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Sarcomatoid Carcinoma of the Kidney: A Case Report

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Abstract **Case Report**

Sarcomatoid carcinoma of the kidney is an uncommon tumor associated with a very poor prognosis. Because this tumor can be occasionally difficult to distinguish from renal sarcoma, immunohistochemistry and electronmicroscopy are sometimes necessary for diagnosis. Therapy is actually essentially surgical because if adjuvant therapies should follow radical nephrectomy, no standardized regimen has been at present defined. The patient was a 67-year-old, father of two, a chronic smoker who had quit smoking 3 years previously. Our patient had no comorbidities. The diagnosis of a kidney tumour was suggested by the image of an inferior polar process of the left kidney on the abdominal CT scan, revealed by abdominal pain. The patient underwent an enlarged total nephrectomy: in favour of a locally advanced sarcomatoid carcinoma of the kidney measuring 10 centimetres. The patient has been discussed at a multidisciplinary consultation meeting for systemic treatment in accordance with international recommendations. The mainstay of treatment is extended nephrectomy. Nephrectomy is not always feasible, and when it is, it appears that this operation has little influence on the survival rate and prognosis. After surgery, the average survival time is short, around 6.3 months on average. Surgery alone would therefore appear to be ineffective in aggressive behaviour of this tumour. Adjuvant treatment is needed to control the disease. Between immunotherapy, anti-angionogenic agents or chemotherapy, a few series in the literature have reported the benefit of these different molecules on the recurrence-free survival of these patients. The natural history of sarcomatoid carcinoma of the kidney is frightening. The poor spontaneous prognosis of this tumour is compounded by the absence of an effective therapeutic weapon. The key to treatment may lie in the development of molecularly targeted therapies.

Keywords: Abdominal pain; sarcomatoid carcinoma, Kidney cancer, nephrectomy, targeted therapies, aggressive tumour.

INTRODUCTION AND BACKGROUND

Sarcomatoid carcinoma of the kidney is an uncommon tumor associated with a very poor prognosis. Because this tumor can be occasionally difficult to distinguish from renal sarcoma, immunohistochemistry and electronmicroscopy are sometimes necessary for diagnosis [1].

Therapy is actually essentially surgical because if adjuvant therapies should follow radical nephrectomy, no standardized regimen has been at present defined [2].

OBSERVATION

The patient was a 67-year-old, father of two, a chronic smoker who had quit smoking 3 years previously.

Our patient had no comorbidities.

The diagnosis of a kidney tumour was suggested by the image of an inferior polar process of the left kidney on the abdominal CT scan, revealed by abdominal pain.

The patient underwent an enlarged total nephrectomy: in favour of a locally advanced sarcomatoid carcinoma of the kidney measuring 10 centimetres.

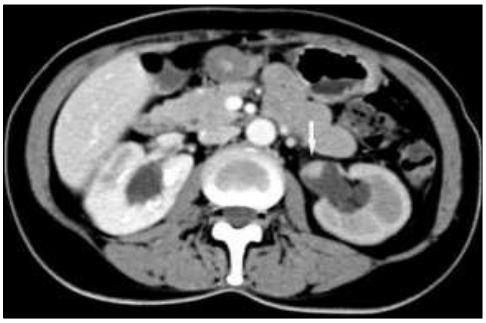

Figure 1: Abdominal computed tomography scan demonstrates a mass in the left renal pelvis

Figure 2: Histological and immunohistochemical features. (C) CK7 (+); (D) P63 (+); (E) GATA3 (+); (F) EMA (-)

The patient consulted after four months of surgery, he refused all adjuvant treatment.

Abdominal pain set in, and he consulted his surgeo for a new morphological assessment, which showed a multinodular mass in the nephrectomy site, indicating clinical and radiological progression of his disease.

The patient was discussed at a multidisciplinary consultation meeting for systemic treatment in accordance with international recommendations (anti-angionogenic).

DISCUSSION

Due to the limited cases reported in the literature, currently, there is no recommended treatment regimen for sarcomatoid carcinoma of the upper urinary tract. When the patient's condition permits, radical resection is preferred [3].

More recently, a study showed that the expression of epidermal growth factor receptor (EGFR) was positive in the majority of sarcomatoid carcinomas suggesting that anti-EGFR molecular targeted therapy may be a promising therapeutic direction in the future [4].

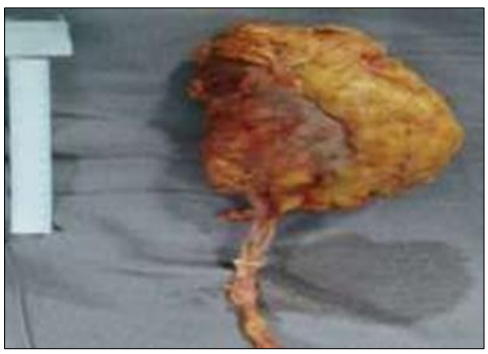

Figure 3: The gross specimen. The right middle ureter was blocked with a Hem-o-lok clip, which avoided the spread and overflow of tumor and pus into the lower urinary tract during the surgery

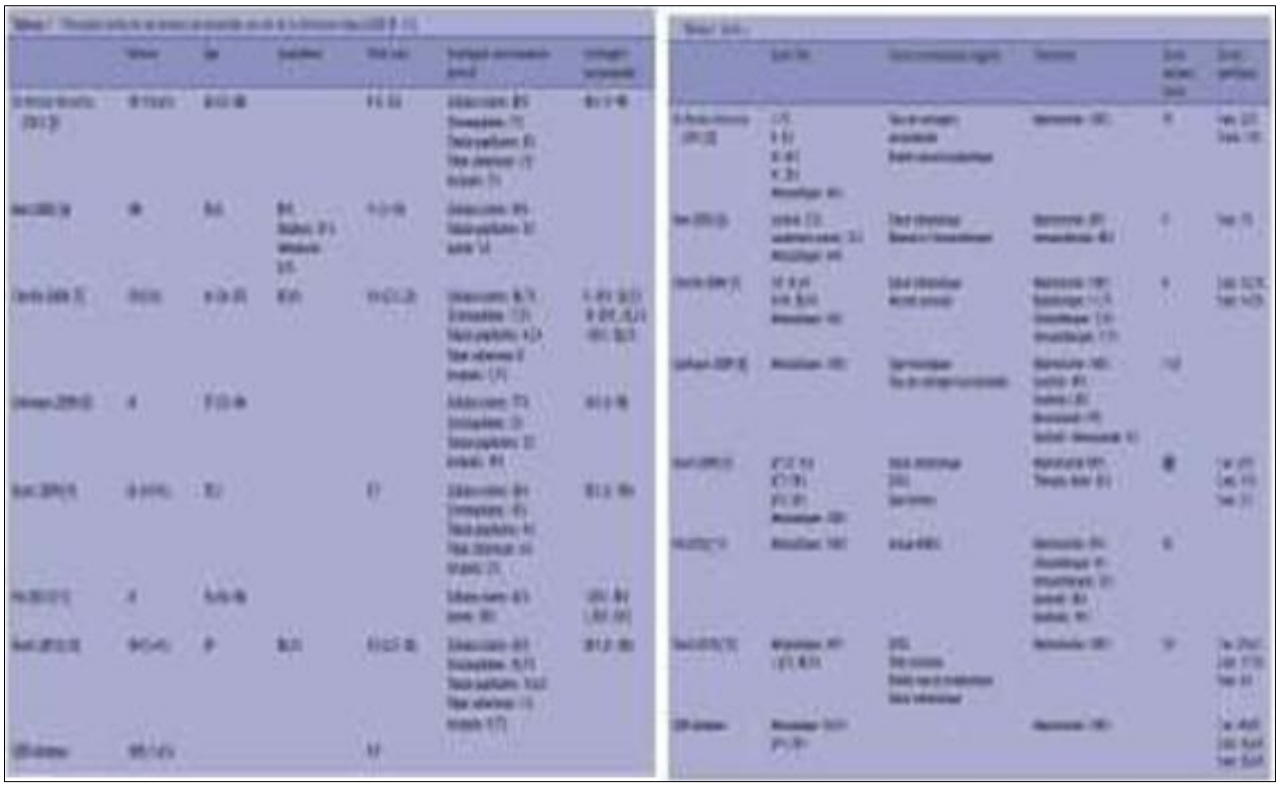

Figure 4: Main series of carcinomas: sarcomatoid carcinoma of the kidney of the literature since 2000-V. Arnoux *et al.*,

CONCLUSION

The poor spontaneous prognosis of this tumour is compounded by the absence of an effective therapeutic weapon.

Between immunotherapy, anti- angionogenic agents or chemotherapy, a few series in the literature have reported the benefit of these different molecules on the recurrence-free survival of these patients.

The key to treatment may lie in the development of molecularly targeted therapies.

REFERENCES

1. de Peralta-Venturina M, Moch H, Amin M, Tamboli P, Hailemariam S, Mihatsch M, Javidan J, Stricker H, Ro JY, Amin MB. Sarcomatoid differentiation in renal cell carcinoma: a study of 101 cases. Am J Surg Pathol. 2001; 25:275–84.
2. Shuch B, Bratslavsky G, Linehan WM, Srinivasan R. Sarcomatoid renal cell carcinoma: a comprehensive review of the biology and current treatment strategies. Oncologist. 2012; 17:46–54.
3. Wang J, Wang FW, Lagrange CA, Hemstreet GP, III, Kessinger A. Clinical features of sarcomatoid carcinoma (carcinosarcoma) of the urinary bladder: analysis of 221 cases. Sarcoma. 2010; 2010:454792. doi: 10.1155/2010/454792.
4. Wang X, MacLennan GT, Zhang S, Montironi R, Lopez-Beltran A, Tan PH, Foster S, Baldridge LA, Cheng L. Sarcomatoid carcinoma of the upper urinary tract: clinical outcome and molecular characterization.