RENAL-RETINAL SYNDROME

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The late complications of the DM are one of the basic reasons of premature physical inability and lethality of the DM patients, which puts essential harm to the health of the population and the economy as a whole (2). Proceeding from it in the foreground of the problem of prophylactics of the given DM complications is put forward.

For the development of effectual measures of prophylactics it is necessary to study features of a course, prevalence and to reveal the factors promoting the development of the late complications of the DM.

Recently the association between DN and DR has being actively discussed in literature.

The purpose of the present work was a study of the frequent- of the late complications of DM on the population of the DN patients in Tashkent city conditions and the study of the risk factors promoting their development.

The given article is devoted to the analysis of the received information on the association between DN and DR and the factors of its development.

In the City Endocrinology Dispensary a single time research in the epidemiology of the late DM complications is performed. Cohort method is used for selection of observation units. Cohort was formed in accordance with all basic attributes of general set: typicalness by sex, age (18-75 years) and type of DM.

. For processing the selected totality of the representative group of DM patients the formula of unrepeated random selection offered by R.N. Biryukova was used.

All surveyed were interrogated on the specially developed card. The card is developed on the basis of an information medical sheet offered by the European regional bureau of the WHO and is adapted according to purposes and research problems.

The card includes the items of information on the patients, duration of disease and treatment (diet observance, receptions of tablet sugar reduce preparations and insulin, duration of reception of preparations, dose of shortactive and prolonged forms of insulin, frequency of injections per - day).

Analyzed anthropometrical and biochemical parameters, the presence and expressivities of changes on the fundus of the eye, functions of kidneys, vascular system, nervous and genital systems as the most often displays of late complications revealed presence in anamnesis hereditary history on DM and hypertensive disease. In women we analyzed the quantity of pregnancies in anamnesis and

their results. We determine the common presence in anamnesis of both hypoglycemic and hyperglycemic. We estimated the risk factors and their characters. Found out the level of knowledge in the patient about DN and the degree of realization by himself of selfchecking. Diagnostics and screening of diabetic nephropathy performed by qualitatively defining proteinuria with the help of the Phan test of thf' Lachema" firm. The test was considered positive, if the albumin concentration in urine was more than 300 mg/ day.

Diagnostics and screening of the peripheral neuropathy performed on the basis of the definition of vibrating sensitivity with the help of the graduated tuning fork. The research was performed on a horizontal patients condition.

Diabetic retinopathy diagnostics performed by way of selection data from medical cards and if necessary examining the fundus of the eye with the help of the indirect ophthalmoscopy after the dilation of pupil. Revealed changes classified by ophthalmoscopic criteria were offered by the E. Koner and M. Porta.

Ischemic heart disease (IHD), vessels macroangiopathy of the lower extremities was established on the basis of combination of the positive answers on the standard Rouse's questionnaire with the presence of stenocardia, myocardial infraction, alternating lameness syndrome, and, also if necessary on the basis of ECG and reovasography examinations.

The total number of patients: 1201 persons, out of the men - 40.5% (486), women - 59.5% (715). Patients suffering from insulin-dependent DM (IDDM) - 201, from non-insulin dependent DM (NIDDM) - 1000.

By the presence of IDDM the greatest number of patients are registered till 40 years (70.1%), and with NIDDM - more senior than 50 years Id (75,6%).

The distribution of those surveyed on the duration of DM has shown, that greatest quantity of the patients was with the disease duration of 6-10 years.

On a compensation degree patients were distributed as follows - with IDDM:

1. with the compensated course -2.5%,
2. with the subcompensated course - 39.3%,
3. with decompensated course - 58.2%.

With NIDD1C accordingly:

1. 13.3%,
2. 47.8%,
3. 38.9%.

In the examinees with diabetes mellitus the DN - DP combination was found in 44.7% of patients with type I diabetes mellitus and in 31,9% of those with type II diabetes mellitus. The direct correlation was observed between DN phase and DR clinical implication (Table 1). In clinical DN and chronic renal insufficiency (CRI) diabetic retinopathy was registered in all examinees, absence of changes in the fundus of eye being typical of the examinees without renal changes.

Comparison of the fundus vessels in groups of patients with renal changes, that is, those having diabetic retinopathy with nephropathy with those without diabetic nephroangiopathy showed that in patients with type II diabetes mellitus and proteinuria preproliferative (DRII) and proliferative diabetic (DRIH) retinopathies were diagnosed 2.5 more frequently than in those without diabetic nephropathy, in 60.4% and 25.0% of cases, respectively. In type I diabetes mellitus the ratio was *III* and 29.4% ($P<0.001$).

It should be noted that there were 2 times more persons with the disease duration longer than 10 years among the diabetics (regardless of diabetes type) with the combination of DR and DN, as compared with those without diabetic nephroangiopathy (Table 2,3), sub- and decompensated diabetes mellitus being observed 2 times more frequently (Table 4).

Confidently high systolic arterial pressure

Table 1

Diabetic nephroangiopathy incidence dependence on diabetic retinopathy severity (%)

Diabetic retinopathy Severity	Type I diabetes mellitus			Type II diabetes mellitus		
	No. of patients	CN	CRI	No. of patients	CN	CRI
DR I	79	36.7+2.7	-	470	29.3+2.6	-
DR П	65	76.6+2.7	4.6+1.2	284	61.2+2.8	3.5+1.2
DR III	14	4.28+2.6	57.1+2.3	38	28.9+2.5	
Total	158	50.0+2.8	6.9+1.6	792	40.7+2.7	

Table 2

Renal-retinal syndrome incidence dependence on type I diabetes mellitus duration and DR severity (%)

Disease duration	No	DR without nephropathy			Total	DR with nephropathy			Total
		DR I	DR П	DRIII		DRI	DRII	DRIII	
Less than a year	22	9.0+0.8	-	-	9.0+0.8	-	-	-	-
1-5 years	47	29.7+1.3	6.3+1.7	-	36.1+1.5	12.7+1.0	4.2+1.0	-	17.0+1.2
6-10 years	51	43.1+1.5	13.7+1.0	-	56.8+1.2	25.4+1.3	15.6+1.6	-	41.1+1.5
11-15 years	39	20.5+1.7	17.9+1.7	-	38.4+1.9	17.9+1.7	38.4+1.7	5.1+0.7	61.5+1.2
16 and more years	42	9.5+0.7	2.3+1.0	-	11.9+1.2	7.1+1.2	52.3+1.2	28.5+1.4	88.0+1.4
Total	201	2.4+1.0	6.9+0.8	-	33.8+1.0	14.4+1.2	23.3	6.9+0.7	44.0+1.4

Table 3

Renal-retinal syndrome incidence dependence on type II diabetes mellitus duration and DR severity

Disease duration	No.	DR without nephro	jathy		Total	DR with nephropathy			Total
		DR I	DR П	DRIII		DRI	DRII	DRIII	
Less than a year	161	18.6+1.2	0.62+0.62	-	19.0+1.2	5.5+1.7	-	-	5.5+1.7
1-5 years	221	31.2+1.4	65.8+1.5	0.45+0.4	37.5+1.6	23.0+1.3	1.8+0.8	-	24.8+1.9
6-10 years	235	56.1+1.6	9.3+1.8	0.85+0.5	66.3+1.6	19.1+1.5	12.7+1.1	-	31.9+1.2
11-15 years	201	23.6+1.3	-	0.99+0.7	54.2+1.5	14.4+1.7	28.3+1.7	28.3+1.7	50.7+1.5
16 and more years	182	29.6+1.3	2.1+1.0	3.2+1.3	35.1+1.5	2.1+1.0	51.0+1.7	11.5+1.3	64.8+1.5
Total	1000	33.2+1.4	10.0+0.9	1.1+0.3	44.3±1.5	13.8+1.0	18.4+1.2	2.7+0.5	34.0+1.5

Table 4

Renal-retinal syndrome incidence in dependence on diabetes mellitus control (%,+m)

Control	Type I diabetes mellitus			Type Π diabetes mellitus		
	No.	DR without nephropathy	DR with nephropathy	No.	DR without nephropathy	DR with nephropathy
Compensated	5	-	20.0±0.4	133	33.0±1.3	8.2±0.8
Subcompensated	79	39.2±1.4	3.9+1.3	478	42.2±1.4	
Decompensated	117	33.9±1.3	53.8±1.5	389	50.6±1.6	49.3±1.5

(regardless of diabetes type) was observed in patients with DR and nephropathy as compared to those without nephropathy. Mean systolic arterial pressure in patients with type I diabetes mellitus and DR without nephropathy was 131.75+23 mmHg, in the group with DR and renal changes it was 149.88±26.1 mm Hg. Upon type Π diabetes mellitus the values were 136.09±21 mm Hg and 155,46±25 mm Hg, respectively. Diastolic arterial pressure upon type I diabetes mellitus in the group of patients with DR and nephropathy was 92.6+12 mm Hg, in the group of persons with DR without nephropathy 71,50±14 mm Hg. Upon type Ц, diabetes mellitus the values were 97.47±14 mm Hg and 84,84±12 mm Hg, respectively. It should be noted that upon DR with nephropathy the arterial hypertension family burden was higher than the one in the group of patients with DR without nephropathy (upon type I diabetes mellitus being 56.0% and 19.5%, upon type Π diabetes mellitus 50.6% and 34.8%, respectively).

The "DM family burden" and "obesity" factors were found insignificant in patients with the DR - DN combination (P>0.05).

The findings confirm the opinion that both insufficient compensation of carbohydrate metabolism and arterial hypertension play a significant role in DN pathogenesis, DR reflecting the general increase of endothelium barriers permeability for blood plasma proteins.

The analysis of mean blood serum cholesterol showed that in patients with the DR and DN combination as compared with those without renal changes the total cholesterol is higher. Upon type I diabetes mellitus in patients with the DR - DN combination mean cholesterol was 5.9±lmmol/l, in persons with DR without nephroangiopathy it was 3.4±1.7mmol/l, upon type Π diabetes mellitus the values being 7.7±1.2mmol/l and 5.7±1.0mmol/l, respectively.

Thus, the findings show that 44.5% of patients with type I diabetes mellitus and 31.9% of those with type II diabetes mellitus had the DR - DN combination to be the evidence for renal-retinal syndrome in the patients of the kind.

LITERATURE

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