

## EFFICACY AND COMPLICATIONS OF VAGINAL RING PESSARY IN PELVIC ORGAN PROLAPSE

### Hypothesis / aims of study

Vaginal ring pessary is a common treatment for pelvic organ prolapse. Studies had shown an increase in quality of life after ring pessary use (1). However, complication rates were up to 56% (2) and only 56% continued its use at 6 to 12 months (1). Our study aimed to investigate the efficacy and complications of vaginal ring pessary in patients with pelvic organ prolapse. Factors that may affect its efficacy were investigated.

### Study design, materials and methods

This is a prospective study. All women presented to our urogynaecology clinic between 2011 to 2013 with pelvic organ prolapse whom opted for vaginal ring pessary as long term treatment or temporary treatment before surgery were invited to the study. If the ring pessary slipped out, reinsertion was performed for up to 3 times in the same consultation. Participants were contacted by phone 2 weeks later for any problems arising from the ring pessary. They were followed up at 6 months and 12 months for prolapse symptoms and complications of ring pessary. Only vaginal ring pessary was used in this study. Treatment was considered successful if the ring pessary could be retained without complications necessitating its removal. The desired treatment for pelvic organ prolapse (conservative, vaginal ring pessary or surgery) was assessed at baseline, 6 months and 1 year. Factors that affect success rate of ring pessary were investigated.

### Results

101 women were recruited. The mean age was 63 years old, ranging from 43 to 84 years old. The mean parity was 3, ranging from 1 to 8. Among them, 78% had first or second degree prolapse and 22% had third or fourth degree prolapse. Three had vaginal vault prolapse and the rest had urogenital prolapse. 3 participants were lost to follow up. 21 of them had surgery performed between 6 months and 1 year follow up. In 41% (41/98) of participants, the ring pessary fell off. 35% (35/98) required a change of size of ring pessary. 64% (64/98) continued with ring pessary at 6 months and 44% (44/98) continued with ring pessary at 1 year. At 6 months, 60% (59/98) reported improvement of symptoms, 25% (25/98) reported no change and 14% (14/98) reported worsening of symptoms. Up to 23% of participants had complications at 6 months (Table 1). 23% (23/98) had vaginal discomfort and 16% (16/98) had urinary symptoms with 81% of those being increase in stress urinary incontinence. Fifty three participants whom continued to use ring pessary at 6 months were followed up at 1 year. Among them, 16% (7/53) reported per-vaginal bleeding, 5.7% (3/53) reported urinary symptoms and 3.8% (2/53) reported vaginal discharge (Table 1).

**Table 1. Complications from ring pessary**

	Per-vaginal bleeding	Urinary symptoms	Strain to defecate	Vaginal discharge	Vaginal discomfort
6 months (n = 98)	11/98 (11%)	16/98 (16%)	3/98 (3%)	14/98 (14%)	23/98 (23%)
1 year (n=53)*	7/53 (16%)	3/53 (5.7%)	0/53 (0%)	2/53 (3.8%)	--

\*Excluding cases which had surgery

Treatment was considered successful in 61% (60/98) of participants at 6 months. For those whom continued with the ring at 6 months, 83% (44/53) had successful treatment at 1 year. There was no difference in success rate with regards to age, number of vaginal delivery, birth weight of baby, body mass index, degree of prolapse and presence of pre-existing stress urinary incontinence (Table 2).

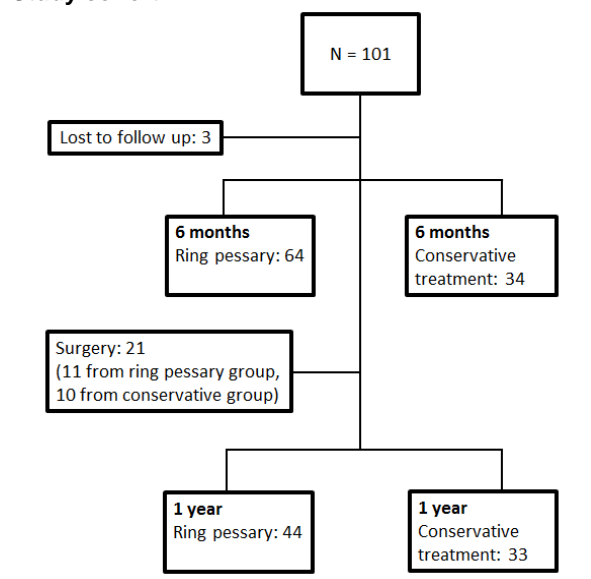
**Table 2. Factors affecting success rate of vaginal ring pessary**

	Successful group	Unsuccessful group	P-value
Age (years)	Mean 63.96 (SD 8.93)	Mean 61.41 (SD9.72)	0.187
BMI (kg/m2)	Mean 25.38 (SD 3.81)	Mean 26.78 (SD 4.42)	0.121
Birth weight of baby	Mean 3.22 (SD 0.63)	Mean 3.29 (SD 0.44)	0.661
Number of vaginal deliveries			
1 and 2 deliveries	55%	45%	0.838
3 and 4 deliveries	63%	37%	
≥5 deliveries	54%	46%	
Degree of prolapse			
1 <sup>st</sup> and 2 <sup>nd</sup> degree	65%	35%	0.149
3 <sup>rd</sup> and 4 <sup>th</sup> degree	48%	52%	
Stress urinary incontinence			
Present	56%	44%	0.436
Absent	65%	35%	

At baseline, 21% (21/98) of participants had already decided for surgery with ring pessary as a temporary treatment. Among those whom initially opted for ring pessary (n= 77) as treatment, only 39% desired to have ring pessary as long term treatment at 1 year, 14% desired for conservative treatment and 47% desired for surgery (Table 3).

**Table 3. Desired treatment for cases with ring pessary as initial desired treatment**

	Conservative	Ring	Surgery
6 months (n=77)	10/77 (13%)	39/77 (51%)	28/77 (36%)
1 year (n = 77)	11/77 (14%)	30/77 (39%)	36/77 (47%)

**Study cohort****Interpretation of results**

Vaginal ring pessary improved the symptoms of women with pelvic organ prolapse and its successful rate was 61% at 6 months follow up. The success rate increased to 83% at 1 year for those who were able to continue with ring pessary at 6 months. However, in 41% of them the ring fell off initially and up to 23% experienced complications requiring further medical assessment. Only 39% desired to use it as long term treatment at 1 year follow up. 47% desired for surgery as definitive treatment.

**Concluding message**

Vaginal ring pessary effectively treated pelvic organ prolapse in 61% of cases. However, the rate of continuation was low and surgery was the most popular treatment in the long run.

**Keywords:** pelvic organ prolapse, conservative treatment, prospective study

**References**

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**Disclosures**

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