

Characteristics of upper urothelial carcinoma in an area of Balkan endemic nephropathy in South Serbia. A fifty-year retrospective study

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ABSTRACT

Aims and background. Upper urinary tract transitional cell carcinoma, a relatively rare tumor, is up to 100 times more frequent in regions with Balkan endemic nephropathy. Characteristics of transitional cell carcinoma in the endemic South Morava Region in Serbia in the previous 50 years were evaluated.

Patients. We analyzed 477 cases with pathologically confirmed transitional cell carcinoma who underwent surgery from 1957 to 2006: 91 from endemic, 106 from adjacent and 280 from control settlements. Cases in the study came from 10 endemic villages, 46 adjacent villages, 51 control villages and the city of Nis.

Results: The increase in number of transitional cell carcinoma from 1957 was followed by a peak between 1967 and 1978 (yearly incidence 21.9 per 100,000) and a slow decrease thereafter to 7.4 (1997-2006). In the control settlements, the increase was steady. Reduced kidney function at surgery was found in 58% of patients from endemic and in 20% from control settlements. Age at surgery has significantly increased from 52.3 and 51.5 (1957-1966) to 70.9 and 66.1 (1997-2006) for endemic and control settlements, respectively. The female sex was predominant in endemic and adjacent settlements and the male sex in control settlements. Transitional cell carcinoma from endemic settlements was of a lower grade in the period from 1957-1986, but in the period from 1987-2006 they were predominantly high grade. Low tumor stage (pTa-pT1) predominated in transitional cell carcinoma from the endemic and adjacent but not the control settlements in the period from 1957 to 1986. However, in the last 20 years, upper urinary tract transitional cell carcinoma stage increased, the highest in the period from 1997 to 2006 in all settlements studied. Conservative surgery was advocated for transitional cell carcinoma in Balkan endemic nephropathy areas up to 1996. Transitional cell carcinoma are now more malignant and more advanced than before, and a less aggressive approach is used only for absolute indications.

Conclusions. An increased number of transitional cell carcinoma in endemic settlements was observed, markedly decreasing in the last decade. An increasing age and a shorter survival were recorded in patients both from Balkan endemic nephropathy and control settlements. Sporadic cases upper urinary tract transitional cell carcinoma in settlements adjacent to endemic settlements were demonstrated. Free full text available at www.tumorionline.it

Key words: upper urinary tract transitional cell carcinoma, epidemiology.

Acknowledgments: This work was supported by a grant No. 145004 from the Ministry of Science and Technological Development of Serbia.

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Received November 10, 2009;
accepted May 18, 2010.