



DIATOMS IN HUMAN TISSUES ON HISTOPATHOLOGY IN DROWNING DEATHS

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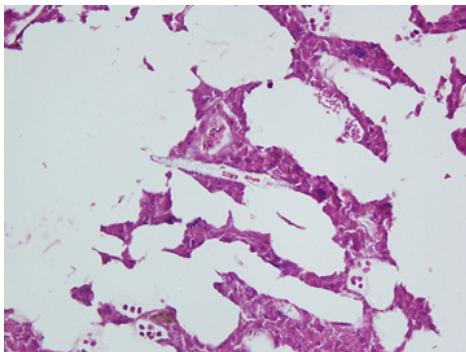
KEYWORDS :

Diatoms are siliceous walled unicellular transparent microorganism found in all the open water bodies which can photosynthesize like plants. Most diatoms are unicellular, although they can exist as colonies in the shape of filaments or ribbons². Diatoms found inside the body of a victim provide key evidence for forensic investigations of suspected drowning deaths¹. Diatom test is usually done by Forensic expert in body viscera by acid digestion of tissues. Identification of diatoms in body tissue by a histopathologist reinforces the above mentioned diatom test.

A 25 year old male was found floating in a fish tank in the fields. On examination there was froth on angle of mouth and skin of hands and feet was puckered. Death due to drowning was suspected and viscera like heart and portion of lungs, liver, spleen and kidney were sent for histopathology. Sections from lung showed diatoms in tertiary bronchioles in the form of filaments ribbons and colonies (Fig.1) which on polarizing microscopy produced autofluorescence. It was highly suggestive of death due to drowning.

We could not find any photomicrograph of diatoms in human tissues in the existing literature. Diatom is considered as gold standard in death due to drowning. Diatoms do not occur naturally in the body and do not readily decay, they can be detected even in heavily decomposed bodies³. On histopathology these could be misinterpreted as vegetable matter or even fungi.

To conclude, though diatoms were identified in the lungs in our case, final opinion regarding the cause of death can be given only after comparing the species detected from the body with that present in the water body from which the body was recovered.

**Legends**

Photomicrograph showing filamentous ribbon and colonies of diatoms in the tertiary bronchioles. (H&E, 400x)

References

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