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Fever as a factor contributing to long-term survival in a patient with metastatic melanoma: A case report

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ABSTRACT

Background: Malignant melanoma is a cancer that arises from pigment cells in the skin called melanocytes. The long-term survival of a patient with advanced melanoma is rare.
Case: We present a unique case of a female patient who has suffered from malignant melanoma for more than 13 years. The disease progressed quickly, and 19 months after diagnosis, the patient was classified as having stage IV melanoma. After several years, the patient had several episodes of fever that were not deliberately treated with medication. After each episode of fever, the patient observed the disappearance of tumours, which was confirmed by medical examination. Interestingly, since her initial diagnosis, the patient has refused most of the proposed medical treatments. Consequently, only some of the surgical procedures were performed. Currently, despite the initially poor prognosis, the patient only suffers symptoms that are the result of surgical resection of brain metastases. Most of her malignant tumours either disappeared or have stabilized without further growth.
Conclusions: The onset of fever has altered the typical and unfavourable course of melanoma, causing remission or at least stabilization. This observation, in accordance with others in this field, suggests that fever in cancer patients should not be treated immediately, but should be allowed to develop under the care of a physician.

1. Introduction

Malignant melanoma is a malignancy of melanocytes, which are mainly located in the skin, but can also be found in other places such as the ears, eyes, gastrointestinal tract, oral and genital mucosa.[1] Melanoma has the potential to metastasize to any organ of the body. Patients with distant metastases usually have a median survival of less than one year, with a mortality rate of 95% in the first five years after the diagnosis.[2] On the other hand, to the surprise of many physicians, cases of long term spontaneous remission and regression of cancer exist.[3,4] Interestingly, a correlation between the regression of cancer and fever incidence was noted.[5]

In this report, a case of advanced melanoma that underwent remission after episodes of concurrent infections and fever is presented. The patient agreed to undergo some planned antineoplastic therapies, i.e. some surgical procedures (see case study), but categorically refused others such as pharmacological treatment and radiotherapy. In this case, the episodes of fever that preceded the remission of numerous tumours is of particular interest.

2. Case study

A 37- year- old Caucasian woman was admitted to the hospital in 2002 with a skin lesion on her left scapula. After local excision, a histological evaluation demonstrated that it was benign. Two years later (in August 2004), during pregnancy, the patient observed a recurrence of the lesion, which was removed after childbirth (the patient did not agree to an earlier surgery) (Fig. 1). A histologic review of the resected specimen showed an advanced melanoma (stage III according to Clark's level of invasion, and a Breslow thickness of 5 mm). In June 2005, due to local recurrence, the patient underwent another operation, the surgical margin was enlarged and the lymph nodes in which metastases were identified were removed.

Throughout August 2005, the cutaneous metastases gradually increased in size, some up to a few centimetres in diameter. In February 2006, the wellbeing of the patient was deteriorating, which manifested in anorexia, cachexia and worsening neurological symptoms such as headache, fatigue, aphasia and episodes of loss of consciousness. In March 2006, computed tomography of the head confirmed the presence of a brain tumour in the left hemisphere (Fig. 2). Because melanoma

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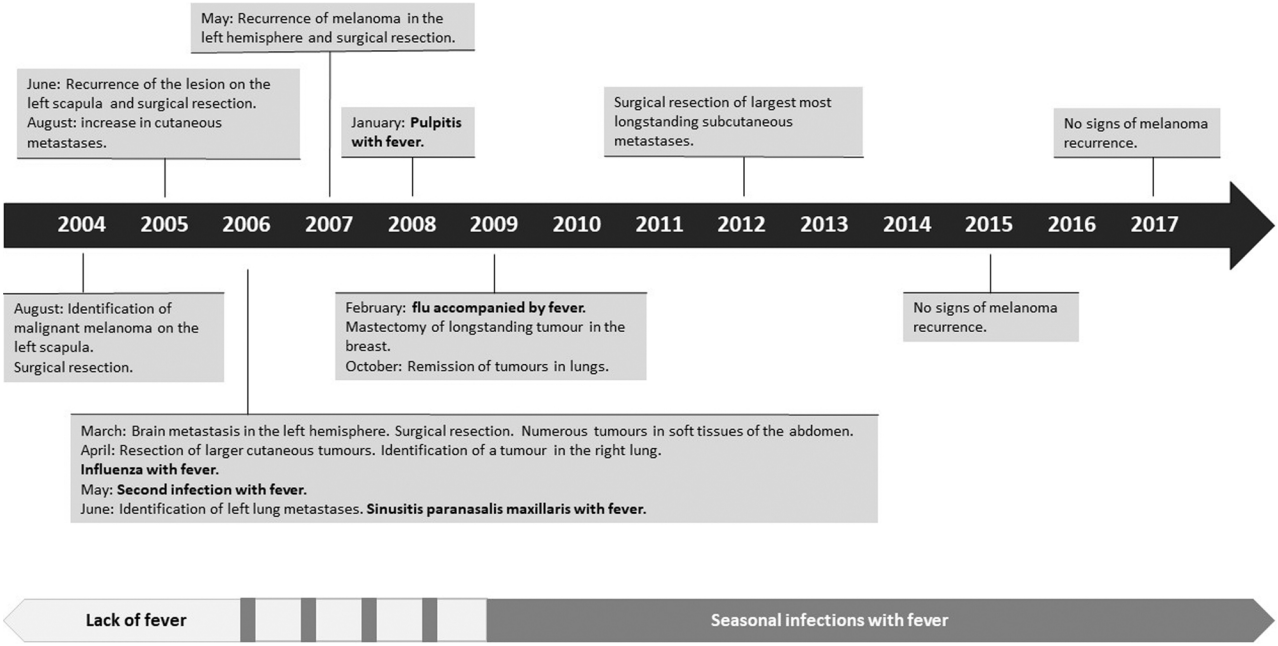

Fig. 1. Timeline depicting the medical history of the patient. The dark grey colour at the bottom indicates time periods in which fever occurred.

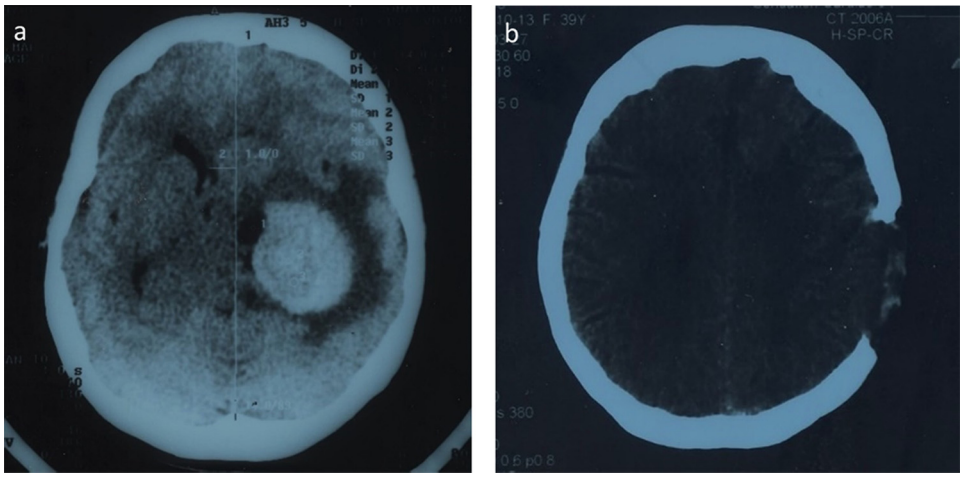

Fig. 2. Brain imaging of the patient with melanoma metastasis: a. A computed tomography scan in 2006 revealed a solid tumour in the left hemisphere, b. The brain of the patient after the first resection.

cells had spread to distant parts of the body, melanoma was classified as stage IV. After the surgical excision of the tumour in March 2006, aphasia, amnesia, agraphia and alexia were observed. Moreover, USG showed numerous tumours of up to 6 cm in diameter in soft tissues of the abdomen, and X-ray examination showed a tumour of 9 millimetres in diameter in the right lung. Due to the presence of many sites of metastasis, the patient was classified as palliative. At the turn of March and April 2006, larger tumours in soft tissues were surgically removed. Histological evaluation confirmed that these were skin melanoma metastases.

The patient experienced the first significant infection in many years in April 2006 due to influenza, which was accompanied by a 10-day fever ranging from 39 to 41 °C. Two weeks' post recovery the patient observed an intensified and painful enlarging of tumours followed by pain relief and a gradual decrease in size. Another episode of influenza occurred after approximately a month. As with the previous infection, the body temperature was significantly elevated and sometimes exceeded 41 °C. Next, a spontaneous regression of tumours was observed, associated with a residual area of depigmentation (Fig. 3).

One month later (in June 2006) the patient was hospitalized due to sinusitis paranasalis maxillaris. The patient refused endoscopic sinus drainage, but accepted pharmacological treatment (augumentin, paracetamol, ACC). In addition to the previously identified tumour in the right lung, X-ray examination revealed metastases in the left lung up to 1.5 cm in diameter that had not been detected previously. After one year (in May 2007), a recurrence of the melanoma in the left hemisphere was identified and was urgently resected (Fig. 4).

In January 2008 the patient suffered from pulpitis accompanied by a fever that ranged from 38 to 39 °C for over a week. The patient refused antipyretic treatment and this level of fever was maintained for the next 5 days post-tooth extraction. After this incidence, as observed previously, the regression of cancer occurred. At the next clinical examination, the patient's general condition was considerably improved without clinical evidence of disease progression.

In February 2009 the patient was diagnosed with the flu accompanied by fever; her temperature for the first 5 days was approximately 39 °C and for the next 10 days was maintained between 37 and 38 °C. After this episode of inflammation, tumour's remission was observed.