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Introduction & Objectives: High-grade non-muscle-invasive bladder cancer (NMIBC) is treated with transurethral resection and intravesical medication, of which BCG is the most widely used agent. Robotic cystectomy is considered the gold-standard for patients who fail BCG treatment i.e. those who are found to have high-grade disease persistence. However, continuation of bladder preserving treatments may be considered due to patient choice or for poor surgical candidates. We reviewed our recent patient cohort as to whether we are proceeding to cystectomy at the appropriate time.

Materials & Methods: A retrospective analysis of the robotic cystectomy database (2015 - 2020) was performed to identify patients who had received BCG prior to cystectomy. Data regarding demographics, number of BCG instillations, and histopathological staging was collected. Histopathological stage was compared between patients who had received an induction course of BCG only (Group A), and those who had continued maintenance doses (Group B). Statistical analysis was performed using Fisher's Exact test.

Results: A total of 73 patients (57 males, 16 females) met the final inclusion criteria, with 24 patients in Group A, and 49 patients in Group B. 66 (90%) patients were pre-operatively staged as <T2. There was no significant difference in pre-operative staging between groups ($p=0.21$). At cystectomy, 19 patients had muscle invasive disease (Group A: 7; Group B: 12). There was no significant difference in final staging between groups ($p=0.78$). Pelvic lymph node dissection was performed in 68 patients, with 6 patients found to have lymph node metastases.

Table 1: Comparison of pre-operative and final pathological stages

Pre-operative Staging	Pathological Staging at Cystectomy, n (%)				
	<T2	T2	T3	T4	Node positive
T0	0	0	0	0	0
Ta	9 (12)	0	0	0	1
Tis	17 (23)	2 (3)	1 (1)	0	0
T1	26 (36)	5 (7)	5 (7)	1 (1)	3
T2	1 (1)	3 (4)	2 (3)	0	2
T3	1 (1)	0	0	0	0
T4	0	0	0	0	0
Total	54 (74)	10 (14)	8 (11)	1 (1)	6 (9)

NB: In cases where T1 and Tis disease was detected at pre-operative staging; only T1 is recorded in the table. In cases where Tis and Ta disease was detected at pre-operative staging; only Tis is recorded.

Conclusions: Robotic cystectomy plays a key role in the management of NMIBC patients who fail BCG, given the considerable number of patients with muscle-invasive disease at final staging. However, more prolonged BCG treatment was not associated with more advanced disease in our cohort. Hence, due consideration should be given to persistence with intravesical treatment for selected patients. Additionally, given the relatively low yield of positive lymph nodes, the necessity of pelvic lymph node dissection should be carefully considered on an individual patient basis.