Editorial

Dual-Energy Computed Tomography Applications in the Abdomen

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Among the recent developments in computed tomography (CT), dual-energy CT (DECT) is one of the most important recent advances. The challenges with single-energy CT (SECT) acquisition are tissue characterization and lesion differentiation. In SECT, the two different elements with the same attenuation depict a similar Hounsfield's unit. DECT can overcome this challenge. In DECT, tissues are imaged with two energy levels. The attenuation response to both energy levels is used to characterize the tissues further. This issue especially deals with the applications of DECT in abdominal imaging.

In the first article, Alavandar et al[1] have discussed the basic principles and available hardware in DECT. In the second article, Narappulan et al[2] have analyzed the role of virtual monoenergetic imaging, one of the essential image sets generated from dual-energy source images. They discuss its role in evaluating hypervascular focal lesions in the liver. In the following article, Marri and Madhusudhan[3] have explained the role of DECT in the evaluation of diffuse liver diseases like fat/iron deposition and fibrosis. In the subsequent article, Singh et al[4] have discussed the use of DECT in evaluating gall bladder pathologies. Further in the issue, Mroueh et al[5] have explained the role of DECT in pancreas imaging with applications in pathologies like pancreatitis, trauma, and pancreatic neoplasms. In the following article by Mehra,[6] DECT role in urolithiasis has been discussed extensively.

Lastly, in the article by Tripathy et al,[7] DECT applications in abdominal interventions are discussed. The role of calcium and bone subtraction images in evaluating vessels in atherosclerotic diseases and virtual noncontrast images/iodine maps in evaluating residual tumors following locoregional treatment of HCC is explained very well in this article. This article also analyzes the evaluation of endoleaks in low monoenergetic images and metal artifacts reduction in high monoenergetic data sets.

We wish our readers an enjoyable and highly informative reading.

Conflict of Interest
None declared.

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