THE METASTASIS OF MELANOMA TO THE GROIN FOUR YEARS BEFORE THE APPEARANCE OF THE PRIMARY LESION ON THE HEEL

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Metastases sometimes become evident long before the existence of the primary growth is suspected and even a careful search may fail to reveal the source of the metastasis. This occurs most frequently in primary neoplasms of the internal organs, where diagnosis is of necessity difficult. That it may occur also with neoplasms on the surface of the body is shown by a case of melanoma of the heel recently observed. In this patient a lymph node metastasis was the first evidence of the disease, and a careful search of the skin over the area drained by the involved node failed to reveal the primary growth until over four years had elapsed. A summary of the case follows:

F. L., a woman of forty-seven, married, and with four children living and well, had been in excellent health up to the onset of the present illness. On Feb. 24, 1926, she was seized with a sharp pain in the region of the right groin. The pain was accompanied by vomiting and a temperature of 100° to 101°.

Examination revealed a hard, tender mass the size of an orange, just below Poupart's ligament. The physical signs and symptoms led to a diagnosis of strangulated femoral hernia, and a surgical consultant advised operation. Under ether anesthesia the mass was exposed and found to consist of hemorrhagic tissue resembling neoplasm. There was no evidence of hernia or a hernial sac. A careful en masse dissection of the tumor
together with the lymph nodes and the surrounding fat was performed, and the wound was closed without drainage.

The specimen consisted of a mass measuring $7 \times 6 \times 4.5$ cm, apparently composed of several greatly enlarged and fused lymph nodes. A thin membranous capsule covered practically the entire mass. Beneath the capsule was extensive diffuse hemorrhagic extravasation. The tissue was soft, edematous, and easily torn.

Microscopic examination (Fig. 1) showed the tumor to be made up of small polygonal cells having prominent hyperchromatic nuclei and a well defined cytoplasm. Where the cells were more compact, the nuclei were larger and distinctly fusiform in type. There were several small foci of lymphocytic infiltration, essentially perivascular. The tumor had a fine connective-tissue stroma, upon which the tumor cells assumed in places a foliate arrangement. The vascular supply was extensive and consisted of small capillary vessels. Nowhere was there any evidence of pigment formation. Microscopic examination of the adjacent, uninvolved lymph nodes showed marked dilatation of sinuses, which were filled with proliferating reticulum cells and polymorphonuclear leukocytes. The final pathological diagnosis was non-pigmented melanoma.

Assuming that the primary source was a melanoma of the skin which should be clinically discernible in the area drained by the inguinal nodes, I again examined the right lower extremity, trimming the toenails and examining the tissue beneath. I examined the shaved pubic region and the umbilicus. A small nevus was found above Poupart's ligament and removed, but upon pathological examination proved to be benign. No primary tumor could be found.

The patient was given intensive deep x-ray therapy over the inguinal region, and for four years remained in excellent health. Repeated physical examination and roent-
Röntgenograms of the spine and pelvis during this period failed to reveal any recurrence of the neoplasm.

In June 1930, four years and three months after the metastasis had been removed from the groin, the patient was seen with a small painless ulcer on the inner aspect of the right heel, which had appeared about two months previously and had failed to respond to simple household remedies. The ulcer was situated about an inch posterior to the astragaloscapoid joint, was punched out, and measured 3 cm. in diameter. Its base was firm pink tissue, somewhat like granulation tissue in appearance. A small specimen was removed for microscopic examination, which revealed that it was a non-pigmented melanoma (Fig. 2), the same type of tumor as that which had been removed from the groin four years previously.

It was now easy to reconstruct the chain of events. In the depths of the skin over the right heel, a small melanoma had been present for at least four years. It was too small to be seen or felt from the surface but it was in an area that was massaged by every step taken by the patient, and it had metastasized very early.

Röntgenograms of the chest and pelvis failed to show any metastases and a mid-thigh amputation was advised but refused. A wide local resection of the neoplasm was performed, the dissection being carried down to the cs calcis. The wound was closed by a combination flap and pinch graft method with an excellent result. Deep radiation therapy was then given to the heel and the right groin.

The patient’s health continued excellent for two years following the resection of the heel neoplasm. In March 1932, during a routine follow-up visit, a small nodule was noticed on the anterior aspect of the right leg. Microscopic examination showed that it was the same type of neoplasm that we had been dealing with from the beginning. Within the next two months six more nodules appeared on the anterior aspect of the right leg (Fig. 3).

As a last resort radiotherapy was tried. X-ray therapy was given over the entire extremity and radium packs over some of the larger nodules, but the treatment was ineffective. During the next six months several hundred tumors appeared on the right lower extremity, varying in size from a millet seed to a golf ball. Many of the growths began to ulcerate, but none were pigmented. No tumors appeared above a line drawn around the thigh about four inches below the groin. This may have been due to the previous lymph node dissection of the inguinal region.

The patient died in February 1933, with symptoms of cerebral and spinal cord metastases.

**Summary**

A non-pigmented melanoma of the right heel metastasizing to the groin four years before the primary growth was visible is reported. The early metastasis may have been due to the constant trauma to which the growth was subjected because of its location. The tumor was resistant to radiotherapy.