

# OUTCOME OF VASECTOMY REVERSAL

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## ABSTRACT

- Objective* To determine the outcome of vasectomy reversal in terms of patency and pregnancy rates, and the various factors associated with it.
- Study design* Descriptive case series.
- Place & Duration of study* Reproductive Health Services at Bahawalpur for the period of 3 years.
- Methodology* All individuals who presented for vasectomy reversal, irrespective of the duration of vasectomy and age, were included.
- Results* A total of 21 cases were operated. Patency rates were 100%, 75% & 50% for patients who were operated within one year after vasectomy, between 1-4 years and >4 years, respectively. The corresponding pregnancy rates in 3 groups of patients were 93.3%, 50% and 0%, respectively. The reason for vasectomy reversal in 50% cases was death of children, and in the remaining cases it was due to second marriages, religious and psychological reasons.
- Conclusions* Duration after vasectomy played an important role in the success rate of vasectomy reversal.
- Key words* Vasectomy reversal, Vasectomy, Pregnancy rates.

## INTRODUCTION:

Reversal of vasectomy is a surgical procedure that reconnects the male reproductive tract previously interrupted by a vasectomy. Two procedures are possible at the time of vasectomy reversal, vas deferens to vas deferens connection and epididymis to vas deferens connection.<sup>1</sup> Two microsurgical approaches are used for vasovasostomy. One approach is the modified single layer vasovasostomy and other is two layer vasovasostomy but neither has proved superior to the other.<sup>2,3</sup> For epididymo-vasostomy two surgical methods are under practice and these are mucosa to mucosa end-to-side method and intussuscepted epididymo-vasostomy technique.<sup>4,5</sup>

Time period after vasectomy is a major factor influencing the outcome of the procedure.<sup>6</sup> The age

of the patient does not seem to affect the success rate of the procedure.<sup>7</sup> The patency rate after vasovasostomy is equal when performed in either straight or convoluted segments of the vas deferens.<sup>8</sup> Antisperm antibodies has been noted to impair fertility after vasectomy reversal.<sup>9</sup> This study was conducted to find out reason for reversal of vasectomy and success rate of the reversal procedure.

## METHODOLOGY:

The study was carried out in Bahawalpur under reproductive health services from April 2007 to April 2010. It was descriptive study with non probability purposive sampling. It included 21 patients that came for vasectomy reversal irrespective of the age and cause of vasectomy reversal.

The procedure was performed under spinal / local anaesthesia. A vertical incision was made over the median raphe. Both ends of the vas were identified and delivered out. In majority of the cases both the ends were found joined together by a fibrous band.

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The fibrous band was excised and both ends re-fashioned and patency of proximal and distal segments checked by passing polypropylene number 1 thread in the lumen. The same polypropylene was used as a stent and brought out via separate incision. Anastomosis between proximal and distal segments was done over the polypropylene stent by using 7/0 polypropylene by single layer interrupted technique. The same procedure was repeated on the opposite side from the same incision. Haemostasis was secured and the scrotal skin approximated by absorbable sutures. Patency was checked after two weeks by examining the sperms in semen analysis. Patient was contacted by telephone after the procedure to determine the pregnancy.

### RESULTS:

Among the 21 patients who came for the vasectomy reversal, 16 (76.1%) were between 30-40 years, one (4.7%) was 26 years old and 4 (19.2%) above 40 years of age. Fifteen cases (71.4%) were operated within one year after vasectomy, 4 (19%) operated between 1-4 year and 2 (9.5%) after 4 years of vasectomy.

Patency and pregnancy rates were 100% and 93.3% among those who were operated within first year after vasectomy, while it was 75% and 50% for the group who were operated between 1-4 years and it was 50% and 0% among those who were operated after 4 years of their vasectomy.

The major factor for vasectomy reversal was death of the children (50%), while the other factors included second marriages (35.8%), and religious (9.5%) and psychological (4.7%) reasons.

### DISCUSSION:

The majority of the patients who came for vasectomy reversal were between 30-40 years of age. The mean age of the patients in the study group was 36 years and it is comparable to study of Sigman M.<sup>10</sup> The patency and pregnancy rate depends upon the duration between vasectomy and its reversal. In our study the patency and pregnancy rates were maximum i.e. 100% and 93.3% respectively in patients where reversal was performed within one year after vasectomy, which is better as compared to the study of Bolduc S where it was 86% and 53% respectively.<sup>11</sup> The patency and pregnancy rates of vasovasostomies in Chang Gung Memorial Hospital, Taipei, Taiwan were 85.7% and 50.0%, respectively.<sup>12</sup> As for the causative factors for vasectomy reversal are concerned, second marriages were found to be 35.8% while it was 91% in the study carried out in Australia by .<sup>13</sup> The difference in the statistics are due to the difference in the social setup of the two

societies, as the frequency of second marriages is quite less in Pakistan.

### CONCLUSION:

The best results of vasectomy reversal were achieved in patients where it was performed within one year after vasectomy.

### REFERENCES:

1. Vasectomy reversal. Available at [http://en.wikipedia.org/wiki/Vasectomy\\_reversal](http://en.wikipedia.org/wiki/Vasectomy_reversal)
2. Lee HY. A 20-year experience with vasovasostomy. *J Urol* 1986; 136:413-5.
3. Monoski MA, Schiff J, Li PS, Chan PT, Goldstein M. Innovative single armed suture technique for microsurgical vasoepididymostomy. *Urology* 2007; 69:800-4.
4. Thomas AJ Jr. Vasoepididymostomy. *Urol Clin North Am* 1987; 14:527-38.
5. Berger RE. Triangulation end-to-side epididymovasostomy. *J Urol* 1998; 159:1951-53.
6. Belker AM, Thomas AJ Jr, Fuchs EF, Konnak JW, Sharlip ID. Results of 1,469 microsurgical vasectomy reversals by the Vasovasostomy Study Group. *J Urol* 1991; 145:505-11.
7. Yang G, Walsh TJ, Shefi S, Turek PJ. The kinetics of the return of sperm to the ejaculate after the vasectomy reversal. *J Urol* 2007; 177:2272-6.
8. Patel SR, Sigman M. Comparison of outcomes of vasovasostomy performed in the convoluted and straight vas deferens. *J Urol* 2008; 179:256-9.
9. Ansbacher R. Humoral sperm antibodies: a 10-year follow-up of vas-ligated men. *Fertil Steril* 1981; 36:222-4.
10. Sigman M. The relationship between intravasa sperm quality and patency rates after vasovasostomy. *J Urol* 2004; 171:307-9.
11. Bolduc S, Fischer MA, Deceuninck G, Thabet

- M. Factors predicting overall success: a review of 747 microsurgical vasovasostomies. *Can Urol Assoc J* 2007; 1:388-94.
12. Huang HC, Hsieh ML, Huang ST, Tsui KH, Lai RH, Chang PL. Microsurgical vasectomy reversal: ten-years' experience in a single institute. *Chang Gung Med J* 2002; 25:453-7.
13. Jequier AM. Vasectomy related infertility: a major and costly medical problem. *Hum Reprod* 1998; 13:1757-9.