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*Cover Letter

Authorship

All authors have fulfilled all conditions required for authorship.

Conflict of interest

There are no potential conflicts of interest for each author as described in the information for authors.

Previous Publications

There are no previously published or intended publications for this article we are submitting.

All of the authors have fulfilled all conditions required for authorship.

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The cover letter that accompanies the submitted manuscript accurately states that all authors have fulfilled all conditions required for authorship.

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a single sentence of 25 words or less delineating the paper's essential point(s) and double spaced, to be used to describe the article in the Table of Contents.

a short version of the article title, to be used in the identification line at the base of each table and figure.

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Text

Research articles have been organized into the following sections and identified with the following headings, as described in the Information for Authors:

Introduction, Materials and Methods, Results, Comment

Subheadings in Clinical Opinion and Review articles are unique to the subject matter and short.

References

Double spaced, without automatic numbering software.

Numbered sequentially as they appear in the text.

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Do not contain any personal communications or unpublished observations, which, if used, are mentioned parenthetically in the text, unnumbered. Signed written approval by the person being quoted is included with the submission.

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Figure legends appear together on a separate page, not on the figure itself.

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Materials are submitted in *.mpg or *.mov format.

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Lin's hysteroscopy (TCR)-metroplasty method: A simple and effective approach of Cesarean section scar defect

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Lin's hysteroscopy (TCR)-metroplasty method that focused on the four major predisposed anatomical problems of the cesarean section defect with patient's quality of life greatly improved.

Lin's hysteroscopy (TCR)-metroplasty method

Cesarean section defect had been found to be one of the causes of prolonged bleeding in women with previous cesarean delivery. Lin's hysteroscopy (TCR)-metroplasty method had focused on four predisposed anatomical defects, which ensured correction of the cesarean section defect. With this simple procedure, the patients had greatly improved their quality of life, as well as discomfort.

Key words: TCR-metroplasty, prolonged bleeding, cesarean section defect, Hysteroscopy-metroplasty

In the recent years, some new studies had showed that one of the causes of prolonged menstrual cycle in women who had cesarean delivery before could be the scar defect from the cesarean delivery itself. From these women suffered from prolonged bleeding to a point that greatly affected the quality of their lives had some common distinct clinical presentations. Usually the patient had their second cesarean delivery, and right after found their menstrual cycle had prolonged to twice as before. However, the menstrual cycle itself was with regular period and normal amount, but with spotting up to two weeks. This previously undescribed cause of prolonged bleeding can be easily identified with sonography or hysteroscopy. Under sonography, a triangular anechoic filling defect can be seen, and with hysteroscopy the uterine anterior wall defect at isthmus area just below the cervix internal orifice can be clearly detected.

With this problem in hand, a new approach to this problem is in demand. If the anatomical problem can be solved by simple and effective procedure, the quality of life of these patients can be improved greatly. In our institution, the defect had been approached with Lin's method of metroplasty by hysteroscopy transcervical resection (TCR), and the results are greatly appreciated. There are four predisposed anatomical defects focused with Lin's procedure: 1. The granulation over the anatomical internal orifice; 2. The fibrotic tissue at the proximal side of the cave; 3. The small hollow and depression in the cave of the scar defect; 4. The defect itself. These are the four main problems that caused the blood to stuck and form clots which all needs to be corrected in order to have the optimal resolution to the prolonged bleeding. With the simple procedure, our patient who had been identified with cesarean scar defect causing the prolonged bleeding had improved greatly. All patient who had been followed up within six months after the procedure, had return to their regular menstrual cycle, and satisfied with the improvement.

Figure legends

Figure 1: Before and After Lin's TCR-metroplasty

Upper left: before correction; Upper right: after correction; a: cave of scar defect; b: excision line; c: anatomical internal orifice of cervix; d: external orifice of cervix; e: before excision; f: after excision

Video legends

TCR 1: Identify the boundary of the surgical field

TCR 2: Clean the proximal side granulation tissue

TCR 3: Coagulation of the proximal side of the cave

TCR 4: Dealing with the small hollow or depression in the cave

TCR 5: Correction of the distal side of the cave

TCR 6: Clear path from the anatomical internal orifice of the cervix to the external orifice of the cervix without any hollows or depressions

Figure 1
[Click here to download Electronic Supplementary Material \(online publication only\): Fig1.tif](#)

TCR Video 1

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TCR Video 2

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TCR Video 3

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TCR Video 6

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