Cutaneous Metastasis as a Key Manifestation of Adenocarcinoma on Pancreatic Graft

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ABSTRACT
Cutaneous metastases are a rare phenomenon and usually carry an ominous prognosis upon diagnosis.

We present the clinical case of a patient with metastatic pancreatic adenocarcinoma with the singularity of its origin in a graft from a previous donor after a pancreatic-renal transplant for type 1 diabetes.

It is essential for every clinician to suspect the presence of skin metastases in every patient with skin lesions in a compatible setting.

Case Report
A 48-year-old man was seen in the emergency department for evaluation due to febrile symptoms associated with respiratory symptoms of 15 days of evolution.

As a relevant background, it was a patient with a pancreatic-renal transplant of 10 years of evolution due to type 1 diabetes mellitus of poor evolution. He was being treated with tacrolimus 3mg/day, mycophenolate 360mg/12 hours, and cyclosporine 200mg/day. On examination, diffuse crackles and rhonchi were found in both lung fields. In addition, the presence of a clinically asymptomatic erythematous papule located in the left frontal region (panel A) was striking. The analysis only reported minimal elevation of inflammatory parameters. The chest X-ray turned out to be normal.

Given the febrile picture in a patient at risk due to the transplant, hospital admission was decided. During admission, a computerized axial tomography (CT) scan was performed (Panel B), showing extensive bilateral pulmonary perilymphatic involvement, with interlobular and cissural septal thickening, with multiple nodules and consolidations. Due to suspicion of invasive fungal infection, treatment with voriconazole was started, without clinical response. During admission, other skin lesions began to appear in the patient, highlighting another papule located in the mid-thoracic region (Figure 1) and another 3 smaller ones on the scalp. A skin biopsy was performed, which found a nodular lesion made up of cords, rows, and glandular structures at the dermal level, with the presence of lymphovascular embolization. The cells were very atypical and showed immunoreactivity against MUC1, MUC5, CK7, CK20 and GATA 3, being negative for estrogen, CDX2, MUC4, MUC2, PSA, PSMA, progesterone and TTF-1, resulting in a biopsy compatible with adenocarcinoma metastasis of possible pancreatobiliary origin.

Given this result, a CT scan with abdominal contrast was performed, where an 8.1x5.2cm mass with a malignant appearance was observed at the level of the pancreatic graft in the right iliac fossa (panel D), as well as multiple findings compatible with liver and bone metastases and peritoneal implants. Finally, after the diagnosis of metastatic pancreatic adenocarcinoma on a donor graft, it was decided to start palliative chemotherapy, with subsequent death of the patient in a few weeks.
Figure 1: Clinical and radiological manifestations of our patient

In panel A, a somewhat shiny erythematous papule can be seen, located in the left frontal region (black arrow). Panel B shows a high-resolution computerized axial tomography section, with predominantly perihilar lung involvement and multiple ground-glass areas coexisting with other nodular areas. In panel C, another tumor-like papular lesion (black arrow) can be seen in the thorax, similar to the one in panel A. Finally, in panel D, an abdominal axial tomography section can be seen, where a large tumor lesion can be seen, size in the area of the grafted pancreas, at the level of the right iliac fossa (yellow arrow).

Discussion

Pancreatic cancer is the fourth leading cause of cancer death in the United States [1]. The most common skin manifestations are jaundice and pruritus due to biliary obstruction.

Cutaneous metastases from pancreatic carcinoma are rare, being the most frequent in the navel (sister María José’s nodule) and more frequent in the body and tail of the pancreas, which goes against its most common location (head of the pancreas). Location in other parts of the body, as was the case in our case, is much rarer, and predominates in the head and neck [2-4].

It is essential to know that sometimes skin involvement is the first sign for the diagnosis of pancreatic cancer, and there are already several case series reported in the literature [2].

Its appearance classifies the tumor as stage IV, in most cases irreversible and therefore its presence gives an ominous prognosis. In the review carried out by Miyahara et al, the median survival was 5.8 months, with a range between 1 and 22 months, and Schoenlaud et al. found a median survival of 3.3 months in 2 cases of cutaneous metastases per case [2,4-6]. Pancreatic cancer taken from a series of 200 patients with cutaneous metastases.

The uniqueness of our clinical case, and to our knowledge not published in the literature to date, lies in the presence of cutaneous metastases on a pancreatic graft in a transplant patient. In addition, it constituted the guiding piece for its diagnosis. It is essential for every clinician to suspect the presence of skin metastases in every patient with skin lesions in a compatible setting.

Author Contributions

Miguel Mansilla-Polo, Begoña Escutia-Muñoz and Daniel Martín-Torregrosa managed clinical treatment and procedures, contributing to the development of this paper.

- Carlos Abril-Pérez, Rodolfo David Palacios-Díaz and Mónica Pozuelo-Ruíz directed the writing of the manuscript and follow-up of the patient.
- Vicent Martínez-Cózar directed the anatomopathological diagnosis.
- Ignacio Torres-Navarro and Rafael Botella-Estrada supervised the work.

Declarations

This article has no funding source.

Oral and written consent was obtained to publish this image.

Ethics: procedures followed here were in accordance with the ethical standards of the responsible committee on human experimentation and with the Helsinki Declaration of 1975, as revised in 1983. We have not use patients’ names, initials, or hospital numbers.

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