Summary and Conclusion

Gastric cancer is one of the frequent causes of cancer-related deaths especially in the far east.The early detection and preoperative staging of gastric cancer is critical. Conventional endoscopy and double contrast barium swallow studies allow the early detection of small lesion but cannot determine the depth of tumor invasion and the presence or absence of metestasis.

Early gastic carcinoma is defined as carcinoma limited to the mucosa or submucosa, irrespective of the presence of lymph node metastasis.

Aim of the work was to evaluate the role of Multi-slice CT in early detection of gastric carcinoma.

The anatomy and CT anatomy was discussed in this study, as well as the pathology of gastric carcinoma was reviewed.

Adenocarcinoma is the most common gastric malignancy, representing over 95% of malignant tumors of the stomach.

The peak prevalence is between 50 and 70 years of age.

The prognosis was based on the extent of gastric wall penetration, lymph nodes involvement and distant metastases. Adenocarcinoma is an aggressive tumor with a 5-year survival rate of less than 20%. However, early gastric cancers are curable lesions, with 5-year survival rates of more than 90%.

Therefore, early detection and accurate staging of gastric cancer are essential because surgical resection is the treatment of choice.

Endoscopic ultrasonography (US) provides the most useful information regarding tumor location, horizontal extension of the tumor,

the depth of mural invasion, and perigastric lymphadenopathy. Endoscopic US allow reliable distinction between an intramural lesion and extrinsic compression.

Currently, multidetector row CT scanner allows for thinner collimation and faster scanning, which markedly improve imaging resolution and enable rapid and easy handling of three- dimensional image reconstruction of the obtained images. Two-dimensional MPR and CT gastrography, including virtual gastroscopy and transparency rendering, provide multiplaner cross-sectional imaging, gastroscopic viewing, and upper gastrointestinal series imaging in the same data acquisition.

Transparency rendering provides global orientation of the focal findings in the stomach in the same way as upper gastrointestinal series imaging.

Early gastric cancer appears as protruding, superficial or depressed lesion on mucosal layer of stomach.

Multi-slice CT allows noninvasive assessment in distant metastasis of gastric cancer in the pelvis.

Gastric cancer recurrence has a poor prognosis. Multi-slice

CT is the primary modality of suspected recurrence.

The accuracy for staging gastric carcinoma is 71.4%. The preoperative multi-slice CT scan had 96.1% sensitivity, 100% specificity and 96.4% accuracy for evaluating serosal invasion. The sensitivity, specificity and accuracy for assessing pathologic lymph node involvement are 73.1, 50.0 and 84.2 %, respectively. But multi-slice CT had 100% sensitivity for evaluating hepatic metastases.

Conclusion, multisclice CT including 3D imaging processes is a new reliable modality for diagnosis of early gastric cancers not only in preoperative staging but also for postoperative follow up.