

A Comparison of Continuous and Interrupted Suturing in Laparoscopic Pyeloplasty

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ABSTRACT

Background: Laparoscopic pyeloplasty is one of the most common reconstructive procedures performed by urologists. Both continuous and interrupted sutures are being practiced for ureteropelvic anastomosis. The success rate and the complications associated with the suturing technique needs evaluation. We analyzed the results from of our patients who underwent laparoscopic pyeloplasty using both techniques.

Objective: To review the outcome differences among patients undergoing laparoscopic pyeloplasty regarding suturing technique.

Materials and Methods: All patients who underwent laparoscopic, transperitoneal dismembered pyeloplasty of the primary pelviureteric obstruction were analyzed. The primary outcome was successful pyeloplasty, as assessed by the resolution of symptoms and T^{1/2} <10 minutes. The secondary outcomes were the complication rate and the operative parameters. The difference in the parameters was assessed by Student *t* test analysis.

Results: Of the 107 patients we studied, 65 had interrupted suturing and 42 had continuous suturing. The success rate was not significantly different among the 2 groups. The mean suturing time, postoperative drainage volume, postoperative hospital stay, and total cost of the procedure were significantly less in the continuous suturing group.

Conclusion: The continuous suturing technique is preferred over the interrupted suturing technique for laparoscopic pyeloplasty because the success rates are equal

and the postoperative stay, suturing time, drain output, and cost of the procedure are better.

Key Words: Laparoscopy, Pyeloplasty, Suturing technique, Cost effectiveness.

INTRODUCTION

Laparoscopic pyeloplasty is one of the most common laparoscopic reconstructive procedures performed by urologists since it was first described by Schuessler et al in 1993.¹ Ureteropelvic anastomosis is the most important step in pyeloplasty and has a large bearing on its success rate. Intracorporeal suturing is one of the significant factors in the outcome of laparoscopic pyeloplasty.² Both interrupted and continuous suturing are being practiced for ureteropelvic anastomosis.^{3,4} Although continuous sutures are more watertight compared with interrupted sutures,⁵ the possibility of seeing the purse-string effect and tissue damage may be a concern.⁶⁻⁸ We present the results of our retrospective analysis of the effects and outcome of continuous and interrupted sutures during laparoscopic pyeloplasty.

MATERIALS AND METHODS

We retrospectively reviewed all patients who underwent laparoscopic pyeloplasty at our center from June 1998 to March 2012. A total of 129 patients underwent laparoscopic pyeloplasty. All procedures were performed by a single surgeon with >3 years of prior laparoscopic suturing experience.

Twenty-two patients were excluded from the study: 8 patients who underwent transperitoneal but nondismembered pyeloplasty (which included 3 redo nondismembered pyeloplasties), 9 patients who underwent retroperitoneoscopy, 2 patients who underwent redo dismembered pyeloplasty, and 3 infants who underwent laparoscopy-assisted pyeloplasty (pelvis and ureter brought out through a 10-mm flank port for extracorporeal anastomosis). Hence, 107 patients were included in the study.

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