of AF n = 0	Non-valvular etiology of AF. n= 4 (100%)
VKAs	2 (18,2%)	0	2 (18,2%)	0	0	0
DOACs	1 (9,1%)	0	1 (9,1%)	1 (25,0%)	0	1 (25,0%)
Antiplatelet drugs	6 (54,5%)	0	6 (54,5%)	2 (50,0%)	0	2 (50,0%)
DOACs + Antiplatelet drugs	0	0	0	0	0	0
Without AT therapy.	2 (18,2%)	0	2 (18,2%)	1 (25,0%)	0	1 (25,0%)

Discussion of the findings. As is known, the leading causes of cardiovascular mortality are myocardial infarctions and cerebral strokes. The estimated number of strokes in Uzbekistan is not less than 76 thousand/year [14,15]. Strokes are characterized by high mortality (up to 30%) and disability. Up to 30% of all strokes develop in patients with AF, detected in 1-2% of the population. Consequently, the estimated number of patients with AF in Uzbekistan is not less than 330-340 thousand annually, and 25 thousand of them develop strokes, including more than 8 thousand fatal. Strokes on the background of AF are characterized by higher mortality and disability rates, compared to strokes, frolicking in patients who do not have this arrhythmia. Therefore, the requirements for the prevention of TEC and, first of all, ACT in this category of patients have become much stricter. Thus, oral anticoagulants (DOAC) are recognized as the drugs of choice, and when prescribing vitamin K antagonists (VKAs), and in particular, warfarin, the recommended level of Time in therapeutical range (TTR) is increased from 60 to 70% [1].

Previously, we found extremely low adherence of physicians and patients in stroke prevention (less than 7%), and, in particular, prescription of anticoagulants and antiarrhythmic drugs [21]. In this regard, there is an urgent need to develop and implement optimal methods of pharmacological prevention of TEC (warfarin or new oral anticoagulants) and recurrence in patients with AF, taking into account the peculiarities of the healthcare organization in Uzbekistan and the requirements for personalized medicine. At the same time from the pharmacoeconomic point of view warfarin is a more acceptable means of preventing TEC (economic benefit of at least 300,000 sums/month per 1 patient in comparison with taking DOACs, for example, rivaroxaban). However, in most district centers of the country, there is no possibility of regular (at least once/month) and adequate monitoring of warfarin efficacy by INR. Thus, most patients who need long-term (lifelong) prevention of thromboembolic complications (ischemic strokes, pulmonary embolism) in the real situation do not receive it either due to the high cost of new anticoagulants (in Uzbekistan-Rivaroxaban, Apixaban), or due to the lack of possibility of effective control of warfarin intake. In connection with the above-mentioned, the

determination of the real situation on the frequency of various forms of AF among the population and the adequacy of prevention of ischemic strokes in this category of patients is the solution to an extremely important socio-economic problem.

Information on the frequency of clinical forms of AF in the territory of individual family polyclinics in the Syrdarya region, as well as compliance of prevention of TEC by different variants of pharmacotherapy with the current recommendations of the European Society of Cardiology (2020) and standards of the Ministry of Health of Uzbekistan (2022), will allow obtaining data on the real need for prevention of TEC in this category of patients, with the possibility of subsequent extrapolation of these data on the regional score in other regions of Uzbekistan.

The relevance of this problem is evidenced by the inclusion in the order of the President of the Republic of Uzbekistan. №-103 of 26.01.2022 "On measures to prevent and improve the quality of treatment of cardiovascular diseases" paragraph on the need to equip the FP of each district of our country with a coagulometer, which allows to ensure regular monitoring of the effectiveness and safety of ACT with warfarin (blood test for INR), especially in socially disadvantaged populations.

Conclusions:

1. The prevalence of AF among the adult population of some polyclinics of Gulistan city. Gulistan (1.03%) and 2 times higher than among the population of rural polyclinics of Syrdarya region (0.49%).

2. The main etiologic factor of AF in all polyclinics was HTN and/or CHD. Low alertness of physicians about CPHD was revealed. At the same time, more than half of them were diagnosed with a permanent form of AF. It was found that, in general, patients with AF of different clinical forms in both rural and urban areas have a high risk of TEC/ischemic stroke, with a low risk of bleeding according to the CHA_2DS_2-VASc and HAS-BLED scales, respectively.

3. Unfortunately, at the outpatient stage corresponding to ESC recommendations (2020) and standards of Ministry of Health of the Republic of Uzbekistan 2022 on prevention of TEC in patients with AF, insufficient adequacy was revealed both in a separate urban (27%) and in rural (25%) polyclinics of Syrdarya region. Thus, more than 70% of AF patients are at high risk of death and disability.

Ethics Committee Approval: The study protocol was approved by the Local Ethics Committee of the Republican Specialized Scientific And Practical Medical Center Of Cardiology (approval number: 7, date: 11.01.2024).

Informed Consent: Informed consent was obtained from the selected patients before administering the study questionnaire. The protocol of informed consent for participation in the study complies with the requirements of the Helsinki Declaration on Bioethics and Human Rights;

Conflict of Interest: We do not declare any conflict of interest.

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