ABSTRACT

TITLE:

Comparison of CT Enterography (CTE) with MR Enterography (MRE) in patients with Crohn’s disease (CD).

AIMS AND OBJECTIVES:

1. To compare the sensitivity and specificity of MRE and CTE in patients with active Crohn’s disease by assessing the ten mural and extra-mural findings described in Crohn’s disease

2. To optimize the MRE protocol by prioritizing the sequences, so that it is cost effective and less time consuming.

3. To make MRE the imaging modality of choice for children and young adults with CD, who require repeated imaging.

METHODS:

This is a prospective study, approved by the Institutional Review Board, after obtaining financial grant for the same. A total number of 25 patients with known CD or with a high clinical suspicion for CD were studied. The age group ranged from 18 – 49 years. Patients who were scheduled to have CTE were included in this study after obtaining informed consent. MRE was done prior to CTE on the same day. Both the studies were archived to PACS and were reviewed and reported.
RESULTS:

25 cases (21 - Men and 4 - Women) with a mean age of 32.12 years, (range 18 to 49) were studied. All 25 patients underwent MRE prior to CTE. The 10 mural and extramural findings were compared on CTE and MRE. The sensitivity and PPV of MRE in diagnosing the disease was 100% and 80%, with a diagnostic accuracy of 95%. The specificity and NPV were 82.3 % and 100% respectively. The most diagnostic sequence was found to be the post-contrast sequences in axial and coronal plane. The results were 100% comparable to CTE. Few findings like creeping fat sign, with prominent vasa recta and sacroiliitis were better appreciated on CTE than MRE.

CONCLUSION:

MRE is an excellent radiation-free imaging technique in diagnosing Crohn’s disease, as comparable to CTE, which is being routine test. With the major advantage of lack of radiation, it will benefit young adults and children, who may require repeated evaluation. The cumulative effects of radiation can be avoided in this group of patients.