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Post-Chemotherapy Management of Testicular Cancers in East Yorkshire and North Lincolnshire

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Introduction

In patients with advanced non-seminomatous germ-cell tumours (NSGCT), findings in post-chemotherapy retroperitoneal(RP) disease at the time of RP resection determine management of both RP and non-RP disease.

On the other hand, in patients with advanced seminoma, residual lesions less than 3cm after chemotherapy can be observed without further intervention.

We describe findings, management and outcome of post-chemotherapy residual lesions of both NSGCT and seminoma treated in our centre.

Method

Case records of testicular cancer patients who attended outpatient clinics between August 2022 and November 2022 at the Queens Cancer Centre (Cottingham) were reviewed. Patients who had received chemotherapy for AJCC stage II or higher were identified and data was collected retrospectively.

Results

121 testicular cancer patients reviewed. 7 patients with NSGCT and 10 patients with seminoma were identified for the study. NGCST patients were younger (median age 31 vs. 45 years) and had longer follow up (median of 65 vs. 40 months). All patients but one were alive and in remission. One patient with NGCST had recurrent metastatic disease. Four out of 7 patients with NSGCT underwent surgical resection of residual mass. Both patients with teratoma in the primary orchiectomy had teratoma in non-RP sites in contrast to those 2 without teratoma in primary tumour (necrosis and non-teratoma tumour component respectively). Four of the 9 patients with seminoma had residual (both RP and nRP) masses less than 3cm which had not progressed during the duration of follow up while the remaining 5 had achieved complete responses.

Conclusion

Our limited experience is in line with recently published report that presence of teratoma is associated with higher rate of teratoma in post-chemotherapy residual disease. Similarly residual seminoma disease less than 3cm is likely to behave in line with published data.

Figure 2: **Characteristics, management and outcomes of patients with Seminoma**

Patient	Primary orchiectomy	RPLND	non-RP findings	Chemotherapy	Post-chemotherapy response	Management of Post-chemotherapy residual disease	Surgical pathology of residual disease	Final outcome
1	Classic Seminoma	Present	Lung nodules and mediastinal nodes	Carboplatin	Stable lung nodules and mediastinal nodes	Observation	N/A	Stable lung nodules and mediastinal nodes
2	Classic Seminoma	Present	Pelvic nodes	BEP	Radiologic CR	N/A	N/A	No recurrent disease
3	Classic Seminoma	Present	Surpa-clavicular and mediastinal lymph nodes. RPLN.	BEP	Radiologic CR	Observation	N/A	No recurrent disease
4	Classic Seminoma	Present	Inguinal nodes	Carboplatin	Stable inguinal nodes. CR RPLN.	Observation	N/A	Stable inguinal nodes
5	Classic Seminoma	Present	Inguinal nodes	Carboplatin	Stable inguinal nodes. CR RPLN.	Observation	N/A	Stable inguinal nodes
6	Classic Seminoma	Present	None	BEP	Radiologic CR	N/A	N/A	No recurrent disease
7	Classic Seminoma	Present	Pelvic nodes	BEP	Stable pelvic nodes. Radiologic CR	Observation	N/A	Stable pelvic nodes. Radiologic CR
8	Classic Seminoma	Present	None	BEP	Radiologic CR	N/A	N/A	No recurrent disease
9	Classic Seminoma	Present	None	BEP	Radiologic CR	N/A	N/A	No recurrent disease

nRP = non-retroperitoneal; RPLN = retroperitoneal nodes; BEP = bleomycin-etoposide-cisplatin 3 cycles; RPLND = retroperitoneal lymph node dissection; N/A = not applicable; CR = complete response

Figure 1: Characteristics, management and outcomes of patients with Non-Seminoma Germ Cell Tumour

Patient	Surgical pathology in primary tumour (all orchidectomies)	RPLN	nRP finding	Chemotherapy	Post-chemotherapy response	Management of Post-chemotherapy residual disease	Surgical pathology of residual disease	Final outcome
1	Teratoma with yolk sac tumour	None	Lung nodules only	BEP	Stable pulmonary nodules	Observation only	N/A	Stable pulmonary nodules
2	Teratoma with embryonal and yolk sac tumour	Present	Lung nodules	BEP	Residual RPLN and stable pulmonary nodules	RPLND. Observation of lung nodules.	Teratoma	No recurrent disease
3	Teratoma with seminoma	Present	None	BEP	Complete response	Observation only	Teratoma	No recurrent disease
4	Choriocarcinoma	Present	Lung and brain metastasis	BEP	Residual lung and brain metastasis	Resection of lung nodule and SRS brain metastasis	Necrosis	No recurrent disease
5	Sertoli-Leydig cell tumour	Present	Supraclavicular nodes	BEP	Residual RPLN	RPLND	Sertoli-Leydig cell tumour	RPLN relapse and later liver metastasis
6	Embryonal cell and yolk sac tumour	Present	None	BEP	Radiologic CR.	Observation only	N/A	No recurrent disease
7	Embryonal cell tumour and seminoma	Present	None	BEP	Sub-centimetre RPLN	Observation only	N/A	Stable sub-centimetre RPLN

nRP = non-retroperitoneal; RPLN = retroperitoneal nodes; BEP = bleomycin-etoposide-cisplatin 3 cycles; RPLND = retroperitoneal lymph node dissection; N/A = not applicable; CR = complete response

References

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