Adrenocortical Carcinoma: A Single Center Experience

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INTRODUCTION

Adrenocortical carcinoma (ACC) is a rare endocrine malignancy, with an incidence in the literature of 0.5 to 2 cases per million population per year. The most important prognostic factors are stage of cancer at the time of diagnosis and success of the first surgery. However, advanced age, tumor size, functionality, high Ki-67 index (>10%), necrosis, and high mitotic activity are among poor prognostic factors.

Descriptive characteristics of the patients and their tumor

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Sex	M	M	F	M	M	M	F	F	M	F	F	M	M	M	M
Age at diagnosis	48	47	48	29	35	72	67	58	52	54	45	62	65	62	50
Laterality of tumor	L	L	L	L	R	R	R	R	R	L	L	L	R	R	L
Long axis diameter(mm)	35	110	60	60	130	180	35	150	30	90	55	90	12	170	105
Stage at diagnosis	I	III	III	II	III	III	I	III	III	III	III	III	I	III	III
Hormonal activity	—	—	—	—	‡	‡	—	‡	—	†	—	—	—	—	—
Surgery procedure	L/P	open	open	L/P	open	open	L/P	open	open	open	open	open	open	open	open
Resection margin	R0	Rx	R2	R0	R2	R0	R0	R1	R1	Rx	R0	R0	R0	R1	R1
Mitotane	+	—	+	—	+	—	—	+	+	—	—	+	—	—	—
Systemic chemotherapy	—	—	+	—	+	—	—	—	—	—	—	—	—	—	+
Radiotherapy	—	—	+	—	—	—	—	—	—	—	—	—	—	—	+
Metastasis during follow	—	—	—	—	+	—	—	+	—	—	+	—	—	+	+

M: male, F: female, L: left, R: right, †: cortisol secretion, ‡: cortisol and dihidroepiandrostenedione-sulphate secretion, L/P: laparoscopic surgery

PATIENTS AND METHOD

Fifteen patients diagnosed with adrenocortical carcinoma, were included in present study. The patients' data were collected by scanning their electronic records. Age, sex, type of surgery (open or laparoscopic), resection margin, treatment and prognosis were analyzed.

RESULTS

Five of the 15 patients included in our study were women and 10 (66.7%) were male. The mean age at the time of diagnosis was 52.93 ± 11.57. The tumors ranged from 180 to 12 mm in diameter, with a mean of 87.4± 52.7 mm. At the time of surgery, cancer stages of the patients were as follows: stage I in 3 patients (20.0%), stage II in one patient (6.7%) and stage III in 11 patients (73.3%). R0 resection rate could be achieved in fewer than 50% of the patients (only 7 patients). 8 patients (53.3%) were not given postoperative adjuvant therapy. While mitotane was administered to 4 patients (26.6%), combined systemic chemotherapy was given to 3 patients (20.0%). 2 patients (13.3%) underwent adjuvant radiotherapy. In the present study, one- and 2-year overall survival rates were observed as 71.4%, 27.3%. 9 patients (60%) died during follow-ups.

CONCLUSION

In our study, the rate of development of metastases in patients with complete surgical resection was significantly lower than in patients without R0 resection ($p < 0.05$). There was no statistically significant difference in median survival time, rate of locoregional recurrence and metastases among patients who underwent open surgery and laparoscopic surgery. Excessive hormone secretion was observed not to have a statistically significant negative effect on the survival. Likewise, mitotane, systemic chemotherapy and radiotherapy had no statistically significant positive effect on survival. Complete surgical resection of tumoral tissue is the most important factor for long-term survival, but, even if R0 resection is achieved high recurrence rate is seen. Therefore, it is often a need for additional postoperative adjuvant treatment modalities, but the efficacy of them is limited.