

'Spiritual coma' death - report on mummification

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ABSTRACT

The purpose of this paper is to present an interesting case alleged to be in "Spiritual Coma" for more than two years which was recovered by the police from a house and brought for post-mortem examination. If fact, it was a mummified body, very rare in our part of the country and became so due to artificial alteration in the environmental conditions. Postmortem findings of this case have been discussed in the present paper and compared with the findings in the literature.

Key Words - Spiritual Coma, Mummification

Introduction

Mummification is the dehydration of the tissues of dead body due to various factors as a result of which putrefaction is arrested and features of the body remain identifiable. Egyptian mummies are known since old days but these mummies are not merely dried bodies but are chemically preserved bodies (1) as is also done in preserving the dead bodies for dissection in anatomy halls by injection of chemicals and keeping in formalin. bodies are also preserved chemically when considerable time is required to transport the dead body from one place to another for final disposal to avoid putrefaction. Mummification is more common in infants but also have been reported among the adults (1).

Case History

In the month of February, 1985, a 26 years female was declared dead in the Govt. Hospital, Gurdaspur. She remained admitted in the hospital for about seven days where she was treated for gastroenteritis. Relatives of this case were not satisfied with the treatment and death declaration of the case by junior doctors. They took her to a private practitioner who after examination of the body remarked that

she was alive which he confirmed by mirror test and diagnosed her to be a case of coma and advised them to take it to some tantrik as in his opinion only a tantrik could cure such a case. On his advice they took the body to home and consulted a sanyasi who gave a concoction. First the jaws were rigid and after giving some concoction by mouth, jaws started relaxing. They continued the treatment from a sanyasi and other such persons but there was no further change in the condition. They kept the body covered in a well ventilated room in which electric room heaters were installed and were kept near the body to avoid the effects of cold on her. Her brother told that they used to give this connection and honey to her upto last days before the body was recovered by the police (History from brother of the deceased; 2,3).

Observations

Post Mortem Findings

It was the body of a female who was wearing a kurta and salwar and was having a steel kara in the left forearm. The body was having long black scalp hair, eyebrows, eye lashes, auxiliary and pubic hair. These hair could be plucked only with difficulty. Hairpins were present on both the temporal regions. Vermilion like powder was present on the forehead. Lips were in a retracted condition and teeth were visible which were firm in their roots. White powder like material was present on the

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face and neck. Nails were intact and firm on their beds. Skin was dry, shriveled & brownish black in colour almost adherent with the underlying structures and bones. Skin was darker on the back of trunk and limbs and was having zigzag wrinkles. Contact flattening was present on the back of thighs and buttocks. Sour cheese like faint smell was emanating from the body. Adipocere was formed on the cheeks, part of back of upper arms, parts of fingers, buttocks and thighs. One cotton swab was present in the vulvar region.

Sour cheese like smell was more marked on opening the body cavities. When we opened the cranial cavity we found that dura was intact, yellowish brown and translucent. Pia-arachnid along with brain substance was converted into rusty brown powder which was lying free in the cranial cavity. There was dirty white and brownish pultaceous mass in the posterior cranial fossa.

Larynx, trachea and pleura were unidentifiable and each pleural cavity contained one small homogenous brownish black mass adherent with the posterior thoracic wall. At the site of heart there was a small unidentifiable brownish black mass. On opening the abdominal cavity peritoneum was brownish in colour. GIT formed homogenous, Unidentifiable masses at various places in the abdominal cavity which were adherent with the abdominal wall whereas in the left hypochondrial region there was a blackish mass measuring 5 x 2.5cm which was brittle and friable. Similarly in the right hypochondrium there was a dark mass measuring 8 x 3 cm which again was brittle and friable. In the region of kidneys there were homogenous masses indistinguishable from the surrounding structures. Uterus was dark brown in colour and still identifiable from its shape and position. Muscles were stiff and hard to cut and on pressure oozed on oily substance.

Histopathological findings

Piece of skin

Pinkish staining material giving the ghost appearance of epidermis and dermis. No nuclei, no adnexa and other detailed structures identifiable.

Piece of lung

Showed pinkish staining structureless material homogenous and devoid of nucleus, forming ghost appearance of alveoli, vascular spaces and tubular spaces with black pigment.

Unidentifiable pieces from abdominal cavity

Pinkish staining structureless material present in granular form and rod like arrangement. A few cellulose fibres can be identified.

Muscles

Muscle bundles can be identified longitudinally and transversally cut pink homogenous, no nuclei and no striations.

From Fascia

Structureless pinkish staining membranous piece. No nuclei can be identified.

Chemical Examination

No poison was detected on chemical examination of contents of cranial cavity, thoracic cavity and abdominal cavity. No poison was detected from skin, hair, nails and femur.

Discussion

Mummification is facilitated by hot dry winds (4) or when the environmental condition cause drying of the tissues sufficiently rapid to halt decomposition. Mummification requires a well drained warm environment preferably with considerable air movement (5). In this case though it was the month of February (not a hot month) but the body must have got radiant heat from the heaters thus raising the environmental temperature which helped in drying the body tissues. The room was well ventilated to allow movement of the air. These factors helped in the mummification of the body. Deprived of moisture, putrefactive organisms do not perforate. A warm drying atmosphere especially with a free circulation of air around the body is ideal for mummification. So the environmental factors in this case were favourable for mummification and are in line with the views of Modi, Campus and Mant (4,5,1). In this case mummification occurred while the body was in a

room where circulation of air cannot be that much free as is in the open. One such case has been recorded by F.E. Camps where mummification occurred in an old lady in the living room where there was no circulation of air but the environment was dry(5). He has also reported another case of 35 year old man in an environment which was warm with free circulation of air (5).

In this case she had suffered from gastroenteritis before death so she must have been in a dehydrated state which had further helped in the desiccation of the body in a hot environment. One case each of mummification has been reported by N.J.Modi, A.K.Mant(4,1). C.K.Simpson has also recorded on case, in 1943, of a girl whose hand was mummified while her body in the grave showed adipocere (6). Adipocere formation with mummification has also been reported by other authors (1,4). Along with mummification we also had a few patches of adipocere formation on the body especially at the sites where there is usually fat. Probably the moisture needed for adipocere formation would have been derived from surrounding tissues. This view goes with the view that body contains sufficient water to allow the conversion to adipocere (5). A similar case has been reported from Chandigarh where a mummified body was recovered after 22 months of death (7). Another case from Bithoor (UP) has been reported of a body whose body was recovered after nine years of death (8).

Relaxation of jaw after giving concoction could probably be related to the disappearance of rigor mortis which occurred before the mummification started. Hair nails and teeth were firmly attached because that stage of putrefaction never reached where these become loose and drying process started before their appearance. Darker colour of the skin on the back can be explained due to rigor mortis settled in the back and did not disappear as the

putrefaction did not start in this case and wrinkling can be due to contact pressure and remained as such. Condition of all the internal organs can be explained due to drying process after the autolytic changes proceeded to various stages but uterus is known to resist putrefaction better as compared to all other internal organs (4). As the skin contracts some of the fat cells in the subcutaneous tissue are broken and liquid oil is traced into the dermis (9) and similar can be the reason for oozing of an oily substance from the muscles.

We had sent the femur, hair and nails to Chemical Examiner especially for arsenic poisoning as it is said to favour the process of mummification in dry warm climates (9) but Chemical Examiner did not detect any poison. Reddy states that in mummified bodies collagen, elastic tissue, cardiac and skeletal muscles, cartilage and bone are usually demonstrable histologically (9) but from the tissues which we examined we observed only ghost appearance of skin, lung and muscles.

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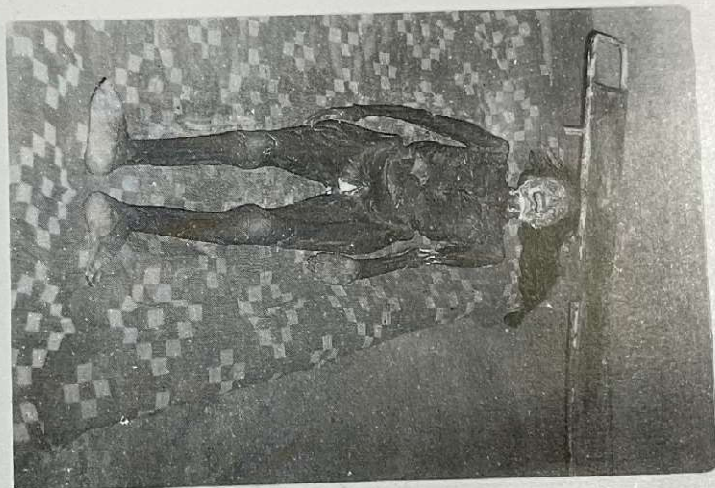


Fig.2. Appearance after removal of clothes



Fig.3. Close up of face showing mummification with patches of adipocere formation



Fig. 4. Back showing ZIGZAG WRINKLES



Fig. 5. Internal appearance after opening the chest and abdominal cavity



Fig. 6. Various internal organs after opening the body cavities . (Rusty brown powder from cranial cavity on left bottom)