UNREPORTED OFTEN CONFRONTED POSTMORTEM ARTIFACT; "POSTMORTEM CONTACT MACERATION"

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INTRODUCTION

Maceration is defined in surgical practice as softening of tissues by soaking until connective tissue fibers are teased apart.[1] Factors which influence it's onset are volume of fluid, time duration, heparin binding protein, bacterial toxins and proteolytic enzymes. Histology reveals high water content in epidermis and dermis.[2]

Maceration is a well-known finding in forensic practice seen in dead bodies recovered from water, where the skin appears pale, swollen and wrinkled. Maceration usually takes more than one hour to develop and is first visible on areas where the skin is thick, like palm, sole, knee and elbow.[3] Similarly, maceration is seen in the living around wounds due to exudates and dressings and elsewhere due to prolong contact with urine and sweat.[4]

It was noted that some dead bodies kept in the mortuary (which were not recovered from water) also showed pale, slightly oedematous and wrinkled patchy areas of skin with different shapes visible as early maceration. This has not been reported in forensic pathology literature.

Key words:
Maceration, Postmortem Artefact, Time Since Death

Observations at postmortem examinations

Fig. 1: Maceration of skin of adjacent body parts in close contact.

Fig. 2: Pale, slightly oedematous and wrinkled skin of axilla

Fig. 3: Pale, slightly edematous and wrinkled skin of elbow

Fig. 4: Contact maceration of axilla upper arm and upper chest.

DISCUSSION

Dead bodies kept in mortuaries without contact with water had shown patchy areas of slightly pale, swollen and wrinkled skin beneath tight clothes and when body parts were in contact with each other. Such areas can be identified as postmortem artifacts due to early maceration based on their appearance. Even though the bodies were not in contact with water, it was noted that the areas of skin which showed these changes, had been exposed to wetness due to sweat or wet clothes for a considerable time period after death. However the pale color and varying shapes could raise suspicion as to their origin. Therefore, the author believes that such lesion can be named as "Postmortem Contact maceration" (PCM).

Awareness of the presence and origin of PCM is important to prevent misinterpretation of such appearances.

The pale areas suggest close contact of adjacent body parts after death for a considerable time period which the author has observed in axilla, groin, neck, front of elbow, between female breasts and chest wall, back of knee and any body parts in contact with each other (Fig. 1,2,3,4).

The author has also noted PCM beneath wet clothes.

Postmortem contact maceration may be helpful to estimate time since death and time period of contact between two surfaces. Before labeling a pale area as PCM it is important to differentiate it from antemortem maceration due to prolonged contact with liquids (eg. water) and fungal infections of skin folds. Maceration due to drowning and PCM can be easily differentiated as in drowning, maceration develops first in thick skin while PCM can occur in any part of skin irrespective of thickness. In contact maceration, the shape of the pale, patchy area corresponds with the contact surface (eg. moist cloth, moist body part) while in drowning the shape of the macerated area depends on the body area with the thick skin. Histological changes of skin in PCM, postmortem time interval related to appearance of PCM and changes of PCM when contact is released are areas that need further investigations.

CONCLUSION

"Post mortem Contact Maceration" is an unreported postmortem artifact visible as slightly pale, wrinkled and swollen skin areas of different shapes due to contact with moist object or contact of two moist body parts over period of time. PCM would be useful in estimating time since death and time period of contact.

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