

# Upper limb swelling due to subclavian vein occlusion as a rare presentation of recurrent renal cell carcinoma: a picture story

Joel Arudchelvam<sup>1,2</sup>, M N Jazeel<sup>2</sup>, D Rasnayake<sup>3</sup>, W W W S Fernando<sup>3</sup>, K Thanesan<sup>2</sup>, S Godahewa<sup>4</sup>

## Abstract

**Introduction:** Renal cell carcinoma (RCC) is known to spread along the veins. However, secondary deposits from RCC growing along the veins are not reported. This case report describes a patient who presented with right upper limb swelling due to RCC spreading along the subclavian vein (SCV) and the superior vena cava (SVC) from a secondary deposit on the rib.

**Case:** A 59-year-old male presented with swelling of the right upper limb. He had RCC seven years ago and underwent radical nephrectomy. A computerised tomographic (CT) scan showed an osteolytic solid mass of 6 cm \* 7 cm on the body of the first rib. The tumour was extending into the SCV and the SVC. There was no evidence of recurrence at other sites. The patient underwent an en bloc excision of the tumour with the ribs and the SCV. The SCV was repaired with a polyester graft. The histology confirmed a metastasis from the clear cell RCC. The patient made an uneventful recovery.

**Discussion and conclusions:** At the time of diagnosis, about 33% of the patients with RCC have metastasis. After the surgery, about 30% to 50% of the patients develop recurrences. Studies have shown that wide local excision of the isolated metastasis with a negative margin (metastasectomy) results in improved survival. Excision is followed by adjuvant therapy. Therefore, this case indicates that patients who develop RCC should be followed up for long periods to detect late recurrences. Wide local excision of the isolated metastasis results in improved outcomes.

## Introduction

Renal cell carcinoma (RCC) is known to spread by growing along the veins. It is also known to cause secondary deposits in the bones. However, secondary

deposits from RCC growing along the veins are not reported. On a Google search using the keywords “renal cell carcinoma”, “secondary”, and “vein invasion”, no cases were found. This case report describes a patient who presented with right upper limb swelling due to venous occlusion. The cause of the venous occlusion was an RCC spreading along the subclavian vein (SCV) and the superior vena cava (SVC) from a bone secondary deposit in the first rib.

## Case

A 59-year-old male presented with swelling of the right upper limb. The patient underwent radical nephrectomy for RCC seven years ago. The chest X-ray revealed an osteolytic bone lesion in the middle of the body of the first rib, suggestive of a secondary deposit. A computerised tomographic (CT) scan revealed an osteolytic solid mass of 6 cm \* 7 cm with a tumour extension into the SCV and into the SVC. Therefore, a secondary deposit from the previous RCC was suspected. There were no recurrences at the other sites.

Therefore, an en bloc excision of the tumour with the first rib, a segment of the second rib, parietal pleura and the SCV was done with the adherent tumour in collaboration with cardiothoracic and vascular surgeons. The tumour extending into the SVC was not adherent; therefore, it was removed in continuity with the specimen. The SCV was repaired with a polyester interposition graft (Figure 2).

The histology confirmed a metastasis from the clear cell type RCC with negative resection margins.

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<sup>1</sup>Faculty of Medicine, University of Colombo, Sri Lanka, <sup>2</sup>National Hospital of Sri Lanka, Colombo, <sup>3</sup>National Hospital For Respiratory Diseases, Sri Lanka.

Correspondence: JA, e-mail: <joelaru@yahoo.com>. Received 16 October 2023 and revised version 17 January 2024 accepted 20 February 2024



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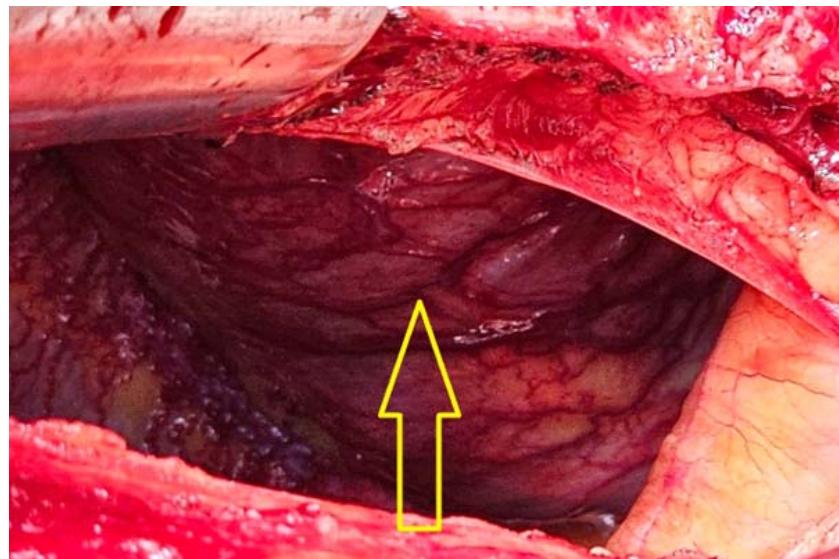


Figure 1. Image showing secondary deposit attached to the first rib (Arrow).

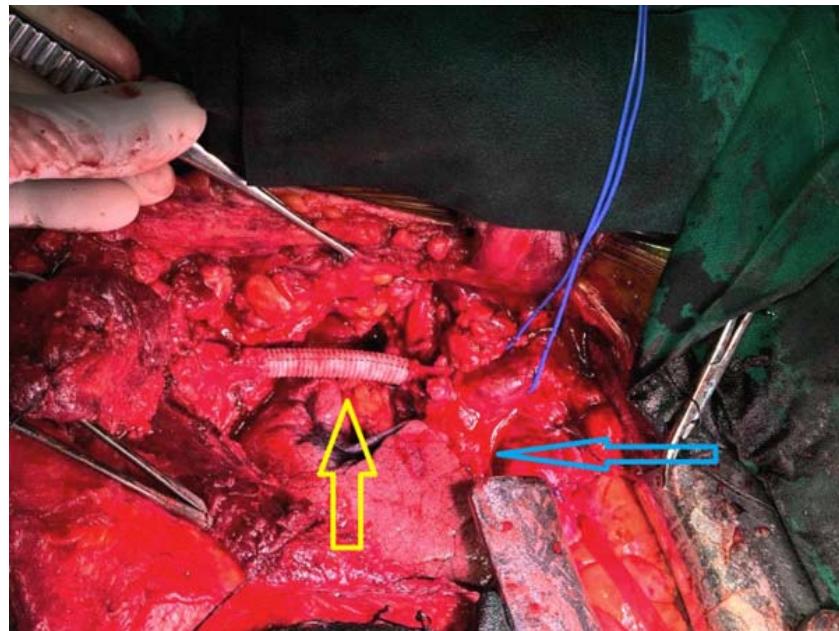


Figure 2. Subclavian vein repair with polyester interposition graft (yellow arrow), SVC (blue arrow).

## Discussion and conclusions

Studies have shown that wide local excision of the isolated metastasis with a negative margin (metastasectomy) and adjuvant therapy result in improved survival [1, 2, 3].

Therefore, this case indicates that patients who undergo radical nephrectomy for RCC should be followed up for long periods to detect late recurrences. A multidisciplinary approach to tumour resection results in the best outcome, as in this case.

## Data accessibility statement

The data is available on request.

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