Novel treatment (new drug/intervention; established drug/procedure in new situation)

Use of cautery as a therapeutic modality in skin metastasis due to renal cell carcinoma

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Summary

Renal cell carcinoma commonly metastasises to the lungs, lymphatics and bone; it uncommonly metastasises to the skin. Several studies and reports have noted skin metastasis to be an indicator of high death rates. The best treatment for a single skin metastasis is surgical excision. However, local radiotherapy has been found to be equally effective. We present a case report where cautery was used at the site of skin metastasis, with good results.

CASE PRESENTATION

A 70-year-old man presented with a history of painless haematuria since 15 days, in January 2007. Systemic examination was normal. His blood counts, renal and liver function tests, including coagulation profile were normal. Urine microscopy showed blood clots. Ultrasonography of the abdomen and pelvis showed a 6.3×7 cm mass in the upper pole of the right kidney. Contrast-enhanced CT abdomen and pelvis showed a peripheral-enhancing hypervascular mass with necrotic areas in the upper pole of the right kidney, multiple nodular lesions in the basal segments of both lungs, a hypodense lesion in the liver and inferior vena cava thrombosis. He underwent right nephrectomy under general anaesthesia—no extension into the Gerota fascia, local lymphadenopathy or renal vein thrombosis was noted. Biopsy of the renal mass was diagnostic of clear cell renal cell carcinoma (RCC) with nuclear grade 2 and stage 2. The patient was discharged and on follow-up after 6 months was clinically asymptomatic. He presented again in October 2009, with complaints of sudden onset of breathlessness and fatigue. He was found to have a massive right pleural effusion. The pleural fluid was haemorrhagic and cytology was positive for malignant cells. A therapeutic pleural tap followed by pleurodesis was performed. During his hospital stay, he lapsed into an altered sensorium. CT of the brain showed multiple intracerebral metastases with intracerebral bleed. He was managed with antioedema measures and antiepileptic agents. His clinical condition stabilised. He developed two bleeding ulcers over the right great toe and over the left little finger. Biopsy of the little finger confirmed skin metastasis (figures 1 and 2). Haemostasis of the toe was achieved by cautery, and of the little finger, with cautery and partial amputation. There was no recurrence of bleeding or development of new lesions at these sites. The patient died of complications a month later.

DISCUSSION

RCC commonly metastasises to the lungs, lymphatics and bone; it uncommonly metastasises to the skin.¹ Skin metastases are clinically expressed as a solitary lesion of sudden appearance and rapid growth. They have a bluish, reddish or brownish colouration, are at times pulsating and on rare occasions are ulcerated.² Several studies and reports have noted skin metastasis to be an indicator of high death rates. The best treatment for a single skin metastasis is surgical excision.³ However, local radiotherapy has been found to be equally effective.⁴ The patient and his relatives declined radiotherapy in view of his poor general condition. They were also not keen for any surgical intervention. Radiotherapy acts by causing devascularisation of local vascular tumours; electrocautery destroys tissue using heat conduction. In principle, we felt electrocautery would have an effect similar to local radiotherapy.

Figure 1 Photomicrograph: H&E ×40: lobules of large-sized clear cells (arrow) separated by fibrous septae.

Figure 2 Photomicrograph: H&E $\times 400$: clear cells (arrow) are polygonal with abundant cytoplasm and a round vesicular nucleus with an inconspicuous nucleolus.

and decided to try it as a bedside palliative measure to control the persistent bleeding. Haemostasis was promptly achieved over the toe. The little finger, however, continued to bleed after cauterisation. The surgeon decided to combine partial amputation and cautery to stop the bleeding.

We suggest that in those patients with skin metastasis, unable or unwilling for radiotherapy or surgical intervention, cautery be tried as a palliative measure.

Learning points

- Skin metastasis is a rare presentation of renal cell carcinoma.
- Local cautery as a palliative therapeutic modality is effective in patients unwilling for surgery or radiotherapy.

Competing interest None.

Patient consent Obtained.

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