

using one-way ANOVA, followed by a Dunnett's multiple comparisons test. **Results:** Despite the lack of statistical significance ($p>0.05$), our preliminary data consistently showed an increase in ATG5 for all tested SCs, and in Beclin-1 for all except 1 nM AB-CHMINACA and 1 nM 5F-AMB. Furthermore, increases in Rab7A protein levels were observed for 1 μ M AB-FUBINACA, 1 nM AB-PINACA, 1 nM AB-CHMINACA and 1 μ M SDB-006; and in LC3 for

all SCs except 1 nM AMB-FUBINACA, 1 μ M AB-FUBINACA and 1 μ M JWH-122. **Conclusions:** Although further experiments are being conducted to confirm these results, the distinct patterns of expression of proteins involved in nucleation (as assessed by Beclin-1), elongation/maturation (ATG5 and LC3) and fusion (Rab7A) steps, indicate different mechanisms of autophagy triggered by the tested SCs.

Keywords: autophagy; cannabinoids; new psychoactive substances; drugs of abuse

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POSTER 105

Assessment of suspected cadaver desecration and the role of forensic anthropology – case report

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Resumo

Introduction: forensic anthropology focuses on the study of human skeletal remains, including the identification of human bone fragments and distinguishing different bones, investigation of skeletal injuries and its possible relation with the time of death, evaluation of morphological characteristics and other parameters [1]. Thus, in the presence of a fully skeletonized corpse, the forensic pathologist needs the collaboration of the forensic anthropologist to interpret autopsy findings [1,2]. Forensic autopsies after exhumations are becoming more common and a multidisciplinary assessment should be considered in each case [3]. **Case description:** a 27-year-old caucasian man died in a car accident during a police chase. The victim lost control of the car, falling into a river and becoming submerged. The forensic autopsy performed at that time concluded that the death was due to accidental drowning. Five years after being inhumated, an exhumation and new forensic autopsy was requested due to suspicion of manipulation and desecration of the remains. **Forensic investigation:** the corpse was transported to the North Delegation of the National Institute of Legal Medicine and Forensic Sciences after the exhumation. The remains were

completely skeletonized, requiring a forensic anthropology evaluation. After their observation and evaluation it was possible to infer that the complete skeleton was present; there were no peri-mortem traumatic injuries; and the only post-mortem alterations were incisions on the skull performed during former forensic autopsy. All the possible morphological characteristics (sex, age at the time of death, stature and ancestry) were estimated and no individualizing characteristics were identified. A bone fragment from the right femur was collected for genetic DNA comparative studies. **Conclusion:** all the features mentioned above were compatible with the remains belonging to the 27-year-old victim, which was later confirmed by DNA testing between the collected bone sample and a comparative DNA sample from his presumed mother. At autopsy, assisted by a thorough anthropologic evaluation, no signs of desecration or manipulation of the remains were identified. We conclude that when dealing with skeletonized remains, a multidisciplinary approach is needed, including a forensic anthropology evaluation, in order to properly answer all the questions that may arise during judiciary investigation [1,4,5].

Keywords: forensic anthropology; exhumation; skeleton; desecration of remains

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POSTER 106

Fatal incised and stab wounds – were they self-inflicted? (a postmortem case report)

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Resumo

Introduction: Although being a well-known suicide method, self-inflicted incised and/or stab wounds resulting in death are uncommon [1]. Certain features can guide the forensic pathologist in excluding a homicidal ethiology [1,2]. However, doubt may persist, especially in the presence of multiple and multifocal wounds, with considerable blood loss. **Objectives:** Case report description. **Methods:** male victim, 59 years-old, right-handed, with no relevant pathological history, namely of a psychiatric nature. He was found dead by his wife, naked in the bathtub of his house. There was an extensive amount of blood on the scene. A large knife and a razor blade were found next to the victim. Police report showed no signs of break-in or struggle. **Results:** on external examination we observed five incised injuries, one on the left side of the neck, and five on the upper limbs, all similarly parallel to each other, as well as four stab wounds in the upper quadrants of the abdomen. Upon internal examination, it was found that the cervical lesion did not damage any large-caliber vascular structures. As for the incised injuries on the

upper limbs, one resulted in the complete section of the right radial artery, and a second one was very superficial, not reaching the dermal layers of the skin (compatible with a hesitation lesion). On the abdomen we found the presence of hemoperitoneum and multiple incised wounds affecting the mesentery, intestines and the left kidney. Toxicology blood screen showed absence of detectable concentrations of ethanol and drugs (abusive and medicinal). **Conclusion:** when encountering fatal incised and/or stab wounds, several features allow the forensic pathologist to discard a homicide hypothesis [2]. Self-inflicted injuries are usually found on easily accessible and exposed anatomical areas [2]. They are often multiple and similar in shape and orientation, some of them being compatible with hesitation wounds [1-4]. Generally, no defensive wounds are observed [4]. Despite these characteristic findings, some suicides may result in atypical injuries [2]. Thus, when fatal sharp force injuries are present, forensic pathologists must perform a careful evaluation of all the components regarding the case, in order to differentiate suicide from homicide [2].

Keypoints:

- Some characteristic findings allow the identification of self-inflicted lesions. are several features which allow the forensic pathologist to discard a homicide hypothesis.
- However, some suicides with bladed instruments may result in atypical injuries.
- When fatal incised and/or stab wounds are present, a close analysis of the case is crucial in order to safely sustain a suicide diagnosis.

Keywords: incised wound; stab wound; suicide; self-inflicted