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Oral presentation

Multiorgan infestation with macrophages with PAS-negative material inclusions in long-term hemodialysis: a case report

SM Shah*[1], R Heyny-von Haußen[1], I Berger[2] and G Mall[1]

Address: [1]Pathologisches Institut des Klinikum Darmstadt, Germany and [2]Pathologisches Institut der Universität Heidelberg, Germany
* Corresponding author

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We report on a case of an 82-year-old female patient with long-term hemodialysis. Causes of hospitalization were a severely impaired general condition, somnolence and progredient dyspnea due to urosepsis with cardial decompensation. No clinical improvement was obtained by treatment with antibiotics. Moreover, aggravation of neurological symptoms like seizure and progredient somnolence appeared. Cerebral hemorrhage or other lesions could be excluded by computer tomography. Due to persisting ill condition, hemodialysis was discontinued. Death occurred three days after admission in consequence of a septic toxic multiple organ involvement. Autopsy findings revealed severe chronic obstructive emphysema, liver cirrhosis, severe atherosclerosis of aorta and large arteries as well as ischemic cardiomyopathy and terminal stage kidneys. The general clinical and pathoanatomical constellation mainly suggests that a status infectiosus with cardiac/multiple organ failure constituted the cause of death. The most striking microscopic findings were multisystemic, non-neoplastic infiltrates of CD68-positive macrophages with PAS-negative material inclusions in liver, spleen, heart, kidneys, bone marrow and generalized within fatty tissue. Fibrosis, necrosis and epitheloid cell reaction were not found. Molecular analysis with 16S-rRNA-broad-range-bacteria-PCR and subsequent cycle sequencing showed amplification of *Proteus vulgaris* DNA in the left kidney, which most probably was the sepsis-causing agent. No bacterial DNA was found in the other organs infiltrated with macrophages. The potential etiopathogenesis of the observed infiltration with a grotesque amount of PAS-negative material and the nature of particles will be discussed.