A new technique for laparoscopic ventral hernia repair: Double crown with one /third of tackers and fibrin glue.

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Abstract:

Aims: The aim of our study is to present the results of a new technique for laparoscopic ventral hernia repair, based on our experimental animal studies, by reducing tackers to one third, of the number usually used during a standard Double Crown Technique, and fibrin glue. The goal was to reduce the two main complications related to spiral tacks: acute and/or chronic pain and potential problems associated with adhesions to them (related to bowel perforation, intestinal occlusion...). Material and Methods: From October 2007 until January 2010, there have been operated 21 cases using this new technique. We analyzed epidemiological (age, sex, BMI...) and surgical data (time, mesh used, hernia defect ...), as well as potential short-medium term complications. Inclusion criteria were primary or secondary ventral hernias located at midline, far from bones, and defects exceeding 3x3 cm and less than 17x12 cm, what involves the use of meshes with size not exceeding 20x30 cm. Results: Our series of patients (n = 21) had a mean age of 53'52 years, with a 57'14% of females. In all cases, PTFE mesh was placed with a mean operating time of 41'11 minutes. No intraoperative complications were detected. The average postoperative stay was 1'62 days. There was just one readmission of 48 hours due to a paralytic ileus as early post-surgical complication. No recurrences have been detected after a median follow up of 12 months (range 1-27 months). Conclusions: Although number of cases and follow up is still low, we believe this technique has yielded promising results. We confirm that is feasible to reduce the numbers of tackers during the Double Crown technique to one third, what could be related to a reduction of

pain. Fibrin glue is necessary to close the gap among the tackers and to protect the bowel from the tackers by covering them, as we have demonstrated in experimental research. It would be important a longer follow-up of our serie and a prospective randomized trial to study the potential reduction of postoperative pain, once we have demonstrated that recurrences do not increase by reducing mechanical fixation.