

# Myosure shaver vs hysteroscopic resection RPOC

I. Nikkels, drs. J.r. Dijkstra

isala



rijksuniversiteit groningen

## Titel

**Outcomes of the use of the Myosure shaver in removal of remnants after miscarriage and placental remnants in comparison to hysteroscopic resection: a retrospective study.**

## Introduction

Retained product of conception (RPOC) is a term used to describe placental remnants after miscarriage, termination of pregnancy, vaginal birth or caesarian section. There is no standardized treatment for the removal of RPOC.(1) Conventional treatment consists of surgical treatment with vacuum aspiration or hysteroscopic resection. The use of vacuum aspiration leads to complications during and following the procedure. The most recent development for removal of RPOC is hysteroscopic morcellation. Advantages compared to previous treatment options are the ability to perform the procedure in an outpatient setting and the theoretical reduced risk of damaging the endometrium and myometrium.(2) There is a lack of scientific research to compare the Myosure shaver with hysteroscopic resection in the resection of RPOC. The goal of this study is to research the effectiveness and safety of the Myosure shaver in regards to hysteroscopy resection of RPOC.

## Research question

Is the use of the Myosure® shaver equal in efficiency and safety for the removal of retained products of pregnancy and remnants after abortion as a conventional hysteroscopic resection?

Primary outcomes are the clinical signs of complete evacuation (no abnormal vaginal blood loss or abdominal pain) and the necessity of a repeat intervention.

## Methods

The design of this study is a retrospective data research. A dataset has been made of 177 women who have had a hysteroscopic procedure for the removal of RPOC in Isala hospital Zwolle between 1-1-2015 and 1-1-2020. This produced two cohorts of 115 and 62 inclusions for Myosure and hysteroscopic resection respectively. Patient characteristics and results were compared between the two groups.

Tabel 1

Patiënt characteristics	Myosure (n= 115)	Hysteroscopic resection (n= 62)	P value
Age	31.1 +- 4.7	30.8 +- 3.7	0.693 *
BMI (n = 85)	23.2 (22.0-26.8)	23.4 (21.3-26.6)	0.933 <sup>a</sup>
Gravida	2 (1-3)	2 (1.5-3)	0.851 <sup>a</sup>
Para	1 (0-2)	1 (1-2)	0.001 <sup>a</sup>

Data is displayed mean +- standard deviation, n (%) or median (interquartiel range(IQR)).

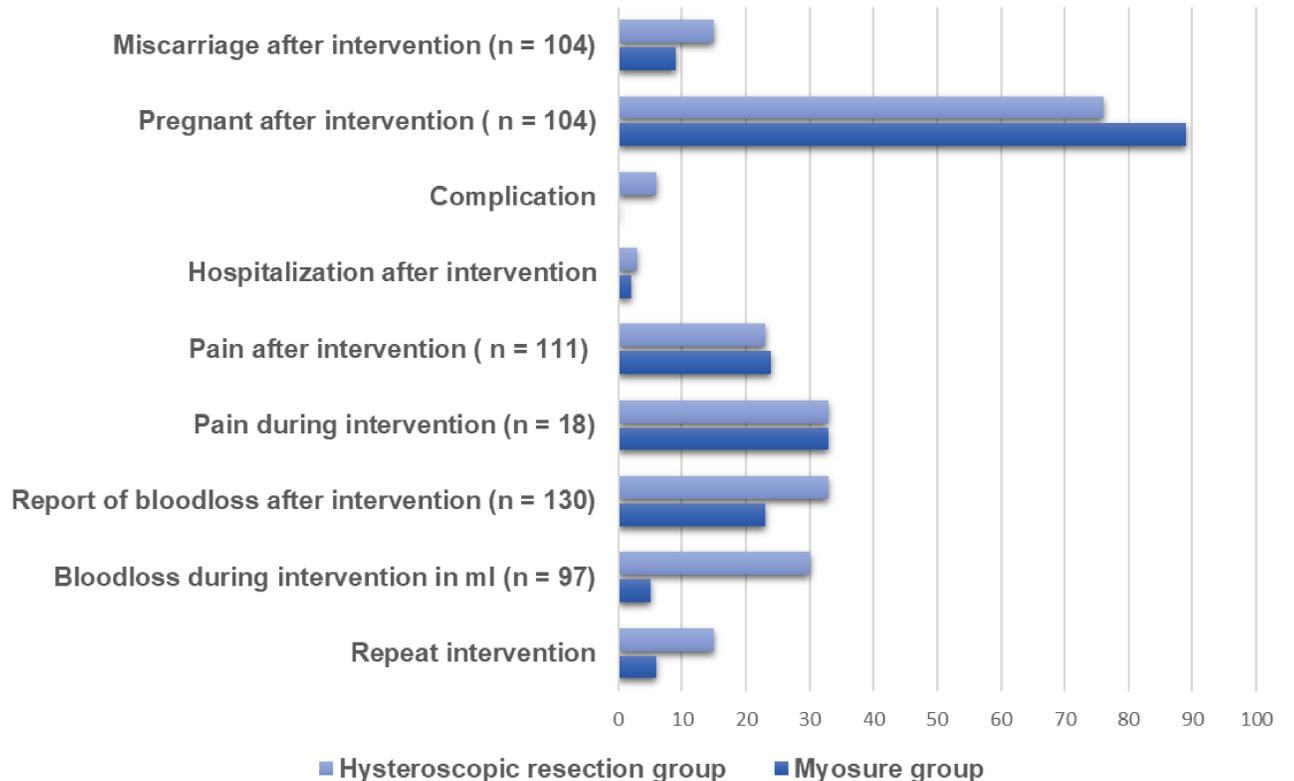
p-values are calculated with:

\* unpaired t-test

<sup>a</sup> Mann-Whitney U-test

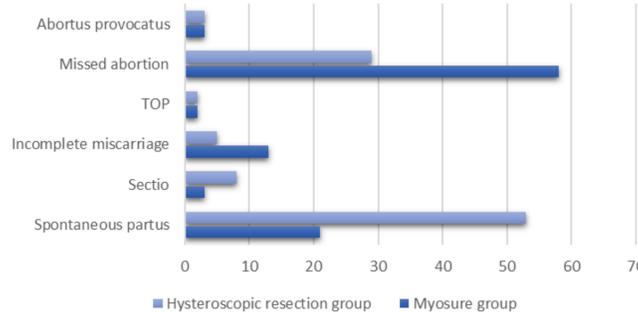
Tabel 1, patient characteristics

## Outcomes after intervention in percentages



Graph 1, outcomes after intervention

## Modus partus in %



Graph 2, modus partus

## Inclusion

Women that have given birth in given timeslot

Women with a miscarriage, abortion or missed abortion before 13 weeks gestation

AND a diagnosis of RPOC post partum

## Exclusion

Less than 4 weeks between end of pregnancy and procedure

Vacuum aspiration of RPOC

Mola pregnancies

Tabel 2, inclusion and exclusion criteria

## Results

There is no significant ( $p=0.096$ ) difference found in the number of patients who were in need of a repeat procedure. There was a significant ( $p=0.014$ ) difference in number of patients with complications after the procedure, with 6% ( $n=4$ ) in the hysteroscopic group and 0% in the myosure group. Total amount of blood loss during surgery was significantly ( $p=0.040$ ) higher in the hysteroscopic group with a median of 30ml (5-100) against a median of 5ml (1-20) in the Myosure group. The use of the Myosure shaver, corrected for age, gives significantly reduced chance of repeated procedure compared to the use of hysteroscopic resection with 34% (95%CI 0.117-0.996,  $p=0.049$ )

## Discussion

- The hysteroscopic resection and the myosure are equally safe in removal of RPOC.
- The myosure is not less effective in removing RPOC than hysteroscopic resection.
- Blood loss during intervention: a trend towards less blood loss in myosure group, however poor data administration.
- Research did not reach 80% power.
- Non-homogenous groups, more missed abortions in myosure group, more spontaneous births in hysteroscopic resection group, making comparisons less reliable.

## Conclusion

The Myosure procedure seems to be just as effective in removing RPOC as hysteroscopic resection. The Myosure seems to have less complication in comparison to hysteroscopic resection. Due to the retrospective nature of this study, more research is indicated

## References

1. Borghi C, Scutiero G, Iafelice I, Brasile O, Poggi A, Folegatti MR, et al. Complete work-up for the management of retained products of conception. Italian Journal of Gynaecology & Obstetrics 2019 September;31(2385 - 0868):19-28
2. R Mallick, B Middleton. The Use of Hysteroscopic Morcellation in the Outpatient Management of Retained Products of Conception. Res Rep Gynaecol Obstet. 2017;1(1):17-15.

## Acknowledgments

- Drs. J.R. Dijkstra, gynaecologist
- Dr. M. A. Edens, clinical epidemiologist.
- Isala hospital Zwolle
- I.M. Nikkels, medical student
- Contact: I.m.nikkels@isala.nl