

Virtual Gastroscopy on Gastric Cancer Staging

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BACKGROUND: Gastric cancer is one of the most prevalent cancers in the world and one of the most frequent causes of cancer related death. The prognosis and treatment planning depends on the initial staging of the disease, evaluating tumor extension, lymph node involvement and distant metastasis. To do this, it uses mainly the tumor-node-metastasis (TNM) system, maintained collaboratively between American Joint Committee on Cancer (AJCC) and the International Union for Cancer Control (UICC). Computed tomography (CT) is routinely used in the staging of gastric cancer, focused on the evaluation of lymph node involvement and distant metastasis. Multislice CT with multiplanar reconstructions and virtual gastroscopy (VG) had become an alternative to the endoscopic ultrasound, and presents some advantages as CT is non-invasive, widely available and less costly.

METHODS: Retrospective, cross-sectional, single-center, observational study, performed by review of CT images with specific protocol for gastric evaluation and VG for staging of gastric cancer and comparison with pathology. It included 13 patients from September to December 2015, at a cancer center. Data collection occurred by filling in a standardized form, including clinical data, discrimination between CT findings and information on the final staging of patients (clinical or pathological). The Research Ethics Committee of the institution approved this work.

RESULTS: The mean age was 62.5 years (31- 89 years), and 53.8% were male. All cases (100%) of CT with gastric protocol and VG were considered adequate for staging, being 53.8% of gastric lesions classified in stage T3, 69.2% of the lymph nodes in N1 stage and 92.3% without distant metastases. Gastric lesions were best evaluated by CT in the coronal plane (46.2%) and classified as elevated lesion on VG (38.5%). Endoscopy was performed in the majority of patients (92.3%), with diagnosis of Borrmann II / III (54%). Almost 47% of patients performed neoadjuvant chemotherapy and CT control before surgery.

CONCLUSIONS: CT with specific protocol for gastric evaluation and VG provides additional information to better therapeutic decision to differentiate T1-T2 lesions, T3 or T4 and identify the presence of suspicious lymph nodes (N+) and / or distant metastases.