

FOUR DECADES OF ENDEMIC NEPHROPATHY IN MEZGRAJA

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Mezgraja village, situated on the right bank of the river South Morava, has presented the focus of endemic nephropathy for the last four decades. The eight and ninth decade of the last century, distinguish the high prevalence of endemic nephropathy, but the last decade is characterized by the degradation in prevalence of this disease in Mezgraja.

The present section research includes 67% of the population in Mezgraja. They have implied through anamneses, physical check and the examination of the first morning urine. In 27% of testers, a different urine abnormality was recorded (proteinuria, glycosuria, microhematuria, leukocyturia). The persons with urine abnormality were subjected to the additional clinical investigation in the Department of nephrology and hemodialysis.

In the course of section research as well as the additional aspire clinical research, different kidney diseases were discovered in 4,18% of the testers, such as: endemic nephropathy (0,52%), cystic disease of kidney (0,52%), renal calculosa (1,04%), and diabetic nephropathy (2,08%). The prevalence of endemic nephropathy is therefore on the level of the previous one, dating from the year of 1966.

All the attained data represent the base for the further prospective analysis of the clinical-epidemiological characteristic of endemic nephropathy. The descending rate of this disease in the last decade rejoice, but it should not baffle and discourage the researchers as it can mean only one "lull before storm". *Acta Medica Medianae 2003; 42 (3): 27-29.*

Key words: endemic nephropathy, chronic kidney disease, frequency

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Introduction

Endemic nephropathy (EN) is a chronic tubulointestinal kidney disease, with the clinical manifestations, which overtake the adult population in the village district along the tributary of the river Danube in Bulgaria, Romania and some republics in ex Yugoslavia: Serbia, Bosnia and Croatia. EN is characterized by its occurrence at the particular central place as well as within a family unit; it follows the slow progressive procedure to the terminal stadium of kidney weakness, and is very often associated with the tumors of the upper urotelium and with still unknown etiology (1,2,3,5,9).

Diagnosis of EN, before the growth of nitrogen materials in the blood is still dodging. It is possible to be established in the early stadium of disease, only if the continuing court-dispensary of the threatened population is carried out (7).

Until now, court-dispensary and the clinical investigation of EN in the basin of South Morava has showed up the existence of a few utter focus of this

disease: Brestovac, Kutles, Donja Trnava, Mezgraja and Nozrina (9). The last voluminous researcher of EN in these districts were carried out in 1981. (8). The last investigation were occasional, sporadic and they mostly observed the family members with the EN. The village Mezgraja is the district where the court, dispensary and clinical investigation of EN have been performed continually since 1965.

The aim of this investigation was to ascertain the frequency kidney disease, En in particular, in Mezgraja, 5 years after the last detailed nephrological examination of residents in this village.

Exameners and methods

The investigations implemented in October, 2002, in the village Mezgraja, commune Nis, 382 (67%) of his residents were included.

Court investigation consisted of rendering the target anamnestic data, clinical check, filling in the family medical chart and the examining of the first morning urine. For the examination of urine we used urine chaplets (chroma 10) with 10 parameters (specific weight, pH, proteins, eritrocits, nitritis, bilirubin, urobilinogen, ascorbid acid, glucose and ketobadys), produced by the firm Mekarini diagnostic-Firenca, Italy. In

this way, the persons with the previous diagnosis of kidney diseases were recorded, as well as the persons with the urine abnormality; moreover, they were in dire need of some further diagnostic research and accessory.

Additional clinical investigation of the persons with urine abnormality were implemented in the Department of nephrology and hemodialysis in Nis, immediately after the investigations on the beat had been terminated. Clinical investigations included the complete hemogram, the overall examination of urine, the estimation of the functional condition of kidney and its morphological inspection (ultrasonographic, radiologic and ect). In this way, the diagnosis of kidney disease in the examined population of Mezgraja was completed. The diagnosis of EN has to satisfy all the previously accepted general criteria (7).

Results and discussion

The village Mezgraja is away from Nis 17 km and it's situated on the right bank of the river South Morava. There are 571 residents (preliminary results of roster from 2002), mostly occupied by agriculture. The village was flooded several times in the past, not so frequently in the last couple of years; yet, but there are still surface waters. Since 1987, when the central water supply was built, the resident from Mezgraja have been drinking fresh water.

After the dispensary and clinical notice that many people with the kidney disease come from Mezgraja, the first nephrological investigation in this village was carried out in 1965. The disease, well known as EN, was verified in two persons (0,10%), 9 persons (1,8%), were probably sick and 51 (10,8%) were suspect on disease (9).

The second court investigation of EN in the same village was carried out by Institute of nephrology and hemodialysis 1975. That was the period when 20 patients of EN were registered (4,5%), 28 (6,3%) were probably sick and 63 (11 %) were suspected on disease (9).

The third country investigation of EN among the same population was done in 1981. EN was verified in 20 persons, which compares 3,8% of the total number of the testees. Other kidney diseases were verified in 8,5% of the testees (9).

With the court investigation in 1996, EN was verified in two persons (0,52%), and other kidney diseases in 3,53% of testees. The tumors of urotelium were verified in two persons (6).

With the last court investigation of EN in Mezgraja, carried out in October 2002. At that time a different urine abnormalities were verified even in 106 (27,85%) of testees (table 1).

The re-examination of urine on the beat registered the following kidney diseases; EN in 2 (0,52%), cystic renal disease also in 2 (0,52%), renal calculosa in 4 (1,04%) and diabetic nephropaty in 8 (2,08%). The tumors of urotelium were not diagnosed with this investigation (table 2). According to this, the prevalence of EN and others kidney disease, stated by this investigation, is actually on the same level as it was in the researches conducted in 1966. The examination of fre-

quency of EN and the rest of kidney diseases can be seen in table 3. The eight and ninth decade of this century as we can see, distinguish the high prevalence of EN, and the last decade we can witness its progressive decrease. This trend of frequency of EN in Mezgraja, are complitly in accordance with ours recent observation of the decreasing trend of incidence with EN on dialysis (3).

Table 1. Urines abnormality in Mezgraja residents

Urines abnormality	n	%
Proteinuria	22	5,76
Glicosuria	14	3,66
Microhematuria	18	4,73
Leucocituria	36	9,42
Positiv nitrits	14	3,66
Amount	104	27,25

Table 2. Frequency of EN and others kidney diseases in Mezgraja

Kidney disease	n	%
EN	2	0,52
Cystic disease of kidney	2	0,52
Renal calculosa	4	1,04
Diabetic nephropathy	8	2,08
Amount	16	4,18

Table 3. The frequency of En and others kidney disease in Mezgraja in period from 1965. to 2002.

year	Prevalence of EN	Prevalence of others kidney disease	Source
1965	0,1%	/	Strahinjc and ass., 1985
1975	4,5%	/	Strahinjc and ass., 1985
1981	3,8%	8,5%	Strahinjc and ass., 1983
1966	0,52%	3,53%	Raicevic and ass., 1996
2002	0,52%	3,66%	this article

The obtained data present the base for the further prospective accessory of the clinical-epidemiological characteristic of EN in Mezgraja. Descending, but at the same time frequently occurring trend of this disease in the last decade rejoice, but it should not baffle and discourage the researchers because it can mean only one "lull before storm".

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CETIRI DECENIJE ENDEMSKE NEFROPATIJE U MEZGRAJI

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Selo Mezgraja, na desnoj obali Južne Morave, predstavlja žarište endemske nefropatije već skoro četiri decenije. Osmu i devetu deceniju prošlog veka odlikuje visoka prevalencija endemske nefropatije, a poslednju deceniju pad prevalencije ovog oboljenja u Mezgraji.

Sadašnjim terenskim istraživanjima obuhvaceno je 67% stanovnika Mezgraje. Ona su podrazumevala iscrpnu anamnezu, klinički pregled i pregled jutarnjeg urina. U 27% ispitanika evidentirane su različite urinarne abnormalnosti (proteinurija, glikozurija, mikrohematurija, leukociturija). Osobe sa urinarnim abnormalnostima podvrgnute su dopunskom, kliničkom ispitivanju u Institutu za nefrologiju i hemodijalizu u Nišu.

Ispitivanjima na terenu, a takođe i dopunskim, ciljanim kliničkim ispitivanjima ustanovljene su kod 4,1% ispitanika različite bubrežne bolesti: EN (0,52%), cistična bolest bregra (0,52%), kalkuloza bregra (1,04%) i dijabetesna nefropatija (2,08%).

Dobijeni podaci predstavljaju bazu za dalje preventivno praćenje kliničko-epidemioloških karakteristika endemske nefropatije. Opadajući, pak, trend učestalosti ovog oboljenja tokom poslednje decenije raduje, ali ne sme da zavara i obeshrabri istraživanje jer može značiti samo "zatišje pred buru". *Acta Medica Medianae* 2003; 42 (3): 27-29.

Ključne reči: endemska nefropatija, hronična bolest bregra, [ucestalo.it](http://www.ucestalo.it)