Defining a Uterine Extraction Score based on a Volume/Access Ratio in Total Hysterectomy: a retrospective cohort study

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OBJECTIVE:

To determine a **Uterine Extraction Score (UES)** to predict uterine extraction feasibility in total hysterectomy to optimise surgical planning.

MATERIALS AND METHODS:

- **Retrospective study** from January 2019 and December 2022
- Women who underwent **total hysterectomy** for **benign conditions (n=178)**
- The **UES** is based on the ratio between **uterine size** and **vaginal access**
- **Three groups of decreasing feasibility of vaginal extraction: green** - vaginal extraction without morcellation, **orange** - vaginal extraction but morcellation needed, **red** - abdominal morcellation by mini-laparotomy or primary laparotomy.

RESULTS:

Uterus size

A < 250cm^3 - 250g

B = 250-500cm^3 - 250-500g

C = 500-1000cm^3 - 500g

D > 1000cm^3 - 1000g

Vaginal accessibility

0 = no vaginal delivery

1 = one vaginal delivery

2 if > 1 vaginal delivery

Access \ Size	0	1	2
A	34/34 = 100%	28/29 = 97%	66/66 = 100%
B	5/10 = 50%	2/3 = 67%	13/16 = 81%
C	6/7 = 86%	1/1 = 100%	3/5 = 60%
D	0	2/2 = 100%	1/2 = 50%

Fig: Results of the UES based on the ratio between uterine size and vaginal access, identified by traffic light colours.

- **Agreement** between the predicted and the observed routes in **92% of cases**
- **Strong correlation** between **estimated volume** and **final weight** *(Pearson corr coeff 0.9)*
- **Uterine morcellation lengthens operative time** and **hospital stay** *(p<0.05)*

Conclusion

The **Uterine Extraction Score** based on the ratio between uterine size and vaginal access can **predict 92% of uterine extraction** feasibility in total hysterectomy.

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