

Meeting abstract

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## The complications of laparoscopic adrenalectomy in older patients

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### Background

Laparoscopic minimally invasive access has changed treatment of the adrenal lesions, becoming the gold standard for the treatment of secreting and non-secreting benign tumors, of rare lesions like cysts or myelolipomas, but remaining still controversial for malignant lesions. In relation to international literature data concerning complications linked to this approach, in particular with regards to over seventy-year-old patients, we have analysed our experience comparing the overall series with that of older patients.

### Materials and methods

From March 1995 to October 2008, performing transabdominal laparoscopic adrenalectomy with flank-approach, we have treated 277 patients (162 women and 115 men) under seventy years old (A group), mean 47.2 (range 3–69) years; 127 right, 139 left and 11 bilateral lesions. Benign lesions have been 50 incidentalomas (with diameter greater than 4 cm), 88 Conns, 4 Cushings, 50 pheocromocitomas, 2 cysts, 3 angiomyolipomas, 3 adrenogenital syndromes, 1 echinococcosys, 1 ganglioneuroma, 1 oncocytic adenoma, 1 solitary fibrous adrenal tumor, 1 Castleman's disease, 1 pigmented paraganglioma and 1 Kinsbourne syndrome. Malignant lesions have been 7 cortical carcinomas (all of these with pre-operative diagnosis of incidentalomas) and 7 metastases. In the same period we have treated 32 patients over seventy years old (B group), whereof 15 women and 17 men, 13 right, 18 left, 1 bilateral lesions, mean age 73.12 (range 70–81) years, in which we have found 6 incidentalomas, 6 Conns, 4 Cushings, 8 pheocromocitomas, 2 cysts, 1 angiomyolipomas, 1 cortical carcinoma and 4 metastasis.

### Results

We did not find any statistically significant difference between two groups concerning operative time (group A mean 80.49 [range 20–270] minutes vs group B mean 92.03 [range 45–240] minutes), postoperative stay (group A mean 3.68 [range 2–13] days vs group B mean 3.48 [range 2–9] days), morbidity (group A 3.97% [11/277] vs group B 6.25% [2/32]: 1 post operative myocardial infarction in a seventy years old man, 1 pancreatic pseudo-cyst in a seventy-three year old man), mortality (group A 0.36% [1/277] vs group B 0%), conversion rate (group A 1.08% [3/277] vs group B 3.12% [1/32]). We have rather found statistically significant difference concerning adrenal lesion's size: group A mean 3.9 (range 0.5–18) cm vs group B mean 4.78 (range 1–11) cm,  $p = 0.04$ . All the specimens were homogeneous in regard to anatomopathological characteristics.

### Conclusion

In our experience we have confirmed the safety and feasibility of laparoscopic adrenalectomy even in old age population, with complication rate and death rate comparable to literature data (0.7–17%; 0–0.4%).