



DECIDING THE ROUTE FOR HYSTERECTOMY A SCORING SYSTEM FOR BETTER FEASIBILITY OF NDVH – INDIAN TRIAGE SYSTEM

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ABSTRACT

AIM: The Aim of the study is to review the limitations, Major Complications and conversion rates associated with non descent vaginal hysterectomy (NDVH) and based on them to device of a scoring system for pre surgical assessment of women undergoing hysterectomy for benign gynaecological conditions. The scoring system would enable to grade women as having low, intermediate and high risk for complications and predict feasibility to perform successful NDVH.

Subjects & Methods: This is a prospective study conducted in Govt Kasturba Gandhi Hospital, MMC. A detailed risk analysis for each of these cases was done. Based on this and Kovacs' guidelines on determining routes of hysterectomy parameters were selected for a scoring system to predict the chances of successful vaginal routes for hysterectomy.

Results: In our Study of 100 cases 98 cases within safe score 7-11, percentage is 98%, 2 cases in upper limit of moderate risk of conversion of score 12-16, no cases is high risk of score >16.

Conclusion: The study concluded that patient requiring hysterectomy for benign lesions having moderate size uterus can be offered vaginal route of surgery. Vaginal approach is best approach for gynaecological surgeon than abdominal approach as VH done through a nature orifice

KEYWORDS : NDVH (non- descent vaginal hysterectomy), Uterus, Hysterectomy, AH (Abdominal hysterectomy), VH (Vaginal Hysterectomy), LAVH (Laparoscopic assisted vaginal hysterectomy)

INTRODUCTION:

1) Hysterectomy a most common surgery performed for gynaecological disorder next to caesarean section. Hysterectomy rates vary form

1.2 – 4.8/1000 women.

2) The methods of hysterectomy are

- VH -Vaginal Hysterectomy
- AH -Abdominal Hysterectomy
- LAVH -Laparoscopic Assisted Vaginal Hysterectomy

vaginal route being the natural one, continues to be next preferred route for removal of uterus.

3) Vaginal Hysterectomy is associated with

- Less Fewer morbidities
- Lesser hospital stay
- Better patient satisfaction

4) Therefore this method is not restricted to uterovaginal prolapse but can be done for other indications

- Large uterine size
- Nulliparity
- Previous pelvic surgery
- LSCS
- Endometriosis and
- Ovarian Mass

5) With the introduction of LAVH in 1990, studies says that LAVH superior in comparison to Abdominal Hysterectomy / Vaginal Hysterectomy, but with similar complications to Abdominal Hysterectomy & Vaginal Hysterectomy.

6) However LAVH has certain disadvantages

- Higher cost
- Expensive instruments
- Longer learning curve
- Morbidities depending on surgeon experience
- But Post Operative recovery is similar to AH.

7) Vaginal removal of uterus in the absence of uterine descent commonly named as NDVH is popular for most benign conditions as uterus can be safely removed intact per vaginum.

MATERIALS & METHODS

1) Methods:

The scoring system for assessment for successful NDVH based on Kovacs guidelines to determine the route of hysterectomy.

2) Materials and Methods:

This is prospective study conducted in government Kasturba Gandhi Hospital, MMC, from october 2015 to September 2016 a conscious effort was made to performs as many NDVH with or without salpingo-oophorectomy, in benign gynaecological conditions.

3) Inclusion Criteria:

1. Uterus Size <16 weeks
2. Mobile uterus
3. Benign Conditions
4. Simple adenexal Mass less than 6 cm.

4) Exclusion Criteria:

- Uterine Size greater than 18 weeks
- Complex adnexal masses
- Severe endometriosis
- Immobile uterus
- Suspected or diagnosed malignancies
- Women opting for abdominal route

5) A detailed risk analysis for each of these cases was done. Based on this and Kovacs guidelines on determining the routes of hysterectomy, parameters were selected for a scoring system to predict the chances of a successful vaginal route of hysterectomy. The scoring system was applied for pre-operative assessment from october 2015 to predict the feasibility of successful NDVH.

The Following parameters were considered for formulating the scoring system.

1) Accessibility of the uterus transvaginally

- Mobility
- Vaginal breadth at apex
- Uterine sizes less than 16 weeks.

2) Pathology not confined to the uterus:

- Adnexal mass
- Endometriosis

3) Pelvic adhesions:

- Puckering of the post vaginal wall at the cervicovaginal junctions.
- Immobility of uterus
- Bladder adhesion due to repeated LSCS

Parameters: Score of 1 to 6 for minimum to maximum risk for conversion.

Mobility of Uterus	Mobile -1			Restricted - 6
Narrow	More than 2 finger -1			Less than 2 finger -6
Uterine size	Less than 12 weeks -1	12-16w-2	16-18w-3	Broad uterus - 6
Endometriosis	No-1	Mild-2		Moderate -6
Removal of adnexa/mass	No-1	Yes-2	Less than 6cm-3	More than 6cm - 6
Post LSCS	None-1	1 PCS -2		2 PCS -2
Puckering of POD	Absent -1			Present-6
Min Score-7	Safe score 7-11	Mod risk on conversion -12-16	High risk more than 16	

Prerequisites for NDVH & Uterine debunking if required

- No contraindications for vaginal route except for size
- Detailed preoperative counselling with informed content
- Consent for switch over the laparoscopic assistance or laparotomy if required
- Favourable clinical and ultrasound finding
- Absence of endometrial pathology (malignancy)
- Both uterine arteries ligated before dubulking.

RESULTS AND STATISTICS

The scoring system was applied for pre surgical assessment of women undergoing hysterectomy for benign conditions from Oct2015 – Sep (2016) in KGH 100 cases was studied -> scoring system was applied.

Mobility of Uterus

- Mobility of uterus is a important parameter in the scoring system.
- If uterus is mobile – 1
- If uterus mobility is Restricted -6.
- In our study – All 100 cases has mobility – score – 1.

Mobility of uterus

	Frequency	Percent	Valid Percent	Cumulative percent
Valid	1	100	100.0	100.0

Valid 1 100 100.0 100.0 100.0 Vaginal breadth at apex

- If vagina admits >2 finger – score-1
- If Vagina admit <2 finger – score – 6
- In our study – All 100 cases shows that vaginal breadth at apex >2 fingers – score – 1.

Vaginal breath at apex

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	100	100.0	100.0
Total	100	100.0	100.0	

Uterine size

Uterine size is another important parameter in the scoring system.

- When Uterine size <12Weeks - Score - 1
- <12-16Weeks - Score -2
- <16-18Weeks - Score -3
- Broad Uterus - Score -6

In our study, out of 100 cases, <12Weeks -Score -1 -77 cases,

< 12-16Weeks - Score -2 -23 Cases,

We did not handle 16-18Weeks and 18Weeks above cases. When the uterine size more than > 18 weeks better go for AH.

For Uterine size 12-16 weeks, several Debulking techniques followed.

All cases are successful without any intra operative complication and conversion rate to AH.

Uterine Size

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	77	77	77
	2	23	23	23

Endometriosis

- Distorted Pelvic anatomy and
- Adhesions are often associated with Endometriosis.

Scoring of 1 – for Absent Endometriosis

Scoring of 2 – for mild Endometriosis

Scoring of 6 – for moderate Endometriosis

In our study is 100 cases, there was no Endometriosis and score was 1.

Endometriosis

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	100	100.0	100.0

Removal of adnexal mass

In scoring system, if no Removal of adnexa – score of 1

Removal of adnexa attempted – score of 2

If size of adnexal mass < 6cm – score of 3

If size of adnexal mass > 6cm – score of 6.

In our study in 100 cases, Removal of adnexa not done and score of 1 is given.

Removal of adnexa

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	100	100.0	100.0

Post LSCS

Post LSCS are associated with pelvic as well as bladder adhesion this increases the chance of bladder tear and this risk increases with number of repeat section.

- If No LSCS done - score of 1
- 1 LSCS done - score of 2
- 2 LSCS done - score of 6

In our study, in 100 cases, AUB with previous 2 LSCS coal 3 cases – score of 6.

Post LSCS

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	91	91.0	91.0
	2	7	7.0	98.0
	6	2	2.0	100.0
Total	100	100.0	100.0	

Puckering POD

If no puckering, score of 1

If puckering is present, score of 6.

Pelvic adhesions – may obliterates the culde sac, and this cause puckering or dimpling of POD vaginal vault at cervico vaginal

junction.

If such patients are encountered – opening of POD is very difficult and likely have complications if subjected to NDVH. So score of 1.

In our study of 100 cases – No puckering of POD Encountered as score of 1.

Puckering of POD

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	100	100.0	100.0

Thus minimum score was - 7
 Safe score - 7-11
 Moderate Risk of Conversion - 12-16
 High Risk - >16

In our study 100 cases
 98 cases within safe score -> 7-11
 2 cases in upper limit of moderate risk of conversion -> 12.
 No cases is high risk > 16.

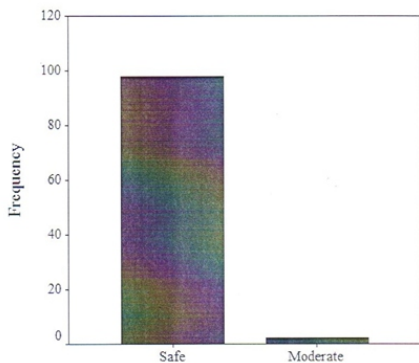
Total score

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	7	69	69.0	69.0
	8	29	29.0	98.0
	12	2	2.0	100.0
Total	100	100.0	100.0	

Total Score

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Safe	98	98.0	98.0
	Moderate	2	2.0	100.0
Total	100	100.0	100.0	

Total Score



Total

Total Score

	Observed N	Expected N	Residual
Safe	98	50.0	48.0
Moderate	2	50.0	-48.0
Total	100		

Test Statistics

	Total Score
Chi-Square (a)	92.160
df	1
Asymp.Sig.	.000

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation

Mobility of uterus	100	1	1	1.00	.000
Vaginal breadth at apex	100	1	1	1.00	.000
Uterine size	100	1	2	1.02	.141
Endometriosis	100	1	1	1.00	.000
Removal of adnexa	100	1	1	1.00	.000
Post LSCS	100	1	6	1.17	.739
Puckering POD	100	1	1	1.00	.000
Valid N (listwise)	100	7	12	7.39	.803

SUMMARY

Hysterectomy is common of NDVH is superior than AH and LAVH.

Through LAVH is safe with similar complications rates as AH and VH.

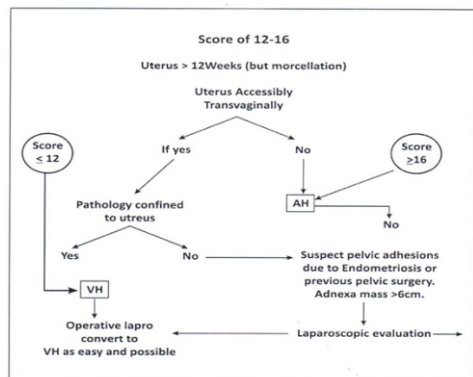
Because of few limitation like

- Costly procedure
- Expensive
- Liger learning curve
- Depends on surgeon's expertise

However POD operative recovery is similar.

But VH is associated with

- Few morbidities
- Reduced stay in hospital
- Good patient satisfaction
- Rapid Recovery
- Early discharge



DISCUSSION

As Cochrane review concluded that VH is far superior than AH/LAVH

When NDVH not possible, LAVH has advantage over AH. Complications and conversion rate in our study was none when compared to other studies, as were they need for conversion.

In study by Paparella et al, used laparoscopy prior to conversion to abdominal route. They concluded reduction in conversion rate is only 1% with LAVH.

Buy using simple scoring system Kovacs guidelines per surgically and this helped as to classify women undergoing hysterectomy for benign conditions into;

- Low ≤ 11
- Intermediate
- High Risk ≥ 17

Low risk group can undergo safely NDVH, High risk group should undergo only AH.

- By applying scoring system which is
- Easy
- Simple
- Did not involve any cost to patient
- Reproducible and
- Helps to classify women into low-intermediate-high risk groups

CONCLUSION

Vaginal approach is best approach for gynaecological surgeon than abdominal approach as VH done through a natural orifice.

Where as AH done through surgically created approach. By Kovac guidelines, a simple scoring system helped better assessment of women pre-surgically before undergoing hysterectomy for benign conditions and for deciding better feasibility to perform NDVH.

Complication and conversion rates has been decreased by to this scoring system.

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