

A combination of two novel ligation techniques for complicated laparoscopic intraligamentary myomectomy

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Objective: To perform laparoscopic myomectomy by combining two novel ligation techniques for a large lateral intraligamentary myoma.

Design: A step-by-step explanation of the surgical procedure using a video with narration.

Setting: University hospital.

Patient(s): A 39-year-old woman (gravida 1, para 0) presented with an asymptomatic pelvic mass. Sonographic imaging revealed a 10-cm subserous myoma from the right lateral uterine isthmus wall. Laparoscopic exploration revealed a large myoma growing from the right lateral cervical isthmus wall toward the broad ligament. It was protruding into the pararectal space with duplicated ureters.

Intervention(s): For such a large lateral intraligamentary myoma, any conventional approach has the potential to cause massive bleeding and accidental injuries. We devised and implemented a preventative strategy for intraoperative bleeding by combining two novel ligation techniques used in laparoscopic myomectomy. We made an incision at the posterior leaf of the broad ligament and exposed the myometrium enveloping the fibroid and the base of the fibroid. Then we performed an incision 2 cm away from the right lower edge of the fibroid base, opening the myometrium and pseudocapsule. We applied two novel ligation techniques that ligate the pedicle on the left of the fibroid and the pseudocapsule on the right of the fibroid. Enucleation and loop tightening were implemented simultaneously. The entire pseudocapsule and most of the myometrium enveloping the fibroid were ligated in the loop knot. Only a small portion of the myometrium on the right side was outside the loop knot, which required electrocoagulation. Loop ligation was performed twice more for reinforcement in the same location. The peritoneum was then closed.

Main Outcome Measure(s): Laparoscopic myomectomy was completed successfully for a large lateral intraligamentary myoma using our novel technique.

Result(s): The surgery lasted 110 min, and the volume of intraoperative blood loss was 150 mL. The patient had a normal postoperative course.

Conclusion(s): Combining two novel ligation techniques in laparoscopic myomectomy is a safe and efficient surgical choice. This technique has obvious advantages in large, broad ligament myomas, reducing bleeding and avoiding unintentional injuries, even in duplicated ureters. Furthermore, this technique is not limited by the device and does not increase the cost of surgery. (Fertil Steril® 2022;118:207-9. ©2022 by American Society for Reproductive Medicine.)

El resumen está disponible en Español al final del artículo.

Key Words: Intraligamentary myoma, laparoscopy, loop ligation technique, myomectomy



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S.W. has nothing to disclose. D.W. has nothing to disclose. F.Z. has nothing to disclose.

The Medical Ethics Committee of Shengjing Hospital of China Medical University approved the study and deemed this video as exempt from formal approval.

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SUGGESTED READING

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Combinación de dos técnicas nuevas de ligadura para miomectomía intraligamentosa laparoscópica complicada.

Objetivo: Realizar miomectomía laparoscópica mediante la combinación de dos técnicas nuevas de ligadura en mioma grande lateral intraligamentoso.

Diseño: Explicación paso a paso del procedimiento quirúrgico mediante video con narración.

Lugar de realización: Hospital Universitario.

Paciente (s): Mujer de 39 años (grávida 1, para 0) con masa pélvica asintomática. La imagen sonográfica reveló un mioma subseroso de 10 cm desde la pared del istmo uterino lateral derecho. La exploración laparoscópica reveló un gran mioma creciendo desde la pared cervical del istmo hacia el ligamento ancho. Protruía al espacio pararectal con uréteres duplicados.

Intervención (es): Para un mioma lateral intraligamentoso tan grande, cualquier enfoque convencional tiene el potencial de causar sangrado masivo y daños accidentales. Diseñamos e implementamos una estrategia preventiva para el sangrado intraoperatorio mediante la combinación de dos nuevas técnicas de ligadura utilizadas en la miomectomía laparoscópica. Realizamos una incisión en la hoja posterior del ligamento ancho y expusimos el miometrio envolviendo el fibroide y la base del fibroide. Realizamos entonces una incisión a 2cm del borde inferior derecho de la base del fibroide, abriendo el miometrio y la pseudocápsula. Aplicamos dos nuevas técnicas de ligadura que ligan el pedículo a la izquierda del fibroma y la pseudocápsula a la derecha del fibroma. La enucleación y el ajuste del nudo se realizaron de forma simultánea. La pseudocápsula entera y la mayoría del miometrio circundante fueron ligados en el giro del nudo. Solo una pequeña porción del miometrio en la pared derecha quedó fuera del lazo del nudo, requiriendo electrocoagulación. La ligadura con asa se realizó dos veces más para refuerzo en el mismo lugar. Luego se cerró el peritoneo.

Variable principal (es): La miomectomía laparoscópica fue realizada con éxito para un mioma intraligamentoso grande utilizando nuestra nueva técnica.

Resultados: La cirugía duró 110min, y el volumen de pérdida de sangre intraoperatoria fue de 150ml. La paciente tuvo un curso postoperatorio normal.

Conclusiones: La combinación de dos técnicas nuevas de ligadura en miomectomía laparoscópica es una elección quirúrgica segura y eficaz. Esta técnica tiene ventajas obvias en miomas grandes en ligamento ancho, reduciendo el sangrado y evitando daños no intencionados, incluso en uréteres duplicados. Además, esta técnica no está limitada por el dispositivo y no incrementa el coste de la cirugía.