A multicentre analysis of the role of the G8 Screening Tool in the assessment of peri-operative and functional outcome in elderly patients with kidney tumours

Tommaso Silvestri1, Nicola Pavan1, Riccardo Boschian1, Giacomo Di Cosmo1, Bernardino De Concilio1, Antonio Celia1, Giovanni Liguori1 and Carlo Trombetta1

1 Urological Clinic, ASUITS, University of Trieste, Trieste, Italy
2 Department of Urology, San Bassiano Hospital, Bassano del Grappa, Italy

Introduction and Objectives

Increasing life expectancy in the general population and the fact that a disproportional burden of cancer occurs in people age ≥ 65 years old have generated great interest in delivering better cancer care for older adults. EORTC and NCCN recommend that all patients with cancer age ≥ 70 years old should undergo some form of geriatric assessment (GA). GA has important prognostic value for overall survival (OS), predicts adverse events of surgery and chemotherapy and detects unknown problems in more than 50% of patients with cancer.

G8 Screening Tool is a robust geriatric tool to identify a geriatric risk profile and for prediction of functional decline and prognostic information for overall survival (OS). (Figure 1)

In this scenario surgery is recommended to achieve cure in localised renal cell carcinoma (RCC). Radical Nephrectomy (RN) and Partial Nephrectomy (PN) whenever feasible represents gold standard treatment, but have a high rate of complications in close relation to the type of patient and the risk factors.

We evaluated the role of G8 Screening Tool in the assessment of outcome of elderly patients (≥ 70 y.o.) underwent surgery for kidney tumours.

Methods

We prospectively enrolled 162 patients from January 2012 to January 2016 underwent surgery at two urological institution. We included patients ≥ 70 y.o at surgery date. BMI, ECOG PS, Charlson Comorbidity Index (CCI) and CKD III at the time of surgery were performed to evaluated functional and pathological pre-operative status of each patient. Clavien-Dindo complications scoring system was used to report postoperative complications. (Table 1)

G8 Screening Tool was applied to each patient before surgery. We divided population into two groups (frail group vs. not-frail group) in relation to the geriatric risk profile based on G8 score (< 14 vs. > 14 respectively).

The aim was to identify the role of G8 Score in predicting intraoperative, postoperative complications and functional outcomes.

Results

A total of 70 females (34%) and 92 (46%) males were included in the analysis. 69 patients (42,6%) underwent PN, while 93 patients (57,4%) underwent RN. Mean age at surgery was 76.57 (SD ± 6.37).

Comorbidity factors were included: mean CCI was 3.06 (SD ± 1.99) with CCI > 5 points in 18 patients (15,65%), mean BMI was 25.15 (SD ± 2.87), 55 patients (34%) with DM, 98 patients (60%) with HTN.

CKD stage III was present in 73 patients (45,1%) underwent surgery. Mean ECOG PS was 1,53 (SD ± 0,66) with score ≥ 3 in 7 patients (6,1%). Mean ASA Score was 2,84 (SD ± 0,73). (Table 2,3,4)

According to the G8 Score, 91 patients (60%) were included in the frail group and 71 (40%) in the not-frail group. (Table 5)

41 patients of frail group vs. 2 patients of not-frail group developed intraoperative complications (p<0,0001). 51 patients of frail group vs. 4 patients of not-frail group developed postoperative complications (p<0,0001). (Table 6)

After a mean follow-up of 40,56 months, mean eGFR was 43,72 ml/min/1.73m2 (SD ± 21,49) in frailty group vs. 47,53 ml/min/1.73m2 (SD ± 13,36) in not-frail group (p=0,015). (Table 6)

Conclusion

G8 Screening Tool seems to be an effective and useful instrument to predict the risk of complications and functional outcomes in elderly patients candidate for kidney surgery.

However, further investigations should be necessary to confirm the good potential of this tool for identifying frail patients with a geriatric risk profile.