

SUMMARY

Plincelnerová L, Čermák M, Fišer L, Juhász Á, Kočárek J. Inferior vena cava lesion as a complication of laparoscopic radical nephroureterectomy with retroperitoneal lymphadenectomy.

Introduction: Upper urinary tract tumors occur in 5–10 % of all urothelial tumours. The prognosis is poor due to late clinical manifestation resulting in late diagnosis. Radical laparoscopic nephroureterectomy is considered gold standard treatment. In case of high risk tumors, retroperitoneal (paraaortic, paracaval) lymphadenectomy is carried out. Inferior vena cava lesions come as a rare, but serious complication of this type of surgery.

Clinical case: We present a case of a 55 years old female patient with oncological duplicity: tumour of the renal pelvis, topic of this presentation, and an oesophageal tumour (epidermoid carcinoma classified as pT2pN0Mx, R1). In 2018, the patient underwent total oesophagectomy, D2 lymphadenectomy and a posterior mediastinal lymphadenectomy with gastrooesophagoanastomosis. On restaging CT scan 2 years after the surgery, there was a newly discovered unclear finding on the right kidney, which was suspicious of a metastatic invasion. In differential diagnosis, either abscess or a primary kidney tumor were considered. Due to the inconclusive imagery, we performed another early CT check-up, progression on the right kidney and on the retroperitoneal lymph nodes was described. Diagnostic ureterorenoscopy including cold biopsy and wash-out cytology was performed. Eventhough the histopathological and cytological examination wasn't helpful, the endoscopy showed the expansion to be of suspicious appearance and therefore right sided radical nephroureterectomy with retroperitoneal lymphadenectomy were recommended. Laparoscopical approach was chosen for surgeon's skills. The surgery was complicated by an injury of the inferior vena cava. The situation was fortunately recognized perioperatively and therefore the primary suture could be performed. We proceeded according to the rule of „3 P“ – Pressure, Panic, Port – Compress

the laesion immediately to stop the bleeding and increase the intraabdominal pressure, keep calm and insert another port for additional instruments to fix the lesion. On our recording, all these steps are visible: compression of the lesion, suction of the bleeding and suture, which is performed with a Prolene 3/0 suture. Surgery took 4 hours and 15 minutes and there was less than one litre of blood loss. Postoperative hemoglobin level was sufficient and there was no need for transfusion. The complications are classified as Clavien-Dindo 1. Intramural part of the ureter was removed by Collins knife. The subsequent postoperative period was uncomplicated. The drainage was removed on the third day and the patient was discharged on the eighth day. On the histopathological examination, there was a squamous carcinoma of the renal pelvis described, with positive lymph nodes (pT3pN2, grade 3). Primary squamous carcinoma of the renal pelvis is a rare histopathological finding. It appears in only 1 % of all urothelial malignancies, but it is the most frequent histopathological variation of urothelial tumours. The patient was passed to the complex oncological center, where she was already treated for the earlier diagnosed oesophageal tumour. She received adjuvant chemotherapy (Cisplatinum + Gemzar, 5 cycles in total). The adjuvant chemotherapy was eventually interrupted due to hematotoxicity. The follow-up CT scan revealed generalisation to lungs, right suprarenal gland and paraaortic lymph nodes.

Conclusion: Retroperineal lymphadenectomy represents an important step in surgical treatment of different urological tumours however vena cava lesions can come as a complication of surgery. There can be other iatrogenic causes, for example ureteral stent insertion. Inferior vena cava lesions can be fatal and the best way to handle this complication is to recognize the lesions perioperatively and to perform primary suture.

KEY WORDS

Inferior vena cava, nephroureterectomy, perioperative vascular lesion, retroperitoneal lymphadenectomy, upper urinary tract tumours.