

## No scalpel Vasectomy: A Novel Technique for Permanent Male Sterilization

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### Introduction

In a world where half of all pregnancies are unplanned, leading to unexpected children, abortions, or long-term financial commitments, it is crucial for men to take more responsibility for birth control. Promoting small family norms is essential, and it is well-known that even minor issues faced by individuals undergoing permanent sterilization can lead to negative publicity and setbacks for family planning programs.

Non-Scalpel Vasectomy provides a refined, straightforward, safe, and permanent method for family size control. It was introduced in India in 1991 by Dr. R.C. M. Kaza and Dr. Alok Banerjee, who received training from Dr. Apichart Nirapathpongorn in Thailand. NSV was officially incorporated into the National

Family Planning Program in March 1992. Government initiatives subsequently expanded NSV training and promotion nationwide, resulting in a network of trained service providers throughout the country.

NSV requires widespread publicity to dispel misconceptions and increase acceptance. Historically, vasectomy has been a safe, effective, and straightforward contraceptive method for men, with various innovative surgical techniques developed to improve its

simplicity. The manual "NSV – An Illustrated Guide for Surgeons," published by Engender Health in 1992, has trained professionals in over 40 countries.

Despite the common belief that men are reluctant to take responsibility for birth control, there is a growing recognition that male involvement is crucial for future population control solutions. According to a United Nations report, vasectomy is used by 10-15% of married couples in countries like Canada, the United States, parts of Europe, and China, but its prevalence is much lower elsewhere. Cultural differences significantly impact vasectomy acceptance, with some countries imposing strict regulations.

When a couple decides to limit their family size, the most effective methods with the least side effects should be available. Despite vasectomy's advantages over female sterilization (tubal ligation) – including fewer side effects, lower risk, quicker recovery, and lower cost – it is less commonly used. Female sterilization is the most common contraceptive method worldwide, highlighting the need for increased promotion and acceptance of vasectomy.

### Technique

Traditional vasectomy is performed under a field block, using local anesthetic to numb the tissue. The NSV technique involves a peri vasal nerve block, anesthetizing a wider area without obscuring the vas deferens. The vas is brought under the skin using a three-finger technique, clamped with a ring fixation clamp, punctured, and spread with a vas dissector. The vas is hooked, elevated, and re-grasped within the ring clamp for excision.

### Uses

- Less Bleeding
- Reduced Pain
- Quicker Recovery
- Reduced Scarring

### Articles

- Vas fixation ring forceps
- Sharp dissecting forceps
- Instruments to occlude the vas: Handheld cautery with disposable tip and sterile holding sheath, Bovie cautery unit with disposable needle point
- Athletic supporter
- Ice pack

### Indications

- Male under 60 years old.
- Couple has at least one child over 1 year old.
- Patient mentally sound and understands sterilization implications.
- Neither partner has been sterilized before.
- Economical affordable

### Contraindications:

- Emotional instability
- Active genital infections
- Past trauma and scarring of the scrotum
- Acute local scrotal skin infections
- Recent trauma

### Procedure:

#### Pre-Procedure:

#### Consultation

- Discuss the decision to undergo a vasectomy with your doctor, understanding it is a permanent form of contraception.
- Review your medical history, including any medications.
- Undergo a physical examination to ensure candidacy.
- Receive pre-procedure instructions, such as shaving the scrotal area and arranging for post-procedure transportation.

**Consent:** Sign a consent form acknowledging understanding of the procedure, its risks, and permanence.

#### Intra-Procedure:

#### Preparation:

- Lie down on the examination table; the scrotal area is cleaned and sterilized.
- Local anaesthesia is administered to numb the scrotum.

#### Procedure:

- A small puncture is made in the scrotum with a special instrument, rather than a scalpel.
- The vas deferens are gently lifted through the puncture, cut, and a small segment removed.
- The ends are sealed using heat (cauterization), tied, or clipped.
- The small puncture heals without stitches.

#### Duration:

The procedure typically takes about 20-30 minutes.

**Post-Procedure:****Immediate Care:**

- Rest briefly after the procedure before going home.
- Apply an ice pack to reduce swelling and discomfort.
- Wear snug underwear or a jockstrap to support the scrotum.

**Recovery:**

- Rest and avoid strenuous activities for a few days.
- Most men can return to work and light activities within 2-3 days but should avoid heavy lifting and vigorous exercise for about a week.
- Manage pain and swelling with over-the-counter pain relievers.

**Follow-Up:**

- Schedule a follow-up appointment to ensure proper healing.
- Undergo semen analysis after several weeks to confirm no sperm presence. Typically, two sperm-free samples confirm sterility, usually taking about 8-12 weeks or 20 ejaculations.

**Complications:**

- Small hematomas or wound infection
- Epididymis congestion
- Sperm granuloma
- Spermatocele
- Pain, ranging from mild to severe, intermittent to constant, reported in 6-15% of post-vasectomy men.

**Nursing Responsibilities:**

- Apply sterile dressings to the puncture

site.

- Monitor the patient for immediate adverse reactions or complications.
- Instruct the patient on wound care and activity restrictions.
- Schedule follow-up appointments.
- Document the procedure details, including the patient's condition before, during, and after the procedure.

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