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Genito-Urinary Function and Quality of Life after Elective Totally Laparoscopic Sigmoidectomy after at Least One Episode of Complicated Diverticular Disease According to Two Different Vascular Approaches: the IMA Low Ligation or the IMA Preservation. A Prospective Multicenter Parallel Study

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Abstract
The arterial ligation during elective laparoscopic sigmoidectomy for diverticular disease can affect genito-urinary function injuring the superior hypogastric plexus, and can weaken the distal colonic stump arterial perfusion. Ligation of the inferior mesenteric artery distal to the left colic artery or the complete preservation of the inferior mesenteric artery can therefore be compared in terms of preservation of the descending sympathetic fibres running along the aorta to the rectum resulting in a different post operative genito urinary function. From January 2015 to March 2016, 66 patients underwent elective laparoscopic sigmoidectomy for diverticular disease among two enrolling hospitals. In one centre 35 patients underwent laparoscopic sigmoidectomy with the ligation of the inferior mesenteric artery distal to the left colic artery (low ligation). In the other centre 31 patient were operated on the same procedure with complete inferior mesenteric artery preservation (IMA preservation). There was no difference in terms of major complication occurred, first passage of stool and length of hospital stay between the two groups. Time of surgery was significantly shorter in LL group compared to IMA preserving group and intra operative blood loss was significantly lower in the LL group. There were no differences in the genito urinary function between the two group pre operatively, at 1 and 9 months post operatively. Genito urinary function did not significantly change across surgery in each groups. The low ligation and the IMA preserving vascular approach are safe end feasible techniques in elective laparoscopic sigmoidectomy for diverticular disease. They both prevent from genito-urinary post-operative disfunction and allow good post operative quality of life. The low ligation approach is related to shorter operative time and slower intra operative blood loss.
Key words: diverticular disease, laparoscopic sigmoidectomy, IMA preservation, genito urinary function