Imaging Of The Lung From A Forensic Radiology Perspective

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Forensic radiology is a specialized area of medical imaging utilizing radiological techniques to assist physicians and pathologists in matters pertaining to the law.
Imaging acts as an adjunct to autopsy in formulation of the cause of death (COD) by the forensic pathologist.
Conventional radiograph is still widely used despite its limitation in 2D projection and poor image quality.
Post mortem computed tomography (PMCT) was later introduced into the world of forensic with superior image quality compared to conventional radiograph and 3D reconstruction capability. Based on previous studies, PMCT is well established in the diagnosis of bony pathology and hidden area of autopsy with limitation in vascular and organ parenchyma opacification. Post mortem computed tomography angiogram (PMCTA) was recently introduced to overcome these limitations and has shown excellent results.
However, lungs remain as one of the most challenging areas for forensic radiologist in term of image interpretation and pathology due to underlying decomposition artefacts that started immediately after death.
Interpretation of lung findings on PMCT and PMCTA has to be done with caution as they are different from clinical radiology or imaging of the living.
In this session, we will discuss the important decomposition artefacts, infection, malignancy, vascular and traumatic causes of death in relation to the lungs utilizing PMCT/PMCTA and their correlation to autopsy. The latest scanning technique, innovation and realm in the imaging of the lungs of the dead will also be described.