Virtopsy

- Post-mortem Imaging of Brain/Spine Injuries: The Importance of a Comprehensive Forensic Approach
- Early postmortem brain MRI findings in COVID-19 non-survivors
- Use of 3D reconstruction of emergency and postoperative craniocerebral CT images to explore craniocerebral trauma mechanism

In forensic investigations, the limitations of the traditional purely autoptic approach can be overcome through post-mortem imaging (virtopsy). Virtospy has several applications to the investigation of brain and spinal injuries, whose analysis can be of forensic interest, especially in cases of suspected malpractice. In this scoping review, we briefly describe the main applications of the two most common post-mortem radiological techniques (computed tomography (CT) and magnetic resonance imaging (MRI)) to the forensic investigation of brain and spinal injuries in cases of medical malpractice or traumatic (accidental/homicidal/suicidal) deaths. Although CT represents the traditional approach to post-mortem imaging, MRI is proving to be a valuable tool to investigate brain and spinal injuries and lesions. These post-mortem radiological techniques can also be used to guide the surgeons in simulated surgical procedures on corpses in the context of training programs, thus helping operators to improve technical and non-technical skills and to reduce the risk of avoidable errors [1].

1)
Azmitia L, Grassi S, Signorelli F, Filograna L, Pascali V, Olivi A, Visocchi M, Oliva A. Post-mortem Imaging of Brain/Spine Injuries: The Importance of a Comprehensive Forensic Approach. Acta Neurochir Suppl. 2023;135:27-31. doi: 10.1007/978-3-031-36084-8_6. PMID: 38153445.