JURNAL BIOMEDIKA DAN KESEHATAN
(JOURNAL OF BIOMEDIKA AND HEALTH)

Vol. 6 No. 3 (2023) pp.340-346 e-ISSN: 2621-5470

CASE REPORT

A Scarce Case of Sarcomatoid Bladder Carcinoma and Bladder Stone in a 58-Year-Old Man: A Case Report

Kasus Langka Karsinoma Sarcomatoid Kandung kemih dan Batu Kandung kemih pada pria berusia 58 tahun : Lapran Kasus

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https://doi.org/10.18051/jbk.340-346

ABSTRACT

BACKGROUND:
Sarcomatoid bladder carcinoma is scarcely found, with most cases of bladder carcinoma due to bladder stone as a risk factor consisting of squamous cell carcinoma. Only 221 cases were reported between 1973 and 2004 of sarcomatoid bladder cancer. Therefore, this case report brings out sarcomatoid bladder carcinoma and its clinical relevance.

CASE DESCRIPTION:
A 58 years old Indonesian man experienced gross hematuria for 3 months, and thus finally brought to the Emergency Room (ER) where he was initiated urinary catheter and given intravenous (IV) fluid along with analgesic parenterally. Emergency abdominal radiograph assessment and blood test were made. Abdominal radiograph assessment suggests a 6 x 6 cm opacity in the bladder and several urolithiasis in the pelvic cavity. Ureum and creatinine increased in the blood test procedure. Based on the characteristic appearance and radiological findings, a diagnosis of vesicolithiasis was made. Following the diagnosis, the patient was urgently operated on (Open vesicolithotomy), and during the stone removal, there was a tangled polyp-like mass found buried underneath the stone. Histological findings of mass and surrounding lymph nodes were made and histopathologically stated the mass was sarcomatoid carcinoma of the bladder and it had metastated to lymph node and pelvic region.

CONCLUSION:
Considering hematuria in urolithiasis is frequent, the clinician should be aware of any tumor findings especially when the hematuria is massive thus emergency urolithotomy should be considered immediately.

Keywords: Bladder Cancer, Sarcomatoid, Vesicolithiasis

ABSTRAK

Latar Belakang

Karsinoma kandung kemih sarcomatoid adalah karsinoma yang jarang ditemukan, dengan batu ginjal adalah sebagai faktor risiko pada sebagian besar kasus karsinoma sel skuamosa. Pada periode tahun 1973-2004 hanya ditemukan 221 kasus sarcomatoid kandung kemih. Kasus ini akan membahas lebih jauh mengenai sarcomatoid kandung kemih dan relevansi secara klinis.

Deskripsi Kasus:

Seorang laki-laki warganegara Indonesia yang berusia 58 tahun mengalami gross hematuria sejak 3 bulan yang lalu, sehingga akhirnya dibawa ke Instalansi Gawat Darurat (IGD) dan pasien mulai menggunakan kateter urin dan infus cairan intravena (IV) dan analgesic secara parenteral. Dilakukan pemeriksaan radiologi dan uji darah secara cito. Hasil pemeriksaan radiologis menunjukkan massa opasitas di kandung kemih ukuran 6x6 cm dan beberapa urolithiasis di rongga panggul. Pada hasil pemeriksaan darah menunjukkan peningkatan kadar ureum dan creatinin. Berdasarkan hasil karakteristik dan temuan radiologis maka ditegakkan diagnosis vesicolithiasis. Selanjutnya pasien dilakukan operasi (open vesicolithotomy) dan saat itu ditemukan massa menyerupai polip di bawah batu. Pada pemeriksaan histologi ditemukan terdapat kelenjar getah bening di sekitar masa yang dinyatakan sebagai sarcomatoid kandung kemih dan telah terjadi metastasis ke kelenjar getah bening dan area panggul.

Kesimpulan :

Sering terjadi hematuria pada kasus urolithiasis, dokter harus waspada terhadap kemungkinan adanya tumor pada hematuria yang massif sehingga dapat dilakukan urolithotomy secara cito..

Keywords : Bladder Cancer, Sarcomatoid, Vesicolithiasis

INTRODUCTION

Sarcomatoid bladder carcinoma is uncommon, the preponderance of bladder cancers caused by bladder stones consist of squamous cell carcinoma.[1] Sarcomatoid Carcinoma is the official designation by the World Health Organization (WHO) for a neoplasm that exhibits a biphasic nature, displaying both mesenchymal and malignant epithelial features. From a histological perspective, the epithelial component of the observed condition consists of high-grade transitional cell carcinoma, potentially exhibiting epidermoid and/or glandular differentiation. On the other hand, the mesenchymal component comprises chondrosarcoma, malignant fibrous histiocytoma, osteosarcoma, leiomyosarcoma, fibrosarcoma, or rhabdomyosarcoma.[2] Physically, sarcomatoid carcinomas are advanced, swiftly growing polypoid neoplasms that are more prevalent in older males. In this world, only 221 cases of sarcomatoid bladder carcinoma are recorded from 1973 until 2004. This showed how rare the case is among other types of bladder cancer. The histopathogenesis of this cancer is still in controversy, but some researchers found that this tumor developed as a result of a totipotential neoplastic cell that underwent many stages to differentiate as a mesenchymal or epithelial cell. Alongside its unwell-described pathogenesis, the history, risk factors, clinical findings, prognosis, and treatment of this type of cancer remain unexplained.[3] The present case involves a male patient of advanced age who displayed the presence of a bladder stone, which was determined to be a potential risk factor for the development of sarcomatoid bladder cancer.

The purpose of this case report is to explain the presentation of rare sarcomatoid bladder carcinoma while coexisting with bladder stone

CASE REPORT

A 58-year-old Indonesian man experienced gross hematuria for 3 months without a previous family history of urology neoplasm and was also accompanied by pain in the suprapubic area after urinating. He only takes paracetamol as a symptomatic treatment of the intermittent pain. He urinates relatively every 30 minutes including in his sleeping time. He also experienced a fluctuating fever thus finally brought to the ER where he initiated a urinary catheter and was given IV fluid along with analgesic parenterally. The catheter insertion was not easy at first, it was not able to be inserted completely therefore taking several hours to complete the procedure.

Emergency abdominal radiograph assessment found 6 x 6 cm opacity in the bladder, 2.3 x 2 cm opacity appeared in L4-L5 right paravertebral line (right ureter projection), 6 x 8 mm in the right side of the pelvic cavity (distal of right ureter projection). Ureum and creatinine increased in emergency blood test procedures, indicating acute kidney injury. Based on the characteristic appearance and radiological findings, a diagnosis of vesicolithiasis was made.

Following the diagnosis, vesicolithotomy was initiated and during the stone removal, a tangled polyp-like mass was found buried underneath the stone. Excision of mass and surrounding lymph nodes was made and the mass was identified as sarcomatoid carcinoma of the bladder histopathologically and spread to lymph node and pelvic region (T4b N1 M0). The patient was finally referred to undertake chemoradiation therapy. Cystectomy was not applied due to the stage of the tumor and could reduce the quality of life.

The combination of gemcitabin and cisplatin was utilized as chemotherapy in this patient. Radiotherapy only went for 2 weeks due to the patient's condition that dropped detrimentally. In the third week, the patient passed away at his house after 1 week of palliative care.

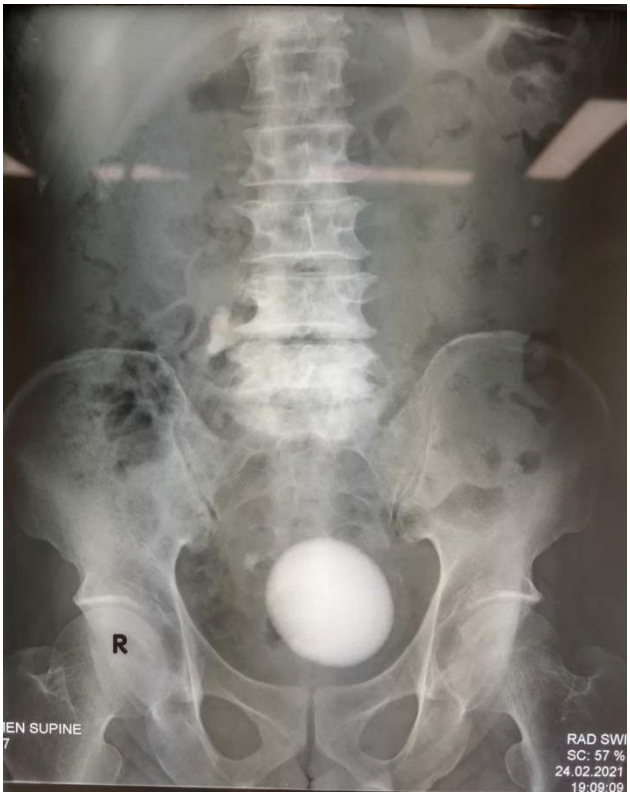

Figure 1. BNO reveals 6 x 6 cm opacity in the bladder.

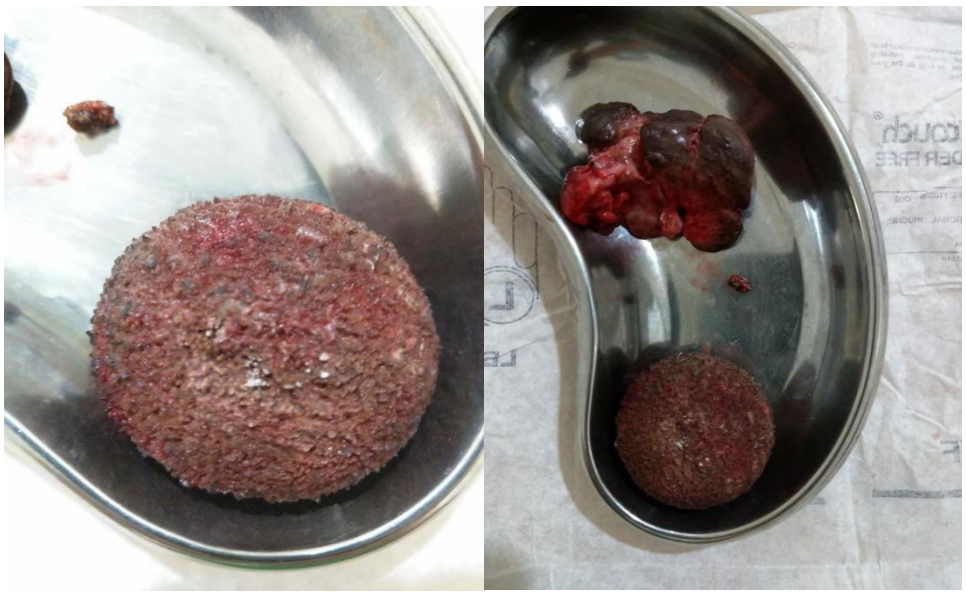

Figure 1. Shape of bladder stone (left) and size comparison between bladder stone and tumor (right)

DISCUSSION

Sarcomatoid bladder carcinoma is one of the uncommon types of bladder cancer (0.1%–0.3% of all urothelial bladder carcinoma, according to estimates). In 1972, sarcomatoid bladder carcinoma was first described.[1] Primarily characterized by single-center case reports or series. The sarcomatoid cancer of the urinary bladder exhibits morphological and/or immunohistochemical indications of

both epithelial and mesenchymal development.[4] The conventional approach for managing urothelial bladder cancer that has progressed to a locally advanced stage involves either radical cystectomy or chemoradiation. However, in the case of metastatic bladder cancer, all established guidelines advocate for a comprehensive cystoscopic assessment of the whole urethra and bladder before proceeding with resection. The evaluation process should encompass the comprehensive documentation of essential tumor characteristics, such as the specific anatomical location, dimensions, and morphological features (e.g., papillary or solid), as well as a thorough description of any observed mucosal abnormalities. Due to the swiftly growing nature of the tumor, partial cystectomy and transurethral resection are not recommended. In contrast to other sarcomas, sarcomatoid urothelial bladder carcinoma responds poorly to radiation therapy alone, necessitating radical cystectomy. The existing literature does not contain any published studies specifically addressing the management of the sarcomatoid variety of urothelial carcinoma. However, a certain group has proposed that radical cystectomy may be a more suitable treatment approach for patients with stage T1 disease, as opposed to intravesical therapy.[5]

Since the clinical findings of the patient had been considered as persistent hematuria, we need to look up the main cause of this sign. Bladder neoplasm usually causes intermittent hematuria, but we cannot put aside the bladder stone as a culprit. This also puts a reasonable question of whether the stone was built directly inside the bladder or it was a descendant accumulated from both upper parts (kidney and ureter).

The study of pathology anatomical findings of the sarcomatoid bladder were found after the excision and the diagnosis was completely different from the initial suspicion of Squamous Cell Carcinoma because there was a large bladder stone (6x8 cm opacity found via abdominal radiograph assessment) that usually causes chronic bladder irritation. Bladder stones-induced chronic bladder irritation is widely recognized as a prominent risk factor for the development of Squamous Cell Carcinoma. The tumor was classified as T4b N1 M0 because it had spread to the pelvis and lymph nodes but there was no evidence of distal metastasis. Bladder cancer prognosis and therapy rely on tumor stage and TNM classification.[4]

This case was treated with chemoradiation therapy without radical cystectomy. According to the staging, radical cystectomy was not an option anymore. Before selecting a treatment, the quality of life must be considered. Chemoradiotherapy was not only a main therapy but also a palliative care. Unless contraindicated, neoadjuvant cisplatin-based treatment improves patient outcomes.[5-7] No credible evidence suggests that neoadjuvant or adjuvant radiation increases survival or is curative. American Urology Association (AUA), National Institute of Clinical Excellence (NICE), and National Comprehensive Cancer Network (NCCN) advocate chemoradiotherapy (radiotherapy plus a radiosensitizer) for patients who cannot have cystectomy because it downstages.[8-10] The treatment protocol developed by Wallach et al. involved a 7-week course of radiation therapy and chemotherapy administered on weekdays, followed by regular cystoscopy examinations to assess treatment response. The patient had a course of radiation therapy consisting of 36 fractions administered for 49 days. The treatment targeted the bladder and pelvic lymph nodes, resulting in a cumulative dosage of 39.6 Gy. Subsequently, an additional dose of 25.2 Gy was delivered specifically to the bladder tumor. The chemotherapy regimen comprised cisplatin at a dosage of 35 mg/m2 (equivalent to 49 mg in 500 mL of normal saline administered over 1 hour) throughout the initial weeks of 1, 3, 5, and 7. Each cycle was followed by a two-day interval. During the administration of chemotherapy, it is recommended to deliver an intravenous bolus of

Palonosetron HCl at a dosage of 0.25 mg, along with an intravenous dose of dexamethasone at a dosage of 20 mg, diluted in 50 mL of normal saline solution.[11]

In the regions of North America and Europe, the majority of bladder cancers, specifically more than 90%, are classified as urothelial carcinomas, which are characterized by their simple nature. The remaining 9% of bladder cancers are attributed to epithelial tumors. The determination of treatment strategy is contingent upon the degree of invasion, which is categorized as either superficial, muscle-invasive, or hyperinvasive. Hyperinvasive tumors require the implementation of radical cystectomy along with chemoradiation, whereas superficial malignancies can be managed using alternative treatment methods. The conventional approach for treating muscle-invasive tumors has historically been radical cystectomy, with or without adjunctive chemotherapy. However, To enhance the overall well-being of patients and minimize the need for urinary diversion operations, there has been a growing utilization of a bladder-sparing treatment approach known as trimodal therapy. This approach involves a combination of transurethral resection of bladder tumors, systemic chemotherapy, and concurrent radiation therapy. It is important to note that this treatment is selectively employed in specific patient populations.[5-11] The findings of the current investigation indicate that individuals diagnosed with that include sarcomatoid components had lower rates of survival and greater rates of recurrence compared to those without sarcomatoid components.[12]

CONCLUSIONS

Sarcomatoid bladder carcinoma is classified as a rare kind of bladder cancer, comprising around 0.1% to 0.3% of all cases of bladder urothelial carcinoma. This form of bladder cancer is aggressive and is typically diagnosed at an advanced stage, worsening the patient's prognosis. With unspecific clinical manifestations, the clinician should be aware of any tumor findings especially when the hematuria is massive thus emergency urolithotomy should be considered immediately. Given the absence of a comprehensive guideline, it is imperative to do further research and investigation of the risk factors, early detection, and therapeutic interventions associated with sarcomatoid bladder cancer.

ACKNOWLEDGEMENT

We thank the Editors or referees, for effusive comments or dedications.

AUTHORS CONTRIBUTION

All authors contributed to the preparation of this manuscript.

FUNDING

None

CONFLICT OF INTEREST

The authors of this scholarly article declare no conflicts of interest.

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