v. 7, n. 1, p. 44, 2018
ISSN 2237-9223

REVISTA BRASILEIRA DE CRIMINALÍSTICA

DOI: http://dx.doi.org/10.15260/rbc.v7i1.251

Letter to the editor regarding "Diatoms in lung tissue: first investigation in Brazil in proving death by drowning"

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Recebido em 10/01/2018; Aceito em 19/04/2018

1. LETTER TO THE EDITOR

Thank you for publishing the paper entitled "Diatoms in lung tissue: first investigation in Brazil in proving death by drowning", by Carneiro, et al., 2017 [1].

We are glad the authors reported the first Brazilian description of the test for legal medicine purpose. The diagnosis of drowning is one of the most difficult in forensic pathology, and it relies on police investigations, forensic autopsy, microscopic analysis, and biochemical tests [2]. The identification of diatoms in body tissues to prove a death by drowning dates back to the end of the 19th century [3]. However, up to the most recent publications, great discussion emerge from methodological and diagnostic controversies that the authors recognize themselves.

We also appreciate the authors mentioned diatoms can be found in the pulmonary cavities, tissues and bone marrow, but few of this issue continued in the paper. Although the authors recovered 133 diatoms from 17.9g of oxidized lung fragment, no peripheral tissue was reportedly analyzed. Literature discusses the important role of diatom identification in peripheral tissues, to rule out passive inflow of water into the deceased's airways during submertion [3].

In an applied point of view, it is recommended that the diagnosis of death by drowning requires a minimum of 20 diatoms/100 ul of sediment taken from 10g of lung tissue and five diatoms /100 ul of sediment taken from 10g tissue from at least one other organ [4].

We encourage all future investigation of diatoms in drowning to consider testing peripheral tissue and state its proportion, in order to provide stronger evidences.

Cordially yours,

F.A. Tironi

REFERENCES

[1] N.P.M. Carneiro, L.C. Torgan, M. Vaz, L.P. Utz. Diatoms in lung tissue: first investigation in Brazil in proving death by drowning. *Rev. Bras. Crimin*. ***6(3)***: 13-16 (2017).

[2] G. Lorin de la Grandmaison, F. Paraire. Place of pathology in the forensic diagnosis of drowning. *Ann Pathol*. ***23(5)***:400-407 (2003).

[3] F. Bortolotti, F. Tagliaro, G. Manetto. Objective Diagnosis of Drowning by the "Diatom Test" - A Critical Review. *Forensic Sci Rev*. ***16(2)***:135-148 (2004).

[4] R. B. Dettmeyer, M. A. Verhoff, H. F. Schütz. *Forensic Medicine: Fundamentals and Perspectives.* Springer-Verlag, Germany (2014), 256-257.