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GOING BEYOND THE AIR LEAK TEST – OUR INITIAL EXPERIENCE WITH A NEW GRADING SYSTEM UTILIZING FLEXIBLE ENDOSCOPY FOR THE INTRAOPERATIVE EVALUATION OF RECTAL ANASTOMOSES.

(P317)

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Purpose: To evaluate an intraoperative anastomotic grading system utilizing flexible endoscopy to identify rectal anastomoses at high risk of anastomotic leak (AL).

Methods: This is a retrospective review of 51 patients who underwent proctectomy with intraoperative flexible endoscopic assessment of the rectal anastomosis. A 3-tiered endoscopic anastomosis grading system was utilized.

Grade 1 anastomosis was defined by circumferentially normal mucosa on both sides of the staple line. Grade 2 anastomoses had <30% of the mucosa on one side of the staple line with evidence of ischemia. Grade 3 were those where 30% or more of the mucosa appeared ischemic on one side of the staple line, or where any mucosal congestion /ischemia was present on both sides of the staple line.

Results: Of the 51 patients studied, 42 were Grade 1, 7 were Grade 2, and 2 were Grade 3. The air leak test was negative for all patients except one. The total anastomotic leak rate for this series was 18%. Six of the 42 patients (14%) with Grade 1 anastomoses developed AL. Three of these (7%) represented symptomatic AL requiring minor drainage procedures. The remaining 3 patients had an incidental finding of AL for which no intervention was necessary. Of patients with grade 2 anastomoses, 3 of the 7 patients experienced an AL (43%). Both grade 3 anastomoses were taken down at the time of the index surgery and reconstructed; neither developed a subsequent leak. Overall, intra-operative endoscopy led to a change in the operative plan in 5 patients (10%). Additionally, 6 high risk mid rectal anastomoses were not diverted based upon the healthy endoscopic appearance of the anastomosis. Only 1 of these patients experienced a symptomatic leak, requiring transanal drainage.

Conclusions: This pilot study demonstrates that the use of flexible endoscopy to evaluate high risk rectal anastomoses may influence surgical decision making in a substantial number of cases. Moreover, a grading system based on the appearance of the perianastomotic mucosa may be useful in identifying patients at especially high risk of anastomotic leak. Further studies are needed to validate these findings.