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ESSENTIAL IMAGE /*Forensic medicine*

Post-mortem CT angiography of mesenteric vessels using cinematic rendering vision

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Multiphase post-mortem computed tomography (CT) was performed in a 71-year old woman who died of unknown cause. The corpse was used in the context of forensic expertise with the goal of optimizing administration of contrast material. CT parameters were as follows: Definition 40® (Siemens Healthineers); beam collimation, 40 × 0.6 mm; tube voltage, 120 kVp; tube current, 350 mAs. Vascular opacification was performed using a multiphase post-mortem CT protocol as described elsewhere using 3500 mL of a liposoluble iodine-based agent (Angiofil® [Fumedica AG], 6% mixed with paraffin oil) [1]. CT images were acquired immediately after the beginning of administration of contrast material. CT images were displayed using maximum intensity projection (MIP) and cinematic rendering [2] reformations. On MIP reformatted images, vessel analysis was difficult because of vascular overlaps whereas cinematic rendering allowed a better visualization and individualization of mesenteric vessels (Fig. 1). Postmortem CT has several advantages compared to conventional autopsy [3]. The use of postmortem CT angiography provides additional information compared to unenhanced postmortem CT. The use of cinematic rendering provides additional information about the depth of the tissues while keeping the details of MIP reformatted images, thus providing informative and more realistic images.

Human and animal rights

The authors declare that the work described has been carried out in accordance with the Declaration of Helsinki of the World Medical Association revised in 2013 for experiments involving humans.

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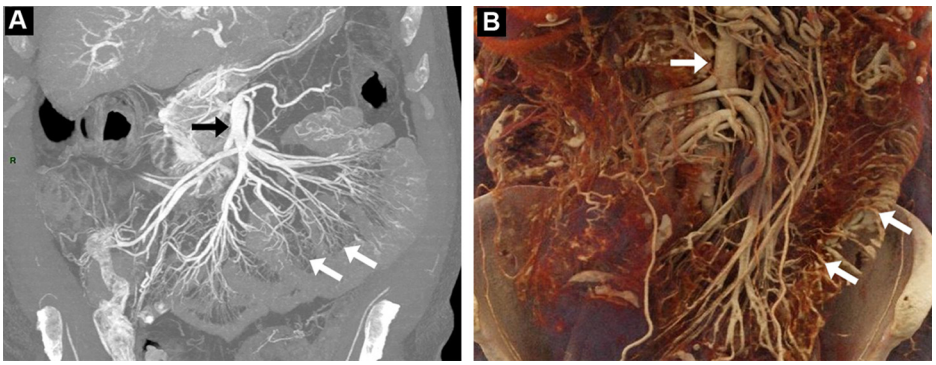

Figure 1. Multiphase post-mortem computed tomography (CT) angiography in a deceased 71-year-old woman. A. CT angiography image in the coronal plane using maximum intensity projection (MIP) reformation shows anatomy of superior mesenteric artery and vein (black arrow) and distal vessels (white arrows). B. CT angiography image in the coronal plane using cinematic rendering reveals exquisite details of the mesenteric circulation (arrows) and surrounding tissues. No abnormal findings are present.

Informed consent and patient details

The authors declare that this report does not contain any personal information that could lead to the identification of the patient(s).

Author contributions

All authors attest that they meet the current International Committee of Medical Journal Editors (ICMJE) criteria for Authorship.

Disclosure of interest

The authors declare that they have no competing interest.

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