

# Modified Laparoscopic Cornual Resection for Cornual Pregnancy

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## OBJECTIVE

The objective of this study was to demonstrate an ameliorated laparoscopic technique of cornual resection that minimizes complications during the management of cornual ectopic pregnancy.

## DESIGN

Stepwise demonstration of the technique is presented with narrated video footage. The difference between this and other conventional methods is illustrated.

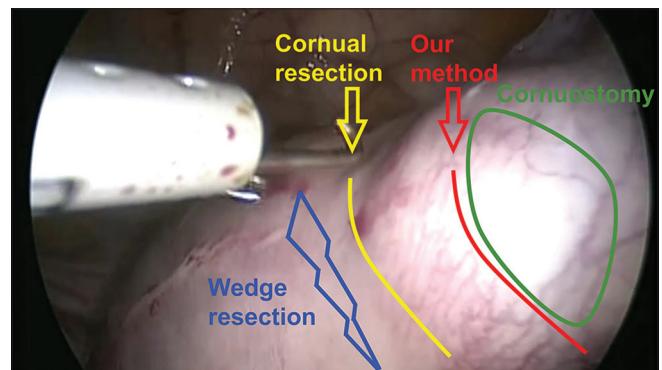
## SETTING

Cornual pregnancy accounts for 2%–4% of all ectopic pregnancies.<sup>[1]</sup> Conventional laparoscopic management includes cornuostomy, cornual resection, and wedge resection.<sup>[2,3]</sup> Possible issues with these procedures are disruption of the fetal capsule, injury to the myometrium accompanied by bleeding, and persistence of trophoblastic tissue.<sup>[1-3]</sup> Our modified cornual resection method can avoid the issues mentioned above.

## INTERVENTIONS

In the video, Table 1 shows how cornuostomy, wedge resection, cornual resection, and our method compare in terms of technical difficulty, fetal capsule manipulation, fallopian tube preservation, trophoblastic tissue retention, myometrial

damage, and bleeding [Video 1]. Cornuostomy is considered the simplest method to perform; however, the fetal capsule is grasped and damaged during this procedure. As a result, trophoblastic tissue may be retained. During a cornual wedge resection, the fetal capsule and the myometrium around it are completely removed, and bleeding is a common complication. Although these adverse events can be minimized during a cornual resection, this procedure is technically challenging because the fetal capsule must be carefully grasped. If the capsule ruptures, cornuostomy must be performed. Our modified cornual resection addresses these issues by shifting the incision line from the uterine serosa to the fallopian tube [Figure 1], which is also the portion that is manipulated.



**Figure 1:** Differences in incision lines of each technique. <http://www.apagemit.com/page/video/show.aspx?num=301>

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**Table 1: Comparison with traditional methods**

|                                 | <b>Cornuostomy</b> | <b>Cornual wedge resection</b> | <b>Cornual resection</b> | <b>Our modified cornual resection</b> |
|---------------------------------|--------------------|--------------------------------|--------------------------|---------------------------------------|
| Difficulty                      | Easiest            | Easy                           | Difficult                | Moderate                              |
| Grab the fetal capsule          | Yes                | No                             | Yes                      | No                                    |
| Fallopian tube preservation     | Possible           | Possible                       | Possible                 | No                                    |
| Persistent trophoblastic tissue | Possible           | No                             | No                       | No                                    |
| Myometrial damage               | Small              | Large                          | No                       | No                                    |
| Blood loss                      | Moderate           | Large                          | Small                    | Small                                 |

Bold characters are detected statistically significant higher than the others

In addition, electrocoagulation of the mesosalpinx and an injection of diluted vasopressin into the myometrium significantly reduce bleeding. However, the fallopian tube cannot be preserved with our method. As this method is not difficult for experienced surgeons to perform, we propose that it can be an appropriate option for managing a cornual pregnancy since it allows for complete fetal capsule and trophoblastic tissue removal with minimal bleeding and myometrial damage.

## CONCLUSION

Our method enables the complete resection of the fetal capsule without disrupting it or damaging the myometrium, resulting in minimal bleeding.

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Nil.

## Conflicts of interest

There are no conflicts of interest.

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