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### Metastasis of Melanoma to the Kidneys: Historical Notes

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#### Abstract

Merriam-Webster's Collegiate Dictionary defined "melanoma" as a tumor showing colored pigment characteristically and that it entered the English Language in 1838. Accordingly, this report sought to harness the historical data available before 1900. To this end, a famous book on the spread of tumors in the human body was consulted. And, so was a reprint containing early studies of pigment biology before 1900. Unfortunately, these approaches were wanting as regards the expected materials. Accordingly, my collection of the *Transactions of the Pathological Society of London*, which began publishing in 1846-48, was searched. The findings are the subject of this paper.

**Keywords:** Cancer, Melanoma, Metastases, Kidney, Soil suitability, History.

#### Introduction

The Merriam-Webster's Collegiate Dictionary was of avail[1]. It indicated not only that "melanoma" means a pigmented tumor characteristically but also that it came into use about 1838. Moreover, the famous book, "The Spread of Tumours in the Human Body[2], was searched. It contained the 1873 melanoma case of Ebert; both kidneys appeared normal to the naked eye "but many glomerular emboli were found microscopically." Another useful source was the 1989 reprint received from Nordlund's associates[3]. Its message was strongly that of a "historical review" of pigment soil biology. Alas! Although it beamed its search on "early studies before 1900," the metastasis of melanoma to the kidneys was not mentioned. Accordingly, I had to search my collection of *Transactions of the Pathological Society of London*. This was a rich pioneer journal that began publication in the 1846-49 period[4]. Indeed, the materials for this paper emerged nicely therefrom.

#### Historical Texts

White[5] searched the whole body, including the kidney, without avail. The same was true of other authors[6-9]. Elsewhere, of the two cases described by Fagge[10], Case I was free of deposit, while Case II was among the listed organs involved. Payne[11] also listed the kidney among the attacked organs. So did Fagge[12] as well as Ogle[13].

An odd mention was made of the kidney by Beadles[14]. In his case, we learn that "at the upper end was a cup-shaped depression where that in the supra-renal capsule had rested upon the kidney."

Involvement through continuity was noted by Sanderson[15]. In fact, the peritoneal secondary's extended thus:

These were most abundant on the left side, where they formed a chain connecting the spleen with the kidney and extending from the latter into the pelvic cavity.

Leggs[16] described bilateral invasion as follows:

Both kidneys together weigh 13 ounces, or 365 grammes. The capsules, being torn off, leave a smooth pale surface, which are studded with about a dozen white nodules the size of hempseed. The right kidney shows two pigmented tumours. These new growths are seen on section in the medulla.

Equally attentive was Mackenzie[17] who separated the lesions thus:

Left kidney weighs 5 oz. On its surface, there is here and there a black pin-pointed speck, and a few black solid nodules the size of small peas attached to the calices. The capsule is not adherent. Right kidney weighs 5½ oz. It also has a slight sprinkling of the black specks on its surface. On section there is a black nodule the size of a pea in its medullary substance, and a small cyst in the cortex containing syrupy contents. The capsule strips readily.

#### Discussion

Both Rolleston[18] and Moore[19] were noncommittal in merely stating that the two kidneys exhibited growths. In other words, there was no comparison, e.g., on the basis of the suitability of soil[20]. In this context, there was even excitement in the case published as No. 2 in the first volume of the *Transactions*. I refer to the exquisite descriptions made by Smith[21] as follows:

Both kidneys were much diseased, but the right presented a rare beautiful specimen of malignant disease. A large mass of the size of an orange involved more than one-third of the organ, situated chiefly towards its convexity. Two others of the size of pigeons' eggs were seen; one situated just below the first, the other, at the concavity of the kidney, where the vessels enter the organ.

These deposits in the kidney differed much in their appearance and structure. The first was of a whitish colour, with dark matter in its centre; and in its consistence hard, presenting the appearance of cancer. The others were softer, and black, presenting clearly the characters of true melanotic deposit.

Incidentally, I earlier recognized this odd case for what it was, namely, the combination of a whitish colored primary growth “with dark matter in its centre.”[21] This was how I came to publish this peculiar cancer to cancer metastasis case in the *New Zealand Medical Journal* of 2005[22]. In conclusion, it is well that the medical masters of yester years painted in their necropsy reports the remarkable evidences of Nature’s footsteps, especially as they could reveal more than do animal experiments[23].

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