

Editorial: Imaging and Oncological Emergencies

Cancer is the second most common cause of mortality in United States and despite of higher cancer related deaths, the over prevalence of malignancy is high. The primary reason for this observation is growing incidence due to earlier detection and improved survival of patients with various malignant disorders. On the same note we have also observed higher number of visits of these patients with multitude of cancer related complications to emergency department. As a matter of fact, cancer related complications could occur at any stage of disease process or may be the first manifestation of malignancy. Most of these visits are due to disease progression and less commonly by treatment associated or non-malignant related problems. Oncologic complications like obstruction of duct, vessel or hollow organ, bleeding, thrombosis or infiltration usually require imaging for diagnosis. Therefore, radiologists have a pivotal role in precise and timely diagnosis of problem and guiding the management as well. Conventional radiography, ultrasound, multi detector CT, MRI, and angiography are considered important modalities. Similarly nuclear medicine imaging also plays an important role in some specific conditions.

Plain X-ray is considered a common and important modality for initial assessment of chest and abdominal emergencies like airway obstruction, tamponade, pneumonia, intestinal obstruction and tumor related fractures. Ultrasound is usually used as a primary modality for investigation of soft tissue abdominal complications, detecting effusion and for performing aspiration as well. Multidetector CT imaging is also used commonly for investigation of thoracic and abdominal emergencies as it is fast and available in most of healthcare facilities. Most of these procedures are performed with intravenous contrast except in those with impaired renal reserve and history of adverse drugs reaction based on previous CT examinations. MRI imaging is primarily indicated for evaluation of cancer related complication of central nervous system like carcinomatous meningitis, herniation and cord compression. Peripheral angiography is an important tool used for diagnosis and control of bleeding within tumor or intracavitary bleeds. Nuclear medicine imaging like ventilation perfusion lung imaging and tagged RBC scans are also sensitive tools for diagnosis of pulmonary embolism and localization of intermittent gastrointestinal bleeding.

The crucial role of imaging in these oncologic emergencies demands a clear understanding across the board in imaging fraternity regarding the selection of adequate imaging modality in a particular clinical scenario. Since proper selection of imaging modality would ensure not timely management but also cost effective. Another important aspect is the availability of trained and credentialed readers for interpreting the image sequences with low likelihood of interpretation errors which may have severe and irreparable consequences. To address these issues, we believe in continuing medical education (CME) and refresher courses focus upon imaging in oncological emergencies.

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