Reasons for acceptance of No Scalpel Vasectomy (NSV) among patients attending family planning unit of Government Medical College, Thiruvananthapuram

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Abstract

Introduction: Despite its advantages over tubectomy, No Scalpel Vasectomy is a less popular method of sterilization. However a minority chooses this method of permanent contraception.

Objective: To find out the reasons for acceptance of NSV over tubectomy among 35 couples as a permanent method of contraception during Oct-Nov 2010.

Materials and Methods: This descriptive study was done in the family planning clinic of Government Medical College,
Reasons for acceptance of No Scalpel Vasectomy (NSV) among patients attending family planning unit of Government Medical College, Thiruvananthapuram

Thiruvananthapuram. Thirty five Couples who underwent NSV were included in the study. A semi structured questionnaire was used for data collection either through direct interview or through the telephone. Quantitative data was summarized using mean and standard deviation. Categorical variables were represented using proportions. Open questions were analyzed by listing of items and domain identification.

Results: During the time period from April 2010 to November 2010 about 1935 tubectomies and 45 NSVs were performed in SAT Hospital. The mean age of the 35 couples who preferred NSV was 35 with standard deviation of 6.3. Thirty (85.7%) opted NSV due to the reason that their wives were unfit for a surgical procedure, due to various medical reasons. Only 5(14.3%) opted NSV out of motivation.

Conclusion: Proportion of couples who choose NSV as a permanent method of contraception is very low. Majority of the couples, who chose NSV, did so due to medical reasons. As they were not fully aware about the details of the procedure, some had doubts and worries regarding complications in the future.

Introduction

No scalpel vasectomy (NSV) is an improved technique of vasectomy which was developed in China by Dr. Li Shunqiang. This was later introduced in the United States and other parts of the world.¹ No-Scalpel Vasectomy is one of the most effective contraceptive methods available for males with few side effects.² Compared to other methods of permanent sterilisation, the NSV approach is less invasive, less painful, heals faster, and has fewer complications.¹²

In India, NSV as a permanent method of sterilization was introduced and popularized through the National Family Welfare Programme.³ This new method is being implemented through a special project funded by United Nation Population Fund (UNPFA), for men who have completed their families.⁴ However, male sterilization techniques are less in vogue in the Indian society. Despite the introduction of advanced techniques and added advantages, the acceptance of male sterilization, particularly NSV has not gone up.⁵ Female sterilization continues to be the most preferred permanent sterilization method in India. According to the National Family Health Surveys (NFHS), the proportion of male sterilisation in India has come down from 3.5% to 1%, during the period from 1992-93 to 2005-06.⁶ In Kerala, the setting of current study, the figures dropped from 6.5% to just 1% during the same period.⁶
The only state which marked an increase in the rate of male sterilization in India was Sikkim, where the rates improved from 2.4% (1998-99) to 4.5% (2005-06). The low acceptance of NSV in the community may be due to a combined effect of lack of committed programmes at the administrators’ level, lack of involvement of health professionals including doctors and the wrong perceptions of the community. The participation of males is crucial in all family welfare activities as they are often the decision makers at the family level. It is possible to motivate men by educating them about the technique and also sharing the available evidences regarding its effectiveness. The family physicians can take a lead role in this initiative because of their proximity to the families and their reputation in the community. In order to improve the coverage of NSV as a permanent sterilization method, it would be apt to know the existing reasons for acceptance of NSV, so that it can be built up on and may help to strategize the programme for future. The objective of current study was to find out the reasons for acceptance of NSV over tubectomy among couples who underwent the procedure in Government Medical College Hospital, Thiruvananthapuram.

**Materials and Methods**

This hospital based cross-sectional survey was conducted at the family planning clinic of Shri Avittom Thirunal (SAT) hospital, Government Medical College, Thiruvananthapuram. SAT hospital is the maternal and child health wing of the government medical college hospital and is one of the largest tertiary health care institutions in the state, which manages reproductive health issues including family planning. Details were collected from couples, whose male counterparts underwent NSV at the study setting, between 1st January and 30th November 2010. As we tried to include all the couples who adopted NSV, no sampling technique was used in this study (only 45 persons underwent NSV during this period in the hospital).

We collected the personal details of the couples eligible for the study and the first contact to the study participants were made through telephone call or by surface mail. The contact information and basic clinical details of the eligible persons were collected from the hospital records. The persons whose contact details were unavailable and those who did not consent to participate in the study were excluded. Thirty-five couples consented to participate in the study. The eligible individuals and couples were invited for an interview at the same clinic where the surgery was performed. Telephonic interviews were conducted for seven couples.
who could not be physically present for direct interview, but were interested to participate in the study.

A semi structured questionnaire was used as the tool for data collection. Interview was conducted by medical professionals. The outcome variable was the reason for opting NSV, which was elicited by asking an open question. The response to this question was recorded verbatim as narrated by the participants. Appropriate probes were used by the interviewer to get insight in to the mechanisms which helped the couples to take a decision. Other variables included in the tool were socio demographic factors like age, education and occupation. We asked a few questions regarding motivating factors behind the adoption of this technique as it influences decision making at the individual level substantially. Questions assessing the stigma associated with the procedure were also included in the questionnaire as success of the campaign at the community level also depends on this factor. A written informed consent was obtained from couples who participated in the study.

The study tool contained a questionnaire to collect variable which were quantitative in nature and a few open ended questions which were qualitative. The quantitative data has been summarized either as mean (standard deviation) or proportions depending upon the nature of variables. The answers of open ended questions were analyzed; the factors were listed and categorized.

Ethical considerations: The study was conducted with the written permission of the head of department, department of obstetrics and gynecology SAT hospital, Thiruvananthapuram. Informed consent was obtained from all the participants of the study. The study protocol was one among the sixty synopses prepared by medical students and faculties of community medicine. This study was given clearance by the human ethical committee of government medical college, Thiruvananthapuram during the academic year 2010-11.

Results

During this study period a total of 1080 (45 NSVs and 1035 tubectomies) sterilization procedures performed at the study setting. The proportion of NSV was only 4.2%. We collected data from 35 couples (77.7%) who consented to share the information. A written informed consent was obtained from couples who underwent NSV was 35.7 (6.3) years and the age ranged between 26 years to 50 years. Eleven (30.5%) men had an educational level more than that of higher secondary schooling (Table 1) and sixteen (45.7%) of them were
semiskilled laborers which formed the single largest occupational category (Table 1).

**Table 1.** Educational and Occupational Characteristics of Study Participants

<table>
<thead>
<tr>
<th>Study variable</th>
<th>Category</th>
<th>Frequency (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>Primary education or less</td>
<td>8 (22.9%)</td>
</tr>
<tr>
<td></td>
<td>Secondary education</td>
<td>16 (45.7)</td>
</tr>
<tr>
<td></td>
<td>Higher education</td>
<td>11 (30.5)</td>
</tr>
<tr>
<td>Occupation</td>
<td>Manual laborer</td>
<td>8 (22.9)</td>
</tr>
<tr>
<td></td>
<td>Semi-skilled laborer</td>
<td>16 (45.7)</td>
</tr>
<tr>
<td></td>
<td>Skilled laborer</td>
<td>10 (28.6)</td>
</tr>
<tr>
<td></td>
<td>Professional</td>
<td>1 (2.9)</td>
</tr>
</tbody>
</table>

Majority of people (30, 85.7%) had opted NSV since several medical reasons prevented their wives from undergoing tubectomy. Only two men were undergone the procedure by ‘own decision’ and three were motivated by a third person to undergo the procedure (The spouse was not a motivator in any of the case). The reasons for opting NSV is given in table 2.

**Table 2.** Reasons for Acceptance of NSV

<table>
<thead>
<tr>
<th>Reason</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical reasons</td>
<td>30</td>
<td>85.7</td>
</tr>
</tbody>
</table>
The medical illnesses which made the wives of the participants unfit for surgery \((n=30)\) were as follows. More than half of the study participants \((17)\) underwent NSV because their wives had already been subjected to multiple surgical interventions. For some women who underwent Lower Segment Caesarian Section \((LSCS)\) for the second time concurrent sterilization was not attempted because of the high risks faced by their newborns. A few of the participants \((4, 13.3\%)\) consented for the procedure as a contraceptive method as their wives had undergone MTP to interrupt a recent conception. Failure of Post Partum Sterilisation was reported as the reason for opting NSV by one couple. For the rest of the couples \((8, 26.6\%)\) the reasons were health problems of the women counterpart. It included heart disease, epilepsy, bleeding disorders and severe diabetes.

We asked a few questions on the kind of motivation and stigma because this is very important in the programme \((\text{National Family Welfare Programme})\) point of view. Twenty six people \((74.3\%)\) who did NSV said that they were motivated by the doctor to do the same. Two of them \((5.7\%)\) said that doctors were even compelling them to do the procedure. Regarding the stigma, 27 men \((77.1\%)\) said that they did not want to reveal to their friends and relatives that they had undergone NSV because of the stigma. None of them reported to suffer from any complications or erectile dysfunctions, however two persons \((5.7\%)\) feared of developing complications related to libido in future.

**Discussion**

It is well known that NSV is a simple, safe, and cost-effective method that is less risky than female sterilization. But it is a relatively new procedure training for which has been provided in India only since 1991. However, it does not require a high degree of medical training, and the procedure itself requires only 5–6 minutes. Since a skin
incision is not made, the procedure effectively removes the fear of incision and has fewer complications than regular vasectomy. Clients can leave the clinic soon after the procedure, and experience little discomfort. This safe, simple and cost effective method is considered as a breakthrough among the family planning initiatives in India.

Vasectomy is considered as a contraceptive technique better acknowledged by affluent men with higher standards of education. However the socio-demographic profile of men who opted this procedure in our setting did not demonstrate a similar picture. Most of them were semi-skilled workers with an education of 12 years or less. Socio-economic characteristics of people who underwent NSV appear to be on the lower rung, possibly reflecting the population catered to by a public tertiary care centre. However a study on individuals who had undergone NSV in Mexico had almost the same socio-demographic pattern of our population. The men were on an average in the fourth decade of their life, an average of 13 years schooling and belonged to middle socioeconomic status. The acceptance rate of NSV is also comparable with a rate of 2.4% among all modes of contraception and the current study documented the proportion of NSV as a measure of permanent method of sterilization in 4.2% of people. Some data reveals that more than one-third of all permanent sterilizations are through vasectomies in US even one decade ago. But the Ghana vasectomy initiative documented that the rate in this African country is even less that in India with only 0.5%. National Family Health Survey in India shows that the rate of NSV in the state of Kerala is just one percent. The prevalence of NSV in the setting of current study appears to be better than the national and state averages of NFHS 3, but it the rate at the community level may be assumed to be less than the reported figure, as the data has been collected from a tertiary level teaching hospital, well equipped with the facilities for the procedure. The statistics from the office of the District Medical Officer, shows that the number of NSVs done in government hospitals of Thiruvananthapuram district during the study period totaled only to 103. From our data, it is evident that 44% of the total NSVs of the district were done at the study setting. This rate of acceptance of NSV as a permanent method of sterilization is far from satisfactory in our setting. It is something unique that the proportion of NSV is very less in Kerala, a state of India where the couple protection rate is consistently higher than the target and a goal of a Net Reproduction Rate (NRR) of one has been already achieved. Another peculiarity in Kerala is that immunization rates and the rates of vasectomy are the only
two figures which showed a declining trend from NFHS 1 to NFHS 3.

Majority of couples who performed NSV in our setting had done it due to medical reasons as they were not left with any other option. But the Mexican population was significantly different from that of ours in factors that led them to choose NSV as their family planning method. Most of them wanted to contribute their share in the family planning.\textsuperscript{13} Only a few of the participants in the current study shared the same.

The promotion of male sterilization has a very strong social basis since men contribute to half of the population and they are the decision makers in most of the families. The methods that can be adopted by men, condom as a temporary method and NSV as a permanent method are also simple and with relatively less complicated.\textsuperscript{14} There are reports which suggest that despite of the introduction of the advanced technique the acceptance of male sterilization has not gone up.\textsuperscript{5} The current study is also bringing in the same kind of a result. The time is ripe to popularize NSV as method for fertility reduction and family welfare. A camp based approach which was successfully adopted in some other setting can also be tried to improve the degree of acceptance.\textsuperscript{5} Measures should be taken to strengthen the campaigns by including these kinds of innovative modes. Even after doing NSV many have doubts regarding it. This uncovers improper counseling which ought to have been given in detail before the procedure. Proper pre-operative and post-operative counseling relieves the beneficiaries of unnecessary thoughts and worries. The role of a family doctor is crucial as revealed by the observations of the current study. The doctor can act as a person who can provide the options to the clients and explain the procedure more confidently and with the help of scientific facts. There are reports from elsewhere which points out that receiving a scientific and non-judgmental counseling helped the clients to opt this procedure.\textsuperscript{15} The stigma to male sterilization does exist and has been reported from 1970s.\textsuperscript{16} This aspect should also be addressed because people who underwent the procedure feels ashamed of and do not want to share their surgical status to their friends or relatives. Training may not be an answer for the same. The programme should have some social engineering mechanisms to solve this problem.

\section*{Conclusion}

Our study attempted to document the reasons for acceptance of NSV as a permanent sterilization technique, among those who adopted the method. People
resort to NSV as a family planning method only if the option of tubectomy for their counterpart has been ruled out. A false notion about NSV is deep rooted in the community, even among those who have already adopted the procedure.

**References**


