

The Historical Elements of Cancer Permeation in Melanoma

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Abstract

In 1889, Julius Cohnheim argued that autopsies aid in tracing the footsteps of Nature. Before then, a Pathological Society had been formed in London, its Transactions being published from 1846-1848 period. As melanoma is characteristically pigmented, The Transactions were searched for evidence of lymphatic permeation. The positive results were in keeping with the personal similar series written on the pancreas, bone and kidney.

Keywords: Cancer; Melanoma; Permeation; History

Introduction

The great German Pathologist, Julius Cohnheim, [1] asserted that the autopsy is capable of delineating the footsteps of Nature. I am persuaded, therefore, that the characteristic pigmentation of melanoma must facilitate the perception of metastatic patterns in The Transactions of the Pathological Society of London from its starting period of 1846-1848 [2]. Hence, it is fitting to comb them as regards lymphatic permeation, seeing that I had reviewed this subject in 1973 [3]. Moreover, as that review was limited largely to current concepts, it is imperative to go further back. For example, Macfarlane Burnet [4] insisted on always knowing the past when starting to do research. Accordingly, this paper supplies some chronologically arranged historical data concerning the rudiments of lymphatic permeation in melanomas.

Historical texts

Ogle [5] appreciated that melanoma deposits seemed chiefly to follow the course of the larger blood vessels and lymphatics.

Godlee [6] was picturesque:

On making sections subsequently of the less distinctly black glands by the side of the external iliac artery it was found that these cells (which varied considerably in size and shape) were the only ones containing pigment, and were arranged in definite rows along the lines of the fibrous trabeculae, occupying, in fact, the position of what is known as the lymph-channel or lymph-sinus.

White [7] painted the picture of the variably colored materials in that "in many places there were wavy absolutely black hues, giving the whole a foliaceous appearance." Indeed, he was particularly interested in the lymphatics taking up the pigment.

Target [8] noted microscopically that "the tumour was thickly permeated with capillary vessels." The specimen was so precious that, it "has been in Guy's Hospital Museum since 1859."

Battle [9] illustrated with melanoma of the clitoris from a patient aged 79 years. When the lesion was sectioned, the revelation was as follows:

In the subcutaneous tissue over the pubes the section shows a series of circular pigmented patches varying in size from a crow quill to a cedar pencil; these are the infiltrated lymphatic vessels, full of pigmented growth. As a rule the section of these is quite clearly defined, circular, and isolated; but in one or two places there is a blackish discolouration, and near the base of the clitoris on the upper aspect the pigmented growth extends between the upper part of the clitoris and the largest lymphatic.

Discussion

A most remarkable feature of the Transactions of the Pathological Society of London was the establishment of the "Morbid Growths Committee". Remarkably, this group of pathologists helped members on microscopical interpretations and solutions. However, on account of the impeccable status of pigmentation, their help was not needed in this paper on lymphatic permeation.

Incidentally, their usual opinions were also not encountered in my series which has so far included the pancreas, [10] bone [11] and kidney [12]. I am persuaded that this work is in keeping with Cohnheim's creed as well as with the visionary views of other medical masters [13]. It is also in keeping with the beginnings of the surgical pathology of cancer [14].

Therefore, it was surprising to find that Einhorn's group did not comment on lymphatic permeation in their 1974 wide ranging review of the metastatic patterns of choroidal melanoma [15].

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