



Pancreatic neuroendocrine carcinoma metastasis to the skin

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Neuroendocrine carcinoma (NEC) rarely metastasizes to the skin, and hence very few cases of cutaneous metastases of pancreatic NEC have been reported [1, 2]. The identification of the primary site in metastatic NEC can be quite challenging because enlarged lymph nodes tend to be the first and only symptom. The prognosis and survival of patients with NEC is poor [1, 2], and so it has been recommended that physical examination as well as biochemical, functional, and imaging tests be performed every 3 months [3]. A thorough physical examination of the skin should also be performed to look for possible metastases. Because our patient's clinical course proved extremely aggressive, we would like to strongly emphasize that diagnostic imaging should be repeated immediately prior to qualifying the patient for surgery. Correct determination of disease stage supports treatment planning and helps avoid unintended qualification for surgery.

A 49-year-old female patient started the diagnosis due to enlargement of the right inguinal lymph nodes. A lymph node packet (52 × 28 × 36 mm) revealed on ultrasound was excised. Histopathology of the surgical specimen showed metastasis of small cell NEC G3. Immunophenotyping revealed the following: ChrA (+), SYN (+), AE1/3 (+) (dot), TTF-1 (-), and a Ki-67 index of 65%. Despite examination by two independent centres, the location of the primary tumour (TxN1Mx) was not identified.

In order to search for the primary lesion, computed tomography (CT) of the abdominopelvic cavity was performed, visualizing a packet of lymph nodes (48 × 32 mm)

on the right side of the lesser pelvis, at the level of the external iliac vessels. In somatostatin receptors scintigraphy with ^{99m}Tc-Tektrotyd revealed overexpression of somatostatin receptors in the lymph nodes seen at CT. The primary focus remained undetected on gynaecological and laryngological consultations, thyroid and breast ultrasound, colonoscopy, and chest CT. CT scans obtained 3 months later showed an enlarged nodal packet. ¹⁸F-FDG PET/CT demonstrated a metabolically active process only in the external right iliac lymph nodes (SUVmax. 6.5) (Fig. 1A, B). Neuroendocrine tumour markers were normal. ⁶⁸Ga-DOTATATE PET-CT 2 months later showed increased expression of somatostatin receptors (SUVmax 10.5 and 17.4) but only in the external right iliac lymph node packets of 59 × 37 mm and 66 × 41 mm in size. The patient was qualified for nodal packet excision and for the search for the primary lesion. Because the packets proved unresectable during surgery, the patient received palliative chemotherapy (cisplatin and etoposide), which was continued for 5 months. Abdominopelvic CT scan performed after the 6th cycle of chemotherapy showed almost complete regression.

Six months later, a ¹⁸F-FDG PET-CT scan showed metabolic progression of the nodal infiltration in the pelvic area (67 × 47 × 116 mm). Due to the progression of the disease, locoregional advancement, and post-chemotherapy polyneuropathy, the patient was qualified for palliative hypofractionated radiotherapy (a total dose of 30 Gy in 10 fractions). Abdominal CT performed 3 months later revealed a solid 22-mm tumour of the pancreatic body, classified as the primary lesion (Fig. 2), and a stable disease in the pelvic lymph nodes according



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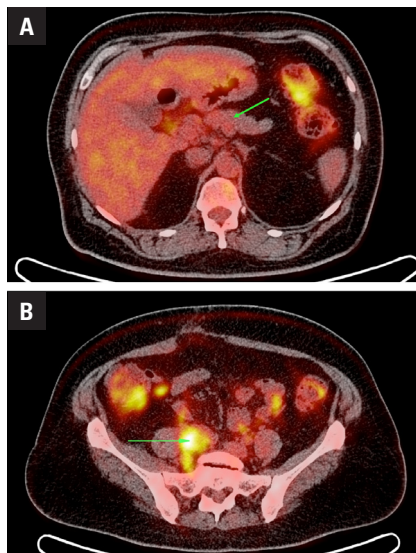


Figure 1. ^{18}F -FDG PET-CT. **A.** Normal pancreas (arrow). **B.** Metastatic lymph nodes on the right side of the lesser pelvis at the level of the external iliac vessels (arrow)

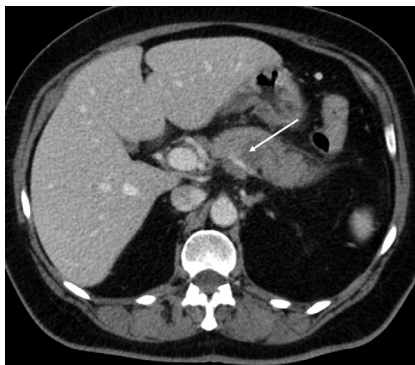


Figure 2. CT scan of the abdominopelvic cavity. Resectable tumour of the pancreatic body (arrow)

to Response Evaluation Criteria in Solid Tumours. The pancreatic tumour was considered resectable and the patient was qualified for elective surgery.

Two weeks after the above CT examination, the patient reported a rapidly enlarging tumour of the right forearm, now measuring $15 \times 30 \times 20$ mm. Another CT was performed prior to surgery for pancreatic tumour, revealing significant progression of the tumour to 31×26 mm, and metastatic lymph nodes ($51 \times 41 \times 87$ mm). Due to infiltration of the celiac trunk and hepatic artery (Fig. 3), the tumour was considered unresectable, and surgery was cancelled. Because the nature of the right forearm tumour had not been clarified, the lesion was excised. The histopathological examination revealed G3 NEC metastasis with a Ki-67 of 90% and mitotic index of 10/10 HPF (Fig. 4A, B). The patient was qualified for palliative oncological treat-



Figure 3. Abdominopelvic CT scan. Unresectable tumour of the pancreatic body with metastatic lymph nodes (arrow)

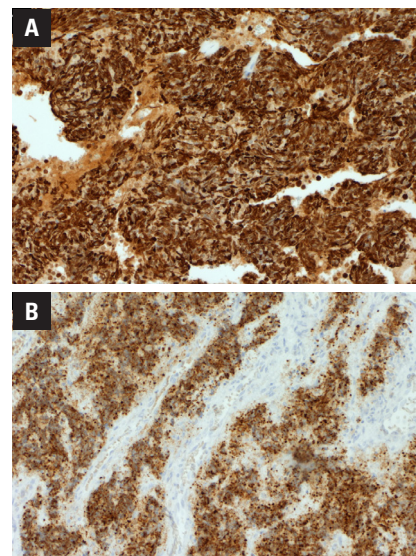


Figure 4. Histology with immunohistochemistry of NEC metastasis. **A.** Chromogranin A ($10\times$). **B.** Ki-67 index of approx. 90% ($10\times$)

ment, which she did not receive due to her rapidly deteriorating general condition. Unfortunately, the patient died 6 months later.

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