

Suture Selection Optimizes Surgical Repair

BY BRUCE JANCIN

FROM THE ANNUAL MEETING OF
THE AMERICAN SOCIETY FOR
REPRODUCTIVE MEDICINE

DENVER – Use of unidirectional knotless barbed suture in laparoscopic myomectomy offers several key advantages over conventional continuous suture with intraoperative knots, according to an award-winning prospective randomized trial.

The unidirectional knotless barbed suture resulted in faster repair of uterine wall defects as well as less intraoperative blood loss, Dr. Simone Ferrero reported at the meeting.

Thus, using unidirectional knotless barbed suture to close uterine wall defects after laparoscopic enucleation of fibroids solves two of the biggest challenges laparoscopic surgeons face in

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endoscopic suturing: the difficulties in knot tying and maintenance of adequate tension on the suture line, said Dr. Ferrero of San Martino Hospital and the University of Genoa (Italy).

He reported on 44 women undergoing laparoscopic myomectomy who were randomized to closure of uterine wall defects with either the V-Loc™ 180 barbed absorbable thread made by Covidien or with Ethicon's Vicryl suture material.

Participants had a median of one intramural fibroid averaging 7.5 cm at its greatest diameter.

Location of the myomas was similar in the two groups.

The V-Loc features a surgical needle at one end and a loop at the other, which is used to secure the barbed suture; when the suture is completed, the surgeon snips off and removes the needle.

Total operative time in the two study arms was similar.

However, the mean 11.5 minutes required to suture the uterine wall defect in the V-Loc group was significantly briefer than the 17.4 minutes with the continuous suture with intraoperative knots.

Moreover, the mean difference in hemoglobin concentration between the day before surgery and the day after was 0.6 g/dL in the V-Loc group compared with 0.9 g/dL with Vicryl with intraoperative knots, indicating significantly less intraoperative blood loss occurred in women whose uterine wall defects were repaired with the unidirectional knotless barbed suture, he reported.

The likely explanation for the

reduced blood loss with the use of V-Loc stems from faster closure of the defects coupled with the fact that the tension on the suture line causes the suture to resist migration, Dr. Ferrero continued.

After each operation, the surgeons rated the degree of difficulty in suturing the uterine wall defects using a 1-10 visual analog scale.

Surgeons rated the degree of surgical

difficulty using continuous suture with intraoperative knots as nearly twice as great, with a mean score of 6.1 out of a possible 10, compared with 3.7 with unilateral knotless barbed suture.

The Italian single-center clinical trial was awarded the Society of Reproductive Surgeons' Prize as the outstanding study in that field presented at the ASRM meeting.

Planned future studies include an

evaluation of whether the use of a unidirectional knotless barbed suture affects the risk of uterine rupture during pregnancy.

Dr. Ferrero and his colleagues have an ongoing study looking to see if the uterine wall scar 6 months post myomectomy is different depending upon the type of suture used in the repair.

Dr. Ferrero said he had no financial conflicts of interest. ■



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