SKELETAL MUSCLE INDEX (SMI) IS A PROGNOSTIC FACTOR IN METASTATIC RENAL CELL CARCINOMA (mRCC) PATIENTS TREATED WITH EVEROLIMUS: A RETROSPECTIVE STUDY

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Aim: Sarcopenia defined by a low SMI, has been identified as a prognostic factor in mRCC patients (pts) treated with tyrosine kinase inhibitors. Everolimus (Ev) has been approved in second- and third-line for mRCC. This study aimed to assess the prognostic role of SMI in mRCC pts treated with everolimus.

Methods: Consecutive mRCC pts treated with Ev between February 2007 and November 2011, were evaluated with computed tomography (CT) scan performed by the same radiologist at the EGP hospital, Paris, France. SMI was assessed at baseline prior to Ev using the L3 cross-sectional area measured on CT-scan. Primary endpoint was overall survival (OS) from start of Ev until patient’s death/last contact. Clinical data related to survival were collected in pts’s files. Results were adjusted using the International Metastatic Database Consortium prognostic group (IMDC) and/or Body Mass Index (BMI) and/or number of previous lines (NPL).

Results: Thirty five mRCC pts, median (range) age = 61y (28-78y), sex-ratio = 29/6 were included. Ev was received as: 2nd or 3rd line = 60%, >3rd line = 37%. All pts had clear cell carcinoma except 2 patients with either chromophobe or papillary carcinoma. IMDC prognostic groups were distributed as follows: “Good” = 7 (20%), “Intermediate” = 23 (66%) and “Poor” = 5 (14%). SMI (cm2/m2) was normally distributed: median (range) = 43.4 (24.2-67.7). Continuous SMI at baseline was significantly associated with OS both in univariate analysis: HR (for 1 standard deviation unit = 8.66 cm2/m2) = 0.57, (95%CI = 0.36-0.91) and after adjustment on IMDC prognostic group (HR = 0.62, 95%IC = 0.39-1.00). Neither adjustment on BMI or NPL did change the HR of the continuous SMI. Comparison of first (T1) and last terciles (T3) of SMI (12 pts each) revealed that OS was longer for pts with the highest SMI: 20.2m (16.1-43.6) vs. 6.6m (5.9-17.9), HR (T3/T1) = 0.42, 95%IC = 0.16-1.06 (p = 0.067).

Conclusions: SMI is likely to be an independent prognostic factor for mRCC pts treated with Ev. Whether it provides an additional prognostic value to the IMDC criteria need to be confirmed in a larger cohort. A collaborative study is ongoing to validate these results.

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