

THE IMPORTANCE OF URINARY ULTRASONOGRAPHY FOR DETECTION OF INCIDENTAL RENAL CELL CARCINOMA

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INTRODUCTION & OBJECTIVES: In this retrospective study, we evaluated the rate of incidental renal carcinoma in patients who did not have upper urinary tract symptoms (UUTS) (fever, lombor pain, mass, gastrointestinal symptoms) and who were referred to our department for urinary ultrasonography.

MATERIAL & METHODS: Urinary ultrasonographic examinations which were performed between March 1995 and August 2004 were evaluated. Only patients with lower urinary tract symptoms and the ones referred for check-up were included. Patients with UUTS or known renal masses or hematuria were excluded and a total of 11355 urinary ultrasonographic examinations were evaluated for incidental renal mass.

RESULTS: The mean patient age was 59 years (range 38 to 90). Of the 11355 patients, 7610 (67%) were men and 3745 (33%) women. Ultrasonography revealed incidental renal mass in 37 (0.33%) patients. Three patients (0.03%) with incidentally detected renal masses were lost to follow-up. 13 of them (0.11%) were regarded as angiomyolipoma after sonography and computed tomography. Their follow-up is still continuing without any problems. Eleven renal masses (0.1%) which could not be named neither as cystic nor solid with ultrasonography proved to be benign with other imaging techniques (computed tomography and/or magnetic resonance imaging). Ten patients (0.09%) with preoperative diagnosis of renal tumour underwent surgery and the pathological diagnoses were renal cell carcinoma in all of these 10 cases.

CONCLUSIONS: The rate of incidental renal cancer diagnosed with ultrasonography in patients UUTS was 0.09%. This rate, which is in correlation with the literature shows that scanning for incidental renal mass is not suitable.

MIXED EPITHELIAL AND STROMAL TUMOUR OF THE KIDNEY (MESTK)

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INTRODUCTION & OBJECTIVES: In 2000, pathologists defined diagnostic criteria for a new histopathological entity among kidney tumours - MESTK, which occurs exclusively in perimenopausal women. The majority of reported MESTK were benign tumours. Only four malignant exceptions were reported in the recent literature. The aim of this work is to present on our series this new histopathological entity to urologists.

MATERIAL & METHODS: From January 1991 to October 2004, 720 renal tumours were surgically treated at our hospital. Four mixed epithelial and stromal tumour of the kidney were diagnosed on histology in four women.

RESULTS: MESTKs were found in four women of average age 62 years. Two women were investigated due to abdominal pain and in two the tumour was an incidental finding. On CT, all tumours were multilocular cystic lesions with a thin wall, a water density without contrast enhancement. Septations were thicker (Bosniak type III) in three cases and very thin (Bosniak type II) in one case. All women underwent nephrectomy. Nephron sparing surgery was impossible due to the tumours' diameter 70-130 mm and a due to close relation of the tumour to the main renal vessels. Two women were treated with transperitoneal radical nephrectomy. Two women were explored laparoscopically with a following transperitoneal (tumours size 13 cm) or laparoscopic nephrectomy (7 cm). All tumours were localised close to the renal hilum. All women are well 1, 12, 89 and 115 months (average 54 months) after the surgery.

CONCLUSIONS: MESTK is an extensively cystic tumour classified as type III or less common as type II in the Bosniak classification on CT. It is impossible to distinguish MESTK from multilocular cystic renal cell carcinoma and benign cystic nephroma on preoperative imaging studies. Due to a relatively big size of tumour and localisation close to the renal hilum, nephron sparing surgery was impossible in all four cases.

THE ACCURACY OF 250 FINE-NEEDLE BIOPSIES OF SOLID RENAL MASSES

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INTRODUCTION & OBJECTIVES: In some cases of uncertain lesions in the kidney it would be helpful to perform biopsies for preoperative histopathological evaluation. However, diagnostic value of fine-needle biopsies is controversially discussed. The aim of this study was to evaluate the accuracy of and the impact on tumour management of fine needle biopsy for histopathological evaluation of small solid renal masses or local recurrences after nephron sparing surgery.

MATERIAL & METHODS: After radical or partial nephrectomy 250 renal tumour biopsies were performed in 50 patients (1 central and 4 peripheral biopsies per tumour). All biopsies were carried out by one urologist after preparation of the kidney ex situ on back table visually guided. Formalin fixed paraffin embedded biopsies were evaluated by one pathologist.

RESULTS: In 49 of 50 cases (98%) we could define the malignant behaviour of the tumour when performing 1 central and 4 peripheral biopsies of each tumour, but in 3 cases (6%) it was not possible to define the origin of the tumour. In 85.2% the grading was correct defined in the histopathological evaluation of the biopsy tissue. A benign lesion were revealed in 4 cases (8%, all oncocyoma). In renal tumours 4cm or smaller in diameter the accuracy of 1 central and 1 peripheral biopsy each regarding to definition of the tumour origin, the tumour grading and the cell type/growth pattern was 96% and 95.5%, 84% and 84.4%, 87.5% and 89.5%. In renal tumour more than 4cm in diameter the accuracy was 100% and 98.1%, 85% and 94.3%, 71.4% and 88.7%.

CONCLUSIONS: Percutaneous biopsy of renal lesions is a rapid diagnostic procedure and accurate enough to evaluate a lesion in a renal remnant after nephron sparing surgery and to evaluate a renal mass in older and/or high risk patients to determine the therapeutic procedure. Additionally, biopsy could be used for identifying benign renal lesion for observation. From our results we recommend 1 central and 1 peripheral biopsy in patients with renal lesions 4cm or less in diameter and 2 peripheral biopsies guided by ultrasound in cases with renal tumours more than 4cm in diameter.

INCIDENTAL DIAGNOSIS IN RENAL CELL CARCINOMA: DOES IT HAVE A PROGNOSTIC IMPORTANCE?

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INTRODUCTION & OBJECTIVES: Stage, histological grade and type of the tumour, and performance status are well known prognostic factors for renal cell carcinoma (RCC). Aim of this study was to evaluate the prognostic value of incidental diagnosis in 279 RCC patients.

MATERIAL & METHODS: The data were reviewed for 279 patients, underwent radical or partial nephrectomies for RCC at our institution between 1990 and 2003. Tumours, diagnosed during imaging studies for symptoms unrelated to RCC were defined as incidental. The prognostic factors were compared for incidental and symptomatic groups.

RESULTS: In all, 96 (34.4%) renal tumours were diagnosed incidentally. For incidentally diagnosed and symptomatic group mean age at diagnosis (55.3 and 54.6 years, respectively) and male to female ratio (64/32 and 122/61, respectively) was not different statistically. Tumours were smaller in the incidental group (56.3 mm vs. 82.7 mm, $p < 0.001$). Incidental tumours were significantly of lower stage and grade compared to others (Table) and presented with significantly less lymphatic, vein and metastatic invasion ($p < 0.001$, $p = 0.05$ and $p < 0.001$, respectively). Nephron sparing surgery was performed more frequently in incidental group (33.3% vs 14.1%, $p = 0.001$). Although mode of detection in multivariate analysis was not found to be independent prognostic factor ($p = 0.686$), univariate analysis showed incidentally discovered tumours had significantly better 5-year disease specific survival rates compared to symptomatic tumours (93.1±0.03 vs. 67.4±0.05, respectively, log rank $p = 0.001$).

CONCLUSIONS:

	Stage				Grade			
	1	2	3	4	1	2	3	4
Incidental (%)	67.7	15.6	15.6	1	36.5	50	8.3	5.2
Symptomatic (%)	35.5	21.9	22.4	20.2	14.8	36.1	29.5	19.7
P	0.001*				0.001*			

Incidental discovery defines more localised and less aggressive nature of renal tumours and gives survival advantage to patients like other prognostic factors.