MRI DOWNSTAGING, PATHOLOGICAL RESPONSE AND MICROSATELLITE INSTABILITY STATUS IN PATIENT’S WITH SIGNET RING CELL CARCINOMA RECTUM UNDERGOING PREOPERATIVE LONG COURSE CHEMO IRRADIATION

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Aims and Objectives
To evaluate MRI down staging, pathological response and correlation of MSI status with Radiotherapy response in Signet Ring Cell Carcinoma Rectum.

Materials and Methods
22 patients with biopsy proven signet ring cell carcinoma rectum patients who had diagnostic MRI pelvis before the initiation of radiation therapy were included in the study. All patients received preoperative long course chemo radiotherapy. Response assessment MRI pelvis was done after 6 weeks of radiotherapy and operable patients underwent Total Mesorectal Excision. MRI down staging, pathological response and MSI status were assessed using IHC and correlated.

Results
There were predominantly male patients and mean age was 38 years (range 18-62 years). 72% were T3 lesions and 63.6% had N2 disease. All patients received 50.4 Gy and 57.1 % patients showed only minimal response in reassessment MRI. Among 15 patients who underwent surgery, 40% had pathological complete response. Even patients who did not show any response in reassessment MRI, showed histopathological complete response MSI IHC was done in 17 patients and all were negative.

Conclusion
The predictive value of MRI in down staging of Signet Ring Cell Carcinoma Rectum needs to be re evaluated. Long course chemo irradiation still plays a significant role in the management of these tumors. MSI assessment with IHC technique may be suboptimal and should preferably done with PCR technique.