

*Case Report*

## Cutaneous Metastasis as a complication of hepatic intra-arterial chemotherapy

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We report an unusual complication of hepatic intra-arterial chemotherapy for metastatic colorectal carcinoma.

### CASE REPORT

A 44 year old man who had a resection for an adenocarcinoma of the transverse colon was also found to have a metastatic nodule in the right lobe of the liver (segment VI). He underwent a laparotomy, during which an intra-operative ultrasound revealed 2 additional nodules – in segments IV and VII. These three lesions were resected, each with 2 cm margin of normal liver. A Portacath (Pharmacia Deltic/NC, St Paul MN55112, USA) was inserted into the gastroduodenal artery. A regime of hepatic intra-arterial chemotherapy was commenced post-operatively with seven doses of 5-Fluorouracil (5-FU) (500mg/m<sup>2</sup> per day) and one dose of Mitomycin C (5mg/m<sup>2</sup>) on the first post-operative day. He was subsequently given seven cycles of 5-FU (400mg/m<sup>2</sup> intravenous bolus followed by the same dose in an intravenous infusion over 18 hours on days 1 and 2 of the cycle) and folinic acid (200mg/m<sup>2</sup> intravenous infusion, also on

days 1 and 2). Each cycle's duration was 2 weeks. One year later he developed further hepatic metastases. Six months after this he requested removal of the Portacath due to abdominal discomfort. Examination revealed a hard mass around the Portacath (figure). This was removed with the Portacath. Histological examination identified an adenocarcinoma. The patient died two months after the removal of the Portacath.

### DISCUSSION

Treatment of hepatic metastases from primary colorectal carcinoma remains problematic. Hepatic resection may offer increased survival in up to a quarter of patients but is usually only practicable in those with less than four small metastases. The role of chemotherapy for advanced colorectal cancer is still controversial. Due to the toxic side-effects of systemic chemotherapy, hepatic intra-arterial infusions are being explored as an alternative. The theoretical reasons that HIA infusions may be successful are that hepatic metastases less than 3 mm in diameter derive their blood supply from the hepatic artery. HIA administered radiolabelled floxuridine concentrates in hepatic metastases to a much greater degree than when systemically administered and the high first pass metabolism of certain agents prevents them from causing systemic side effects.<sup>1</sup>



*Figure* Cutaneous metastasis surrounding Portacath chamber.

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HIA may be delivered in several ways: angiographically-placed hepatic arterial catheters, surgically-implanted infusion ports used with external pumps, or surgically-implanted silicone catheters with subcutaneous chambers (Portacath). HIA infusion is associated with several potential complications. Hepatic enzyme elevation is quite common and stricturing of the bile ducts, requiring stenting, may occur. Peptic ulceration can occur and prophylactic proton pump inhibitors should be used. Technical difficulties in placing the catheter correctly and occlusion of the hepatic artery have been reported. However the systemic complications of 5-FU treatment are largely avoided.<sup>2,3</sup>

The development of a metastatic lesion at the subcutaneous insertion of the HIA infusion system has not been previously reported. We postulate that the nodule may have arisen from peritoneal disease which progressed along the catheter. In this patient it was a late occurrence, but a rare complication such as this may become more common if HIA infusion becomes widely used for the treatment of hepatic metastases.

#### REFERENCES

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