

## MALE STERILIZATION

William M. Kaylor, Jr., M.D. and Mark J. Fallen, M.D.

Bilateral partial vasectomy is most frequently performed by an urologist but can be done by a properly trained non-urologist as well. An estimated 500,000 to 1 million vasectomies are performed annually and the procedure has been a simple, safe, reliable technique for male sterilization for decades. At present, no causal link between vasectomy and cancer has been found, including prostate and testicular malignancies. In addition, no increase in the subsequent risk of atherosclerosis or significant alteration of endocrine status has been revealed.

A thorough patient history is initially obtained to identify possible health risks of minor surgery. A genital examination is performed to determine the palpable presence of both vasa deferentia and to rule out scrotal or inguinal abnormalities. A prostate examination is recommended in men over the age of 40 years. The surgical technique is then fully described and all potential complications of the procedure reviewed. The most common early complications are generally bleeding or Hematoma, superficial infection, and wound separation. Later complications include chronic scrotal pain, epididymitis, spermatocele, hydrocele, and vasectomy failure. The risk of vasectomy failure is stressed to ensure compliance with postoperative birth control and follow-up confirmatory semen analysis. Despite this risk of failure (less than 1%), the patient should be advised of the permanent nature of bilateral partial vasectomy since reversal is not only expensive but also fails to ensure subsequent pregnancy.

Bilateral partial vasectomy is typically performed as an out-patient procedure under local anesthesia with or without intravenous or oral sedation. Sodium bicarbonate can be added (3 mL in 30 mL 2% lidocaine) to the local anesthetic to prevent stinging discomfort associated with injection. The patient is shaved and the skin prepped with the patient in the supine position. The first vas deferens is palpated and manipulated to just beneath the skin surface and the skin, dartos, and perivasal tissues are infiltrated using a small-gauge needle. A 1 cm incision is made and carried through the skin, dartos, and the three fascial layers surrounding the spermatic cord. Bilateral or single midline incisions can be used. An alternative method known as the "no scalpel vasectomy" can also be used. This technique was first popularized in China and utilizes a specially designed hemostat that is sharpened at its tip to puncture the skin, dartos, and fascia and hook the vas. A second instrument (a vas ring forceps) is then used to secure the vas just prior to excision of a 1 cm segment. The vasal lumina are then electrofulgurated proximally and distally with a needle electrode cautery. A figure eight 3-0 chromic suture closes the fascial layers over the testicular end of the vas and is held until hemostasis is assured. The suture is cut and the skin edge inspected. If good hemostasis is evident, then light pressure is applied and sterile gauze with an athletic supporter is applied. Skin sutures are used only if bleeding from the skin edge is problematic.

An ice pack is held to the scrotal area for 20 minutes in the recovery room to limit swelling. This can be repeated at home for discomfort and swelling over the next 24 to 48 hours. (A bag of frozen vegetables in a pillowcase works nicely.) Patients are encouraged to take Tylenol XS for minor pain, and Vicodin or similar narcotic is dispensed in a small quantity for higher level discomfort. The patient is advised to avoid sexual relations for 7 to 10 days and encouraged to limit strenuous physical activity for the same length of time. Postoperatively, the patients are seen at 4 to 6 weeks and specimen cups are given for semen analysis at 12 and 16 weeks. Patients are instructed to ejaculate 20 times or more prior to testing.