Cutaneous Metastasis from Pancreatic Carcinoma- A Case Report and Review

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Abstract
Carcinomas of the pancreas represent less than 5% of human malignant neoplasms [5], skin involvement is rare, and metastasis generally occurs at the umbilical area. There are few reported cases with cutaneous lesions disclosing a pancreatic carcinoma at sites other than the umbilical area. We report a case of cutaneous metastases of pancreatic carcinoma to the scalp. The literature on pancreatic cutaneous metastasis is reviewed and discussed.

Case Report
A 59 year old female was referred to the plastic surgical outpatients with a lesion over the scalp which was painless, bled to minor trauma and had slowly increased in size over 3 months.

She had been recently diagnosed with pancreatic carcinoma of the tail with metastasis to the lung and bone following investigations for weight loss and right loin pain (Figure 1).

On physical examination there was a 1 cm ulcerated lesion over the parietal scalp. This was well circumscribed, with a rolled edge and had it was mobile over the deep structures (Figure 2). There were no enlarged lymph nodes present.

The provisional diagnosis made was of an ulcerated nodular Basal cell carcinoma. Excision of the scalp lesion was expedited and the resultant defect was closed with a scalp rotational flap.

Histology demonstrated the dermis to be infiltrated with malignant glandular structures. Immuno-histochemical staining showed a positive reaction to CK7, CK20, CEA, Mesothelin (Figure 3), which was in keeping with well differentiated pancreatic adenocarcinoma.

She had an uneventful post operative period and when followed up her scalp rotational flap had completely healed.

She was readmitted with a pleural effusion and has since then been receiving palliative chemotherapy with Gemcitabine.

Discussion
Cutaneous metastases occur in 0.7-9% of all patients with cancer, Breast, lung and colon cancer are the most frequent origins [2]. Cutaneous metastases from pancreatic cancer are very uncommon. Mean age of presentation of cutaneous metastases is 68.4 years and there is a male predominance [1].
Distant spread shows that a pancreatic carcinoma can reach all cutaneous tissue via blood or lymphatic systems. The most frequent cutaneous metastatic site is the umbilicus, known as the Sister Mary Joseph nodule and the pancreatic tail was the most common site of the primary tumour [1]. Our case is interesting in that the unusual cutaneous metastases of pancreatic cancer was to the scalp in contrast to the umbilicus. To the best of our knowledge there are only 3 other reports of pancreatic cancer with cutaneous metastases to the scalp [2-4].

A literature review of the published data, has found 17 cases, with non-umbilical cutaneous metastasis to the face, chest, back, axilla, forearm, buttoc and thigh [5]. (Table 1)

Table 1: Non umbilical cutaneous metastases from pancreatic adenocarcinoma.

| Author et al | Age | Sex | Site of skin metastasis | Location of Primary tumour |
|-------------|-----|-----|-------------------------|--------------------------|
| Takeuchi et al | 77  | M   | Left axilla             | Tail                     |
| Miyahara et al | 43  | M   | Scalp                   | Uncus                    |
| Miyahara et al | 85  | M   | Mentum                  | Uncus                    |
| Miyahara et al | 60  | M   | Face, neck              | Body, tail               |
| Ambro et al   | 73  | M   | Scalp                   | Ductus                   |
| Taniguchi et al | 67  | M   | Chest, abdomen          | Unknown                  |
| Taniguchi et al | 69  | M   | Face, head              | Head                     |
| Fussey        | 55  | F   | Neck                    | Head                     |
| Ohhashi et al  | 79  | M   | Neck, chest, abdomen    | No details               |
| Ohhashi et al  | 65  | M   | Back                    | No details               |
| Nakano et al   | 80  | M   | Occipital scalp         | Tail                     |
| Nakano et al   | 80  | M   | Arm, chest              | Unknown                  |
| Sakai et al    | 47  | M   | Herpes zoster-like      | Head                     |
| Sironi et al   | 72  | M   | Right thigh             | Head                     |
| Florez et al   | 84  | M   | Buttock                 | Head                     |
| Jun et al      | 88  | M   | Right forearm, chest    | Body, tail               |
| Fukui et al    | 49  | M   | Face, chest             | No details               |
| Horne et al    | 65  | F   | Chest wall              | Head                     |
| Our case       | 59  | F   | Scalp                   | Tail                     |

Although such cases are rare, it is important to note that metastatic lesions in the skin may be the first sign and one type of distant metastases originating from pancreatic cancer, this may relate to the propensity for tail of pancreas cancers to remain asymptomatic until a later stage when distant metastasis has already occurred.

Grossly the Cutaneous lesions are oval, firm, solid, non painful nodules. Macroscopically they tend to lack uniformity or distinction and are difficult to distinguish from other skin lesions [1]. Most patients die within 7 months from presentation of cutaneous metastases, therefore metastasis to skin indicates widespread general dissemination and a poor prognosis [1].

Immunohistochemical staining of the lesion with for CK 7, 19 and 20 is helpful for identification of the cutaneous lesions primary neoplasm [1].

Conclusion

Cutaneous metastases from pancreatic carcinoma are rare clinical findings, can vary considerably and be non-specific. Metastatic lesions can be the initial presenting sign of pancreatic cancer. When surgery for the pancreatic cancer is contemplated the evaluation and presence of not only liver or lung but also cutaneous metastases has important implications for tumour staging and therapy. To the best of our knowledge, very few patients have been reported with cutaneous metastasis to the scalp disclosing a pancreatic carcinoma, making this a case particularly interesting.

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