Skin disease from Ancient Egypt to Renaissance Italy: A review of Mummies!

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Introduction

The ancient Egyptians believed that the bodies of the dead must be preserved if their souls were to live in the afterworld. Other cultures from around the world also mummified their dead and occasionally corpses have been naturally preserved by favourable environmental conditions. This has provided us with a window on skin disease from the distant past. The largest resource of mummies is from ancient Egypt. The process of Mummification began about 2500 B.C. and became more refined throughout the centuries. It reached its pinnacle with Cioepatra VII (51-30 B.C).

Mummified Skin

The skin of mummified bodies has often been exposed to harsh chemical treatment and extremes of temperature. Many mummies were simply wrapped in clothing and left in pits or caskets and left to be ravaged by environmental bacteria and fungi. Despite these factors, skin has often been well preserved. The skin tends to be shrunk and deeply pigmented and is very brittle on macroscopic examination. There is preservation of both nails and hair and even epidermal ridging is observed. Preparation of mummified tissue for histological examination is modified from preparation of fresh tissue due to its altered physico-chemical properties. Initially the tissue must be rehydrated which takes between one to four days. Haematoxylin and eosin staining is often used although it can be difficult as the eosin can stain most of the tissue non-selectively. Many skin structures have been seen intact in mummified skin including the stratum corneum, keratinocytes, melanin, plissosaceous units, collagen & elastic fibres, blood vessels & red blood cells and subcutaneous adipose tissue.

Infecions

The mummy of Maria of Aragon, Marquise of Vasto (1503-1568) in a Naples Abbey was exhumed in the early 1980’s. She was famed for her beauty and moved in the same intellectual circles as Michelangelo in Renaissance Italy. Examination and preparation began in the same year. The mummy of Maria of Aragon (previously referred to concerning syphilis) was noted to have a pedunculated skin tumour (Figure 6). Light microscopy revealed an epidermal skin lesion with thickened epidermis and a few dermal blood vessels with dilated vessels. DNA studies confirmed it to be a lipoma.

Conclusions

The macroscopic and histopathological findings in mummies attest to the extraordinary resilience of human skin. Examination of mummified skin allows us to understand some of the dermatological conditions prevalent in ancient history. Mummies date from five thousand years ago to a few hundred years and have been described all over the world. Diseases reported include cutaneous infections and a few tumours. The paucity of reports of the common inflammatory dermatoses and tumours of the present day is unprecedented. Currently there is no better record of ancient skin disease; but it is possible that DNA studies in the future will answer many of our questions from the past.

References