Spindle and cuboidal renal cell carcinoma in everyday clinical practice.

1Urge T, 2Hora M, 1Hes O, 1Eret V, 1Stransky M, 1Travnicek L, 3Chudacek Z, 4Betlach J, 5Curik R, 6Rousarova M, 2, 7Petersson F

1Department of Urology, University Hospital Plzen  •  2Department of Pathology, University Hospital Plzen
1Department of Radiology, University Hospital Plzen  •  3Department of Pathology, Regional Hospital Havlickuv Brod
1Department of Pathology, University Hospital Ostrava  •  4National registry for oncologic disease University Hospital Plzen
4Department of Pathology, National University Health System, singapore, Singapore

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Introduction and Objective

Mucinous tubular and spindle cell carcinoma (MTSCC) is a rare tumour; the world has been reported about 200 cases, mainly case reports. MTSCC was accepted and included in the WHO classical cation of renal cancer in 2004. T e histopathologic f ndings are well characterised and include interconnecting tubular and spindled cells with low-grade nuclei within myxoid/mucinous stroma and these tumours indicate di er enti eation to war distal nephron segments, possibly the collecting ductor the loop of Henle. We present the large series of this subtype of renal cell carcinoma

Materials and Methods

We present a set of 17 cases MTSCC whose were established among 2389 primary renal cell tumours in Plzen routine and consultation files.

Results

T e use the 11 men and 6 women in age 22-65 years (mean 58.6). Tumours in size 22-130mm (mean 86mm) were located centrally in most cases. Only in one case (5%) was performed open resection for tumour of lower pole in size of 42mm. T e patient had a stomach tumour too and died 26 months later for generalization. Nephrectomy was performed in 4 patients (24%) laparoscopically, the others by transumbilical approach. Tumours were found incidentally in 12 cases (71%); one patient had pain in his back (tumour 130mm). In addition to all previous published cases MTSCC we observed an association of nephrolithiasis in three case (17%). A previously unreported feature is the occurrence of a clear renal cell carcinoma component in two of our cases (12%).

Fourteen patients (82%) of our patients are currently well without signs of recurrence or metastasis (category T1a - T2aN0M0, G1-2). T wo patients with centrally localized sarcomatoid tumours with invasion of the tumour into the renal sinus category T3aN0M0, G4 died 16 and 24 months later for generalization. T e follow up is 6 to 34 months.

Discussion

MTSCC is presented as a rare, malignant renal epithelial tumour that typically occurs in adult women and usually behaves in a low-grade fashion [1]. Most reports are of single cases, but there are series of up to 17 patients [2, 3]. In our series, we did not see this predominance in females. Grossly, tumours are mainly circumcised and can be large and are usually contained within the renal capsule although tumours are good circumscribed, are localized mainly in central part of kidney and nephrectomy is necessary. According to predomiance of tubular or spindled cell elements, tumours may be confused on histopathological investigation with papillary RCC [4, 5] (particularly type 1), RCC with sarcomatoid change, metanephric adenoma, low-grade collecting duct carcinoma, or even mesenchymal spindle cell lesions such as smooth muscle neoplasms and angiomyolipoma. In one case our we saw parallel clear cell carcinoma.

Proposis is generally favourable. Local recurrence [6] and metasteses are rarely described. Death from distant metastases is reported in 1 case in a tumour with high nuclear grade [7]. Of the 5 reported cases with sarcomatoid change, 3 patients had distant or multiple metastases, with rapidly fatal clinical courses [8-10]. Moreover, in a recent case of metastatic MTSCC, the aroaiminated spindle cell component was the only pattern observed in metastatic tumour foci within the lung and renal hilar nodes, supporting aggressive behaviour of the sarcomatoid element [8]. One case with lung metastasis demonstrated marked atypia within the spindle component of the primary tumour [11]. Not all metastatic foci of reported cases underwent biopsy, so the morphological patterns of many remain unknown; but we are aware of only 2 cases in the English literature where there was low-grade carcinoma in a regional nodal metastasis [12, 13].

Conclusions

MTSCC is a rare tumour with specific morphology. Tumours were localized centrally in most cases and have mostly low malignant potential which increases with the degree of de-differentiation of the tumour.

Literature


Figure 1. T e value of imaging studies for the di eent diagnosis of MTSCC is limited. MTSCC is also a hypervascular lesion. However, the radiological f ndings are not speci c enough and require di er entiation from those of other types RCC. In our cases, CT scanning showed a heterogeneous, low-density tumour (19 - 75 HU) with focal calcification, which would undoubtedly be regarded as an RCC.

Figure 2. Microscopically, the tumours were composed of two main populations of cells. T e papillary type were f attered, spindle cells with sparse cytoplasm and regular elongated nuclei. T e second cell type were small cuboidal cells with clear to lightly eosinophilic cytoplasm. T e nuclei were small, spherical and regular.