

Robotic Radical Cystectomy with Intracorporeal Urinary Diversion – Tips and Tricks

Emanuel Darius Cata^{1,2,3}, Iulia Andras^{1,2,3}, Andrei Popa^{2,3}, Paul Medan^{1,2,3}, Teodora Telecan^{1,3}, Razvan Ognean³, Lorin Giurgiu³, Maximilian Buzoianu^{1,3}, Ioan Coman^{1,2,3}, Nicolae Crisan^{1,2,3}

¹Department of Urology, "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania

²Department of Urology, Regina Maria Hospital, Cluj-Napoca, Romania

³Department of Urology, Municipal Hospital, Cluj-Napoca, Romania

Abstract

Radical cystectomy represents the standard surgical treatment in case of muscle invasive bladder cancer. During the last two decades there was observed a change in the surgical approach of the MIBC, from open surgery to minimal invasive surgery. Nowadays, in the majority of tertiary urologic centers, the robotic radical cystectomy with intracorporeal urinary diversion represents the standard surgical approach. The aim of the current study is to describe in detail the surgical steps of the robotic radical cystectomy and the reconstruction of the urinary diversion and to present our experience. From the surgical point of view, the most important principles which should guide the surgeon when performing this procedure are: 1. Good working space and access both to the pelvis and abdomen and use of the „technique of spaces”; 2. Respect the oncological principles of the surgery with attention paid to the resection margins and limitation of the risk of tumour spillage; 3. Attention to both ureter and bowel manipulation in order to avoid grasping lesions; 4. High care in realisation of the uretero-ileal anastomosis so good long term functional results are achieved. We analysed our database of 213 patients diagnosed with muscle invasive bladder cancer who underwent minimally invasive radical cystectomy (laparoscopic and robotic approaches) between January 2010 and December 2022. We identified 25 patients for which the robotic approach was used to perform the surgery. Despite being one of the most challenging urologic surgical procedures, with careful preparation and training the surgeon is able to achieve the maximum oncological and functional results by performing robotic radical cystectomy with intracorporeal urinary diversion.

Key words: robotic radical cystectomy, bladder cancer, intracorporeal urinary diversion, lymphadenectomy