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RENAL PATHOLOGY. EXPERIMENTAL AND CLINICAL

FP057 BALKAN ENDEMIC NEPHROPATHY AND MALIGNANT TUMORS OF URINARY BLADDER - 40 YEARS OF FOLLOW

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INTRODUCTION: Balkan endemic nephropathy (BEN) is a chronic tubulointestitial kidney disease prevalent in Serbia, Bosnia, Croatia, Bulgaria and Romania. BEN is often associated with the high concominant appearance of the malignant tumors of the urothelium (MTU), especially with malignant tumors upper urothelium (MTUU).

The aim of the paper is to assess the basic epidemiological characteristics of malignant tumors of urinary bladder (MTUB) occuring in Jablanica region in the period of 40 years, and to determine the linear trend of MTUB frequency in region with BEN compared to non-endemic regions.

METHODS: The research period lasted from 1978-2017. During the analysis of the frequency of MTUB, we used the operative material of Urology Department, Health Care Center, Leskovac, and Urology Clinic, Clinical Center, Nis. The average annual incidence rate (AAIR) was calculated per 100,000 people. We collected data about our patients regarding their sex, age, place of living and place of birth. Patients were classified by the place of living (A-endemic regions, B-hypo-endemic regions, C-non-endemic urban regions, D-non-endemic rural regions). Finally, we jointly observed groups C and D (non-endemic regions) for MTUB. For practical reasons, this period was divided into the first (1978-1997) and the second one (1998-2017).

RESULTS: From 1978 to 2017, 1208 cases of MTUB(282 female and 926 male-1:3.28) of the average age of 62 (the youngest 32, and the oldest 86 years). There were 17 patients in endemic (A), 25 in hypoo-endemic (B) and 1166 in non-endemic regions (C,D). AAIR of MTUB was (14.35) in endemic regions, (11,23) in hypo-endemic regions and (11,82) in non-endemic regions. There was five times decline in the relative rate of incidence of MTUB per annum in endemic regions from the first to the second period, while the approximate annual rate for MTUB in non-endemic regions was increased by 3,19 times(288:920). The linear trend of MTUB in the observed period was stastically increased (y= 1.6415x +3,45; r2 =0,85). In the first observed period, MTUB of the Jablanica District in endemic regions was 2.58 times more frequent than in non-endemic ones compared to the number of inhabitants, while in the second observed period it was 1.59 times more frequent in non-endemic regions.

CONCLUSIONS: High frequency of the malignant tumors of the urothelium, primarily MTUU in the areas with BEN incidence, probably points to the common nephropathogenic and cancerogenic etiologic factors and proves the existence of a positive correlation between BEN and MTUU, which is not the case with MTUB.