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The procalcitonin interest to assess a septic state inducing the death in forensic medicine

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Procalcitonin (PCT) is a recognized marker of sepsis in clinical practice and also validated in post-mortem. We evaluated the use of PCT in collecting the body carried out as part of the regular business of a forensic unit. We conducted a retrospective study from raising body made in the Val d'Oise (France). The PCT were assayed by the PCT immunochromatography method. We chose a cut-off of 10 ng / l as significant of septic state. The results were analyzed according to the time post mortem (TPM) and the final diagnosis established after the body collection. When TPM is shorted (8 cases), all PCT assays were negative (< to the cut-off). TPM was intermediate for 58 cases: 5 cases were found positive for the PCT (8.6%) and accordingly to deaths from natural sources. In the group of long TPM, 5 cases showed negative PCT assays. In the group of examinations performed at the funeral (undefined TPM), there is a positive assay (for a natural death) among the 25 cases (4%). There is no significant difference between the both ratios: Groups short TPM/intermediate TPM and intermediate TPM/undefined TPM. For 90 cases, two groups were stratified by their final diagnosis: 33 of natural deaths and 57 of violent deaths. There was no significant elevation of PCT in the group of violent deaths. We noted 6 elevations of PCT for deaths of natural origin (15.4%) and in 3 cases there was an evidence for an infectious context. In a case of natural death with PCT negative test, we found haloperidol in post-mortem peripheral whole blood at therapeutic concentration (analysis by LCMS): Both, the negative PCT assay and the temperature body was abnormally elevated in regard to the TPM permitted to establish a neuroleptic malignant diagnostic.

Biography

Nouredine Sadeg has completed his PhD at the age of 28 years from René Descartes University at Paris and Postdoctoral studies from Assistance Publique - Hôpitaux de Paris (AP-HP) School of Medicine. He is responsible of pharmacological-Toxicological Laboratory in Forensic department of Pontoise Hospital in France. He has published more than 50 papers in reputed journals.

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