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Detection of early gastric cancer using hydro-stomach CT

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A research team from South Korea evaluated the difference in diagnostic performance of hydro-stomach computed tomography (CT) to detect early gastric cancer (EGC) between blinded and nonblinded analysis and to assess independent factors affecting visibility of cancer foci. They found that the diagnostic performance of hydrostomach CT to detect an EGC was not significantly different between blinded and nonblinded analysis. The tumor size and invasion depth were independent factors for visibility.

Traditionally, both air and tap water have been used as oral contrast agents to achieve adequate gastric distension for preoperative computed tomography (CT) imaging in patients with early gastric cancer (EGC). Despite introduction of multi-detector row CT techniques and the use of multiplanar reconstruction (MPR) images, the detection rate of EGC on hydrostomach CT has still been unsatisfactory.

A research article published on February 28, 2011 in the World Journal of Gastroenterology addresses this question. The authors conducted a comparison study for the detection of EGC on hydro-stomach CT between blinded analysis and unblinded analysis with regard to gastroscopic and surgical-histological findings to see whether the detection rate of EGC on unblinded analysis can be improved as compared to that of blinded analysis. The researchers further aimed to assess factors affecting visibility of cancer foci on hydro-stomach CT imaging.

The study showed that hydro-stomach CT imaging was not a reliable tool for the detection of EGC. The poor diagnostic performance of hydro-stomach CT to detect EGC was not significantly different between blinded and unblinded analysis. The size and depth of invasion of an EGC were two independent factors for visibility.

More information: Park KJ, Lee MW, Koo JH, Park Y, Kim H, Choi D, Lee SJ. Detection of early gastric cancer using hydro-stomach CT: Blinded vs unblinded analysis. World J Gastroenterol 2011; 17(8): 1051-1057. www.wjgnet.com/1007-9327/full/v17/i8/1051.htm

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