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Colonic Adenocarcinoma Presenting as a Cutaneous Metastasis in an Old Operative Scar

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Abstract:
Cutaneous metastasis from colon cancer is an uncommon event that usually occurs after identification of the primary tumour and generally indicates diffuse disease. Incisional metastasis occasionally occurs following laparoscopic or open colon cancer resection. However, to the authors’ knowledge only one previous case of colon cancer presenting as a cutaneous metastasis in an old operative scar has been reported. We describe a case of colon cancer presenting as a cutaneous metastasis in an old cholecystectomy scar and discuss possible pathophysiological mechanisms. (J Postgrad Med 2003;49:157-158)

Key Words: Colon cancer, colonic adenocarcinoma, cutaneous metastasis, operative scar

Cutaneous metastasis from colon cancer is uncommon and typically signifies widespread disease and poor prognosis. In colon cancers, cutaneous metastases usually occur after identification of the primary tumour, although several cases have been described with this as the mode of presentation.\(^1\,^2\) Although numerous cases of metastatic colon cancer in operative scars following tumour resection by open and laparoscopic colectomy have been reported, to our knowledge there is only one reported case of colon cancer presenting with cutaneous metastasis in a pre-existing operative scar.\(^6\,^7\) We describe one further case.

Case History
An 81-year-old woman was referred to University Hospital of North Durham with a one month history of noticing a lump in the skin of her anterior abdominal wall in the region of previous cholecystectomy scar. On questioning she also described vague right-sided abdominal pain over the same time period. She had no other symptoms including altered bowel habit or bleeding per rectum. Her past medical history included an open cholecystectomy through a subcostal incision eighteen years ago. Physical examination revealed mild anaemia and a firm cutaneous nodule in the middle of the cholecystectomy scar. Abdominal CT scan showed an intussuscepting caecal tumour with a solitary nodule 23mm in diameter in the subcutaneous tissue of the right upper abdomen with the appearances of a cutaneous metastasis (Figure 1). The patient underwent laparotomy, right hemicolectomy and excision of the cutaneous nodule.

Histopathological examination of the bowel specimen showed a primary moderately differentiated colonic adenocarcinoma of mucinous type. Tumour was identified immediately beneath the serosa although the serosal surface was not breached. Three out of fourteen lymph nodes contained metastatic deposits and extramural lymphatic invasion was apparent. The cutaneous specimen contained a central nodule of adenocarcinoma with histological features identical to the primary colonic tumour.

Discussion
The most frequent site of cutaneous metastasis from colonic adenocarcinoma is the abdomen, although other sites have been described including extremities, penis, head...
Cutaneous metastases in operative scars generally occur in the incisions used for tumour resection, rather than in a pre-existing scar.

Several mechanisms of cutaneous metastasis have been proposed, including direct extension, haematogenous spread, lymphatic spread, spread along ligaments of embryonic origin and implantation of exfoliated tumour cells. Tumour cell implantation may be the most likely pathogenesis when there is metastasis to incisions created for tumour resection via laparoscopic or open colectomy. However, in the authors’ opinion this is unlikely in our case as at the time of cholecystectomy the tumour almost certainly was either at an early stage or may not have existed, precluding the availability of tumour cells for seeding. Perhaps a more feasible mechanism would be that of spread along the ligaments of embryonic origin as the metastasis occurred at a site close to the falciform ligament. Alternatively an alteration in local lymphatic drainage in the region of the scar may be the mechanism responsible for encouraging tumour cell implantation. Although haematogenous metastasis is possible, the question that has to be asked is why should metastasis occur in the scar as opposed to elsewhere? There is little to suggest direct spread as the pathogenic process involved in this case as there was no contiguous tumour.

Assuming that it was not a random phenomenon, we suggest that there was a predilection to incisional metastasis, either as a result of an alteration in the microscopic anatomy around the scar, perhaps in the lymphatic channels, or that the local environs of the scar were more receptive to metastatic tumour cells, possibly due to altered adhesion molecule profile or altered local immunosurveillance mechanisms. The exact pathogenesis of incisional metastasis remains a matter of speculation awaiting further recognition and investigation.

References

Announcement

Symposia

As a part of journal’s golden jubilee celebrations, each issue of the journal will contain a compilation of articles on a topic of interest to the general readership of the journal.

Following symposia are being planned for the next two issues of the year:
1. Role of Diet in Prevention of Diseases
2. Malaria: New Developments