კლინიკური შემთხვევა

ROLE OF PERCUTANEOUS NEPHROSTOMY IN ADVANCED CERVICAL CARCINOMA WITH OBSTRUCTIVE UROPATHY

Nino Chaghiashvli, Levan Donadze, Lamara Pavliashvili, Marita Gugunava, Natia Makharashvili, Tamar Chaprava

Pineo medical ecosystem

Contact person: Nino Chaghiashvli, nchagiashvili1974@gmail.com

DOI: https://doi.org/10.48412/GTBGS.2024.12.39-41

Resiume Percutaneous nephrostomy (PCN) stands as an interventional procedure utilized for decompressing the renal collecting system, ultimately contributing to urinary diversion and potential enhancement of renal function. This case study delineates the pivotal role of PCN in the comprehensive management of patients with advanced cervical cancer afflicted by obstructive uropathy. Through this case presentation, we highlight the significance and efficacy of PCN as a therapeutic intervention in such clinical scenarios.

Key points: Cervical cancer, Obstructive uropathy, Percutaneous nephrostomy

INTRODUCTION

Globally, cervical cancer ranks as the fourth most common cancer in women, with 604,000 new cases in 2020. Around 90% of the 342,000 deaths caused by cervical cancer occurred in low- and middle-income countries. According to current data, approximately 200 women succumb to cervical cancer annually in Georgia. Despite being preventable, it remains a significant health challenge in the country, with over 40% of cases detected in advanced stages, leading to poor prognosis and high mortality rates (1). Many cases pose challenges for definitive treatment due to presenting in uremia as a result of associated obstructive uropathy.

Percutaneous Nephrostomy played a crucial role in restoring renal function and alleviating obstructive uropathy in this advanced cervical carcinoma patient . This intervention allowed subsequent tumor-specific therapy initiation by breaking the cycle of organ dysfunction (2).

CASE REPORT

A 47-year-old woman was admitted to the clinic due to acute respiratory failure. Medical history revealed a diagnosis of cervical squamous cell carcinoma with invasion into the bladder and rectum in April 2023, for which palliative cystostomy was performed.Vital Signs at Presentation: BP: 156/90mmHg, Pulse rate: 156 bpm, O2 Saturation: 84%Electrocardiogram indicated atrial flutter, chest x-ray revealed pulmonary edema with bilateral infiltration.Echocardiography showed severely decreased EF (20%) and massive pleural effusion.Laboratory Results: RBC: x 106, WBC: 15.1 x 103, Hgb: 9.9g/dl, Hct: %, PLT: 627 x 103, CRP: 149 mg/l, Creatinine: 453 mmol/l. Urinalysis: WBCs 30.5, presence of pathological casts.

The patient developed polyorganic insufficiency, including acute kidney failure, urinary tract infection (UTI), pneumonia, and acute heart failure. Antimicrobial treatment was initiated. Thoracentesis was performed, and forced dieresis was commenced. Continuous positive airway pressure support (CPAP) was necessary for respiratory failure. Optimal medical therapy for heart failure couldn't be started due to coexisting acute renal failure, creating a challenging cycle hindering tumor-specific treatment initiation. Diagnostic Imaging Findings: ultrasound indicated bilateral hydronephrosis. Subsequent Abdominal CT with contrast revealed tumor invasion into both ureters (refer to pic.1).The multidisciplinary team, involving family members and the patient, carefully deliberated and decided upon bilateral Percutaneous Nephrostomy (PCN) as the optimal intervention. Bilateral PCN was successfully performed, resulting in a gradual restoration of kidney function and resolution of the infection.Initiation of optimal medical treatment for heart failure became possible as renal function improved. After two weeks of comprehensive treatment, renal function was fully restored (creatinine decreased to 98 mmol/l), and left ventricle EF improved to 50%, enabling the patient to commence chemotherapy.

DISCUSSION

Cervical cancer's high mortality, particularly due to advanced stage diagnosis, poses a significant global public health challenge, especially in low- and middle-income countries (3). Obstructive uropathy, a common complication in advanced cervical cancer cases, arises due to the invasion of the tumor into adjacent structures, such as the bladder, ureters, or surrounding tissues. This obstruction disrupts the normal urinary flow, leading to hydronephrosis, impaired renal function, and subsequent systemic

Figure1. Obstructed Ureters by Tumor

complications.Percutaneous nephrostomy is a minimally invasive procedure used to relieve urinary obstruction by inserting a catheter directly into the kidney. In advanced cervical carcinoma, the tumor can obstruct the ureters, causing uropathy (urinary tract obstruction). This obstruction may result in kidney damage and complications if not addressed. Percutaneous nephrostomy can be a crucial intervention in these cases. By bypassing the obstructed area, it helps in draining urine directly from the kidney, alleviating pressure, and preventing kidney damage. This procedure offers immediate relief from symptoms like pain, urinary retention, and kidney dysfunction, improving the patient's quality of life.

However, it's essential to consider individual patient factors, tumor characteristics, and the overall treatment goals when deciding on the appropriate intervention.

PCN proves beneficial in such scenarios where retrograde ureteric stenting is unfeasible (4).

Our case demonstrates that urinary diversion via PCN not only improves renal function but also allowed the initiation of optimal medical heart failure therapy. As a result of this treatment, both renal and heart functions were restored, enabling the commencement of tumor-specific treatment.

Conclusion

In the management of advanced cervical carcinoma with obstructive uropathy, percutaneous nephrostomy emerges as a valuable minimally invasive procedure. It plays a pivotal role in relieving urinary obstruction, mitigating kidney damage, and ameliorating distressing symptoms associated with ureteral obstruction. As a palliative measure, it significantly enhances the patient's quality of life by offering immediate relief from pain and urinary retention while safeguarding renal function. This technique proves simple and safe, offering the advantage of administering curative/palliative radiotherapy or chemotherapy in 85% of patients (5). However, the decision to employ percutaneous nephrostomy should be part of a holistic treatment strategy, tailored to the patient's individual needs, tumor characteristics, and overall treatment objectives. Collaborative and multidisciplinary decision-making remains essential for optimizing patient outcomes in such complex clinical scenarios.

ლიტერატურა:
References:

1. *World Health Organisation https://www.who.int/news-room/fact-sheets/detail/cervical-cancer*
2. *Massry SG, Schainuck LI, et al. Studies on the mechanism of diuresis after relief of urinary obstruction. Ann Intern Med 1967;66:149–158. DOI: 10.7326/0003-4819-66-1-149.*
3. *Halle MP, Toukep LN, et al. The profile of patients with obstructive uropathy in Cameroon: case of the Douala General Hospital. Pan Afr Med J 2016;23(1):67. DOI: 10.11604/pamj.2016.23.67.8170*
4. *Van der Meer RW, Weltings S, et al. Antegrade Ureteral Stenting is a Good Alternative for the Retrograde Approach. Curr urol 2016;10(2):87–91. DOI: 10.1159/000447157.*
5. *Role of Percutaneous Nephrostomy in Advanced Cervical Carcinoma with Obstructive Uropathy: A Case Series Kamlesh Mishra, Ava Desai, Shilpa Patel, Meeta Mankad, Kalpana Dave Department of Gynecology Oncology, Gujarat Cancer and Research Institute, Ahmadabad, India)*

კანგავლითი ნეფროსტომიის როლი ობსტრუქციული უროპათიით გართულებული საშვილოსნოს ყელის შორსწასული კიბოს დროს

ნინო ჭაღიაშვილი, ლევან დონაძე, ლამარა პავლიაშვილი, მარიტა გუგუნავა,
ნათია მახარაშვილი, თამარ ჩაფრავა

პინეო სამედიცინო ეკოსისტემა DOI: https://doi.org/10.48412/GTBGS.2024.12.39-41

პასუხისმგებელი პირი: ნინო ჭაღიაშვილი, nchagiashvili1974@gmail.com

რეზიუმე კანგავლითი ნეფროსტომია (PCN) არის ინტერვენციული პროცედურა, რომელიც გამოიყენება თირკმლის შეგროვებითი სისტემის დეკომპრესიისთვის. ამ პროცედურამ შეიძლება გააუმჯობესოს თირკმლის ფუნქცია. ჩვენ წარმოგიდგენთ შემთხვევას, სადაც ობსტრუქციული უროპათიით გართულებული საშვილოსნოს ყელის შორსწასული კიბოს მქონე პაციენტების მართვაში გამოყენებულია კანგავლითი ნეფროსტომიის მეთოდი.

საკვანძო სიტყვები: სასვილოსნოს ყელის კიბო, ობსტრუქციული უროპათია, კანგავლითი ნეფროსტომია