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Comparison of Perioperative and Postoperative Outcomes in Patients with Urinary Diversions: Direct Cutaneous Ureterostomy versus Bricker Ileal Conduit Technique Following Radical Cystectomy

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Abstract

Background: Muscle-invasive bladder tumors (MIBT) usually require radical cystectomy (RC) followed by urinary diversion to maintain urinary flow. The two main methods used are simple direct cutaneous ureterostomy (SDCU) and Bricker ileal conduit diversion (BICD), each with distinct advantages and disadvantages. This study compares the outcomes of these two techniques across two university centers in Romania, with each center employing a different surgical approach

Material and Methods: A retrospective study was conducted on 64 patients with MIBT, divided into two equal groups. One center performed the SDCU technique with a classical approach and the other used BICD via a laparos-copic approach. Glomerular filtration rates (GFR), blood loss, operative time, length of hospitalization and postoperative complications were assessed.

Results: Both techniques provided similar postoperative renal function outcomes. The BICD group exhibited a more pronounced decrease in hemoglobin levels (median decrease of 2.1 g/dL compared to 1.8 g/dL in the SDCU group, $p=0.007$) and a significantly shorter hospital stay (median of 11 days for BICD versus 15 days for SDCU, $p<0.001$). Moreover, the incidence of urinary tract infections was significantly lower in the BICD group ($p=0.016$)

Conclusions: The BICD technique is preferable for patients at increased risk of infections due to a shorter hospital stay and a lower incidence of urinary tract infections. Conversely, the SDCU technique remains a viable option for elderly patients. The significant difference in hospital stay duration (11 vs. 15 days) underscores the necessity for a rigorous and individualized selection of the urinary diversion type, tailored to the patient's specific needs and the surgical approach of each center.

Key words: simple direct cutaneous ureterostomy, Bricker ileal conduit, radical cystectomy, urinary diversion