A brief history of a long battle with melanoma

Man and melanoma (from the Greek “melas” meaning dark and “oma” meaning tumour) have had a long and arduous battle tracing all the way back to the 5th century B.C. as outlined in the works of Hippocrates. (Fig 1) The literature on the battle continued with ancient Greek physician Rufus of Ephesus also describing melanoma as well as other medical conditions. (Fig 2)

This rich history has been revealed in archeological evidence, with an interesting study on pre-Colombian mummies of Peru dating back 2400 years ago. The skin demonstrated round melanotic masses and disseminated bone metastases to the extremities and skull. This fascination with melanoma continued, with various further studies through time.

John Hunter, a famous surgeon working at St George’s hospital medical school, was the first person acknowledged to have surgically removed melanoma. He excised a melanoma unbeknown to him from the jaw of a man in 1787. (Fig 3) This event was reported in Observations on Cancer in 1805 by Everard Home; the melanoma was described as “soft and black”. It was not until 1968 that the specimen was microscopically identified; the melanoma has been preserved at the Hunterian Museum, The Royal College of Surgeons.

It was French physician Rene Laennec (famed for the invention of the stethoscope) who first described melanoma as a separate disease entity in 1804 and later formulated the term melanose. He defined these tumours. (Fig 4) He recognised that there was a difference between melanoma and black carbon accumulations, which were characteristically found in the lungs of patients undergoing autopsy. Once a recognised disease, further observations were made by English general practitioner William Norris in 1820 who suggested a hereditary cause of melanoma and he later recognised risk factors such as pale skin and light hair. As treatment, he suggested, in 1857, a wide local excision of the tumour and surrounding skin to reduce the risk of recurrence.

Thomas Fawdington, a surgeon and lecturer, wrote in 1826 “A Case of Melanosis with General Observations on the Pathology of the Interesting Disease” where he described a patient with ocular melanoma and stated that palliation was the treatment option. (Fig 5) In 1837, the first North American case of melanoma was described by Isaac Parish, a surgeon in Philadelphia: a middle-aged female was admitted to Will’s Hospital with a fungus tumour on her toe. She was managed with a mixture of leeches to her groin, ground elm and purgatives which was unsuccessful and she soon died.

Sir Robert Carswell, a pathology practitioner, drew detailed illustrations of melanoma metastases in his works “Illustrations of the Elementary Forms of Disease”, 1838. (Fig 6) His drawings were based on an elderly patient who was brought to him partially paralysed to the Hotel Dieu in Paris; the patient soon became completely paralysed and died. Large black or brown tumours were found in several organs; “the brain contained two in each hemisphere, as large as hen’s eggs”. In 1840, Samuel Cooper, a British surgeon, acknowledged that the best form of treatment is to remove the tumour and that advanced stages of the disease were untreatable. (Fig 7) This remains somewhat true to this day.

This was followed up in 1892 when Herbert Snow, a surgeon, promoted surgical excision of melanoma and prophylactic lymph node dissection. In 1858 Oliver Pemberton published his works “Observations on the History, Pathology, and Treatment of Cancerous Diseases” where he detailed features of melanoma and sites of spread. Pemberton was the first person to describe melanoma in an individual with black skin from Madagascar. (Fig 8 & 9)

Since then further enhancements to treatment have been developed, for example Wallace Clark created the Clark’s scale in 1966 that referred to the depth of the skin invaded by the tumour. In 1970 Alexander Breslow acknowledged the importance of tumour thickness for prognosis, referred to as Breslow thickness. (Fig 10) Both Clark and Breslow’s work have contributed to the current AJCC Melanoma Staging System.

The authors would like to acknowledge the assistance of Mr J. M. D. J. Newey, Department of Dermatology, University Hospital of South Manchester, UK, in preparing this manuscript.

References

[1] Rebecca VW, Sondak VK, Smalley KSM. A brief history of melanoma: from mummies to mutations.