DOI: https://doi.org/10.5114/pm.2022.124020

Menopause Rev 2022; 21(4): 285-288

CASE REPORT

Initial presentation of renal cell carcinoma as a vaginal mass with excessive bleeding

Angel Yordanov[1], Stoyan Kostov[2], Yavor Kornovski[3], Yonka Ivanova[3], Stanislav Slavchev[3], Gancho Kostov[4], Strahil Strashilov[5]

[1]Department of Gynaecological Oncology, Medical University Pleven, Pleven, Bulgaria

[2]Department of Gynaecology, Medical University of Varna "Prof. Dr. Paraskev Stoyanov", Varna, Bulgaria

[3]Department of Obstetrics and Gynaecology, Medical University of Varna "Prof. Dr. Paraskev Stoyanov", Varna, Bulgaria

[4]Department of Special Surgery, University Hospital Kaspela, Plovdiv, Bulgaria

[5]Department of Plastic Restorative, Reconstructive and Aesthetic Surgery, University Hospital "Dr. Georgi Stranski", Medical University Pleven, Pleven, Bulgaria

Abstract

Introduction: Renal cancer is the seventh most common cancer in men and the tenth most common cancer in women. Renal cell carcinoma accounts for 3% of all adult malignancies and 85% of all primary renal tumours. It metastasizes most often to the lungs, liver, bones, and brain and very rarely to the vagina.

Case report: We present a case of a 60-year-old patient, in whom the renal cell carcinoma manifested for the first time as an intense bleeding, soft tumour formation with dimensions 4/6 cm originating in the vagina.

Discussion: Renal cell carcinoma metastasizes in about 30% of cases. Metastasizing can be lymphatic, hematogenous, transcoelomic, or by direct invasion. Most commonly it affects the lungs, bones, adrenal glands, liver, lymph nodes, and brain. Much less often, it metastasizes to the thyroid, orbit, nasal structures, vagina, gallbladder, pancreas, sublingual tissues, and soft tissues of distal extremities. Metastases can be synchronous and metachronous. The described cases in the literature of renal cell carcinoma manifested with vaginal metastases are isolated.

Conclusions: We present an extremely rare case of renal cell carcinoma manifested by profuse genital bleeding from a vaginal metastasis. In such cases, especially if the vaginal lesion does not appear as the primary vaginal carcinoma, we must consider the possibility of metastasis from renal carcinoma.

Key words: renal cell carcinoma; vaginal metastasis; diagnosis; treatment.

Introduction

Renal cell carcinoma (RCC) accounts for 3–5% of all malignancies and about 80% of renal malignancies [1]. At the time of diagnosis of RCC, about 30% of patients have metastases [2]. Renal cell carcinoma metastases commonly affect the lungs, liver, bones, and brain [3] and extremely rarely the vagina – there are less than 100 cases described in the literature [2].

We describe a case of a 60-year-old patient referred for treatment in our clinic due to the presence of a tumour mass in the vagina with severe bleeding. Subsequently, this turned out to be a metastasis from RCC.

Case report

A 60-year-old patient was referred to the Gynaecological Oncology Clinic at Dr. Georgi Stranski University Hospital, Pleven, due to a tumour formation in the vagina, which bled profusely during a gynaecological examination. The patient did not report any previous surgeries or illnesses. The gynaecological examination showed an intense bleeding, soft tumour formation with dimensions 4/6 cm at the entrance of introitus vaginae (Fig. 1).

Blood tests showed normal indicators except for haemoglobin – 90.0 and platelets – 641.0.

The tumour formation was excised *en bloc* with clear margins.

Postoperatively, a whole-body computed tomography (CT) was performed (because the removed formation did not appear like a primary carcinoma of the vagina). The computed tomography scan showed pathological changes in the left kidney and lungs. A lobulated, heterogeneous tumour formation in the middle third of the left kidney, measuring 63/55 mm (Fig. 2 A), and infiltration with tumour thrombosis of the left renal

Corresponding author:
Angel Yordanov, PhD, Department of Gynaecological Oncology, Medical University Pleven, Bulgaria,
e-mail: angel.jordanov@gmail.com

Submitted: 09.04.2022
Accepted: 09.07.2022

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0). License (http://creativecommons.org/licenses/by-nc-sa/4.0/)

vein (Fig. 2 B) was manifested. In the lungs, bilateral, mostly apical nodular lesions up to 3 mm in size were detected. A solid nodule with dimensions of 7 mm was visualized along the right intralobular fissure (Fig. 2 C).

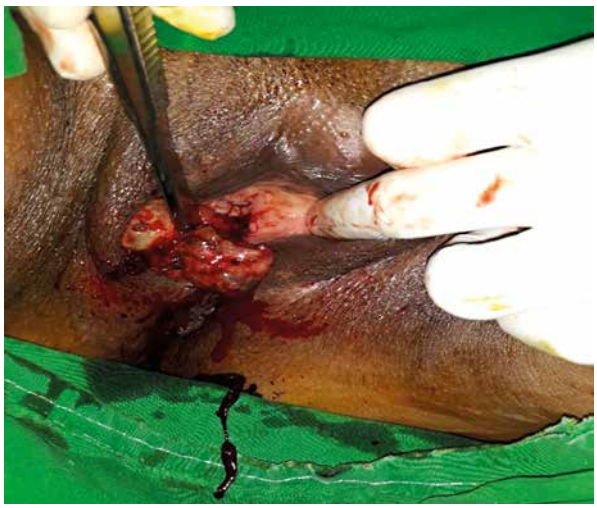

Fig 1. Macroscopic view of the finding

The patient was discharged on the second day after recovery from anaemic syndrome without complications.

The histological results of the surgical intervention are – soft tissues with metastases of clear-cell renal cell carcinoma, necrosis, and haemorrhage (Fig. 3).

After diagnosis, the patient was referred to a urology clinic for further treatment.

Discussion

Globally, renal cancer is the seventh most common cancer in men and the tenth most common cancer in women [1]. RCC accounts for 3% of all adult malignancies and 85% of all primary renal tumours [4]. Renal cell carcinoma is the most common renal carcinoma and the second most common urological carcinoma [5]. Renal cell carcinoma metastasizes in about 30% of cases [6, 7] and can be lymphatic, haematogenous, transcoelomic, or by direct invasion [8]. Most commonly, it affects the lungs, bones, adrenal glands, liver, lymph nodes, and brain [2].

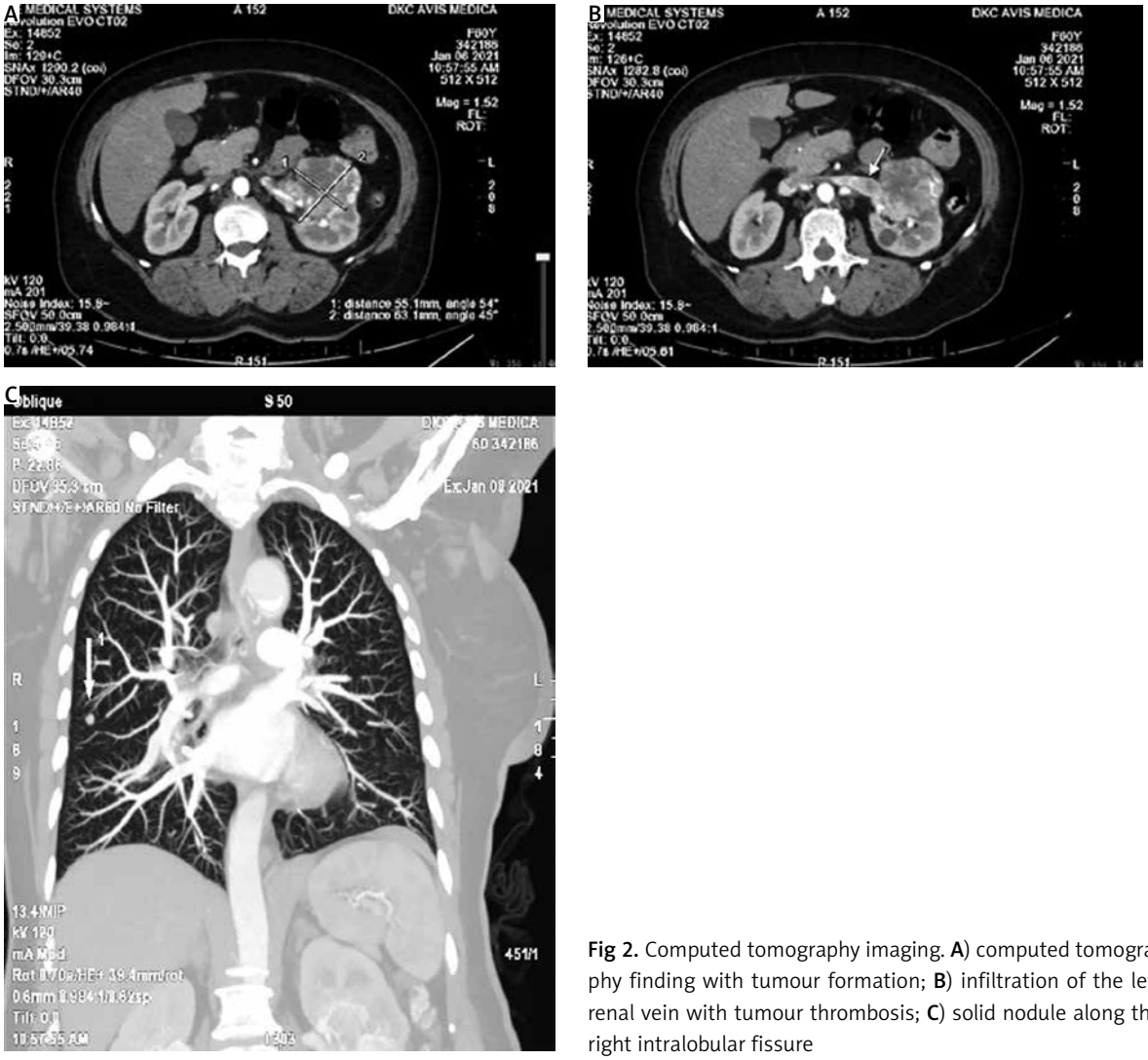

Fig 2. Computed tomography imaging. **A**) computed tomography finding with tumour formation; **B**) infiltration of the left renal vein with tumour thrombosis; **C**) solid nodule along the right intralobular fissure

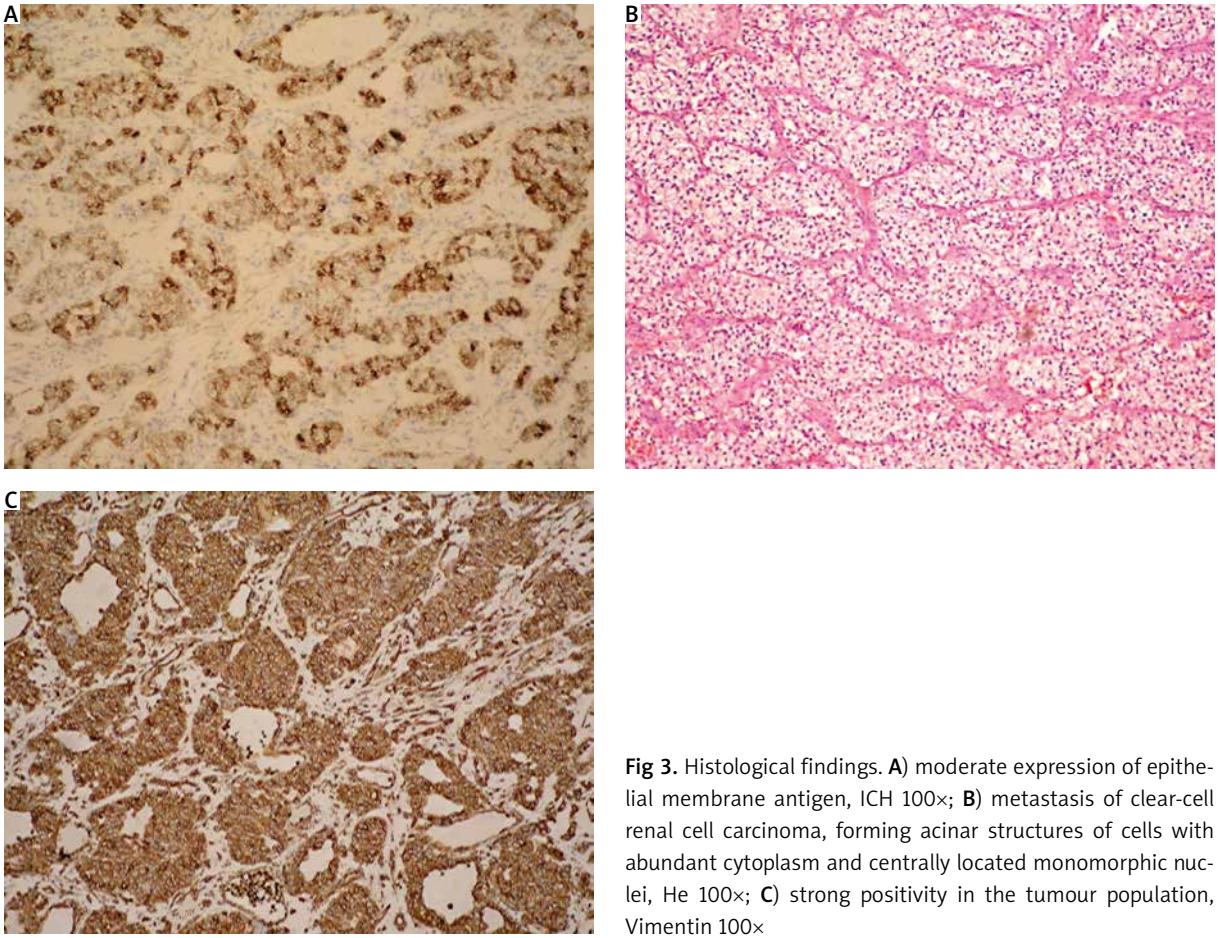

Fig 3. Histological findings. **A**) moderate expression of epithelial membrane antigen, ICH 100×; **B**) metastasis of clear-cell renal cell carcinoma, forming acinar structures of cells with abundant cytoplasm and centrally located monomorphic nuclei, He 100×; **C**) strong positivity in the tumour population, Vimentin 100×

Much less often, it can metastasize to the thyroid, orbit, nasal structures, vagina, gallbladder, pancreas, sublingual tissues, and soft tissues of distal extremities [8]. Metastases can be synchronous – 18%, and metachronous – 50% [9]. Vaginal metastases are extremely rare in RCC. Even less common is its primary manifestation as a vaginal tumour [2, 10, 11]. When RCC metastasizes to the vagina, the formation is usually single, located in the lower one-third of the vagina [12]. Carcinomas metastasizing to the vagina usually originate in the left kidney – tumour emboli passing through the left renal vein to the ovarian vein and uterovaginal plexus [13].

In 1906, Penham described the first case of RCC-associated vaginal metastasis [14]. Since then, less than 100 such cases have been described in the literature, and RCC has been primarily manifested with vaginal metastasis in only 3 of them.

In our case we report an RCC originating from the left kidney and metastasizing to the lower third of the vagina. Regardless of the size of the primary tumour, the patient had no complaints until she found a formation at the entrance to the vagina. This formation bled excessively during the subsequent gynaecological examination, necessitating the patient to be referred to our clinic. Due to the unusual appearance of the formation, we suspected that it was not a primary vaginal tumour. However, we removed it radically because patient presented with heavy bleeding and anaemia. For this reason, a whole-body CT scan was performed immediately after surgery – a renal carcinoma was diagnosis of radiologists. After the histological diagnosis, the patient was referred for further treatment.

Conclusions

We present an extremely rare case of RCC manifested by profuse genital bleeding from a vaginal metastasis. In such cases, especially if the vaginal lesion does not appear as the primary vaginal carcinoma, we must consider the possibility of metastasis from renal carcinoma.

Disclosure

The authors report no conflict of interest.

References

1. Escudier B, Porta C, Schmidinger M, et al. ESMO Guidelines Committee. Renal cell carcinoma: ESMO clinical practice guidelines for diagnosis, treatment and follow-up. Ann Oncol 2019; 30: 706-720.
2. Jimenez A, Rivera Rolon M, Eyzaguirre E, et al. Vaginal bleeding as initial presentation of an aggressive renal cell carcinoma: a case report and review of the literature. Case Rep Pathol 2018; 2018: 2109279.

3. Ozturk H. Bilateral synchronous adrenal metastases of renal cell carcinoma: a case report and review of the literature. Oncol Lett 2015; 9: 1897-1901.
4. Ouellet S, Binette A, Nguyen A, et al. Metastatic renal cell carcinoma initially presenting with hematochezia and subsequently with vaginal bleeding: a case report. BMC Urol 2018; 18: 4.
5. Moradi A, Shakiba B, Maghsoudi R, et al. Vaginal bleeding as primary presentation of renal cell carcinoma. CEN Case Rep 2020; 9: 138-140.
6. Sogani P, Whitmore W Jr. Solitary vaginal metastasis from unsuspected renal cell carcinoma. J Urol 1979; 121: 95-97.
7. Sun D, Lu J, Cao Q, et al. Metastatic renal cell carcinoma to vagina and review of literature. Chin Med J (Engl) 2013; 126: 1793.
8. Sadler G, Anderson M, Moss M, et al. Metastases from renal cell carcinoma presenting as gastrointestinal bleeding: two case reports and a review of the literature. BMC Gastroenterol 2007; 7: 4.
9. Brufau B, Cerqueda C, Villalba L, et al. Metastatic renal cell carcinoma: radiologic findings and assessment of response to targeted antiangiogenic therapy by using multidetector CT. Radiographics 2013; 33: 1691-1716.
10. Pisavadia B, Mevcha A, Patel D, et al. Case report: an unusual presentation of metastatic renal cell carcinoma with per-vaginal bleeding. Urol Nephrol Open Access J 2017; 4: 00118.
11. Chibuzo I, Takure A, Adebayo S, et al. Synchronous vulvar and vaginal metastasis from a type II papillary renal cell carcinoma – a case report. J Urol Res 2016; 3: 1047.
12. Benbrahim Z, Chouaib A, Mazeron R, et al. Gynecologic bleeding revealing vaginal metastasis of renal cell carcinoma. Pan Afr Med J 2013; 14: 62.
13. Allard J, McBroom J, Zahn C, et al. Vaginal metastasis and thrombocytopenia from renal cell carcinoma. Gynecol Oncol 2004; 92: 970-973.
14. Peham I. Hypernephrom der linken Niere mitein er Metastase in der Vagina. Zentralbl Gynak Ol 1906; 30: 724-725.