

Objective

This comparative study is intended to determine the efficacy of single layer intestinal anastomosis in comparison with double layered intestinal anastomosis in terms of duration required to perform an anastomosis, complications like anastomotic leak, and the number of duration of hospital stay.

Methods

This prospective comparative study was conducted at Govt. Rajaji Hospital, Madurai Medical College, Madurai, between August 2013 to August 2014. The study had two groups, group A (single layer) and group B (double layer) and cases were allotted to either groups alternatively requiring single layer anastomosis and double layer anastomosis for various clinical conditions of small and large bowel after fulfilling inclusion and exclusion criteria. Single layer continuous extra-mucosal anastomotic technique was done using 3-0 PDS and double layer continuous technique with 2-0 vicryl & 2-0 mersilk. Duration was noted and all cases were followed up to discharge and subsequently for 2 weeks any complications like leak.

Results

The mean age in group A was 41.4 years and in group B was 41.72 years. Ileal stricture was diagnosed in maximum number of patients i.e. 17 (34%) cases and resection of ileum and ileoileal anastomosis was performed in maximum number

of patients i.e. 19 (36%) cases. In group A mean duration to perform anastomosis was 19.04 minutes to perform a single layer anastomosis and 28.8 in Group B. The mean difference between two groups was 9.76 minutes, and P value was <0.001 highly significant. Overall complication in the form of anastomotic leak was noted in 3 patients (6%). In group A leak was observed in 1 (4%) and in Group B in 2 (8%) patients. The p value was not significant. One patient in Group B died due to septicaemia and the other two recovered.

Conclusion

Single layer extra mucosal continuous intestinal anastomosis can be constructed in significantly shorter duration. No dogmatic evidence was found that double layered anastomosis is superior to single layered closure of bowel anastomosis.

Keywords

Single layer; double layer; duration; hospital stay; anastomotic leak