

# Introduction

**T**he purpose of this guide is to provide physicians with an easy-to-use reference for learning about the no-scalpel approach for vasectomy. This book provides a detailed description of each step of the approach, plus drawings illustrating the various steps. Physician-trainees may use it during their training for study and for later reference to further develop proficiency in the technique. Trainers who are using EngenderHealth's *No-Scalpel Vasectomy Curriculum* to teach the technique to other physicians will use this guide as a reference text.

The guide has been designed primarily to assist two audiences: (1) experienced vasectomists around the world who want to change from the traditional incisional technique to the no-scalpel approach, and (2) doctors who have never performed vasectomy and who want to begin to provide vasectomy services using the no-scalpel technique.

No-scalpel vasectomy is a refined approach for isolating and delivering the vas that uses vasal block anesthesia; the technique requires unique surgical skills, including new ways to handle special instruments. Recommended methods of occlusion are presented on pages 43 to 49. Because of the innovative features of no-scalpel vasectomy, EngenderHealth recommends that any doctor interested in learning the approach receive hands-on training with a well-qualified and experienced trainer.

## **Hands-On Training Recommended**

From field experience in the United States, EngenderHealth has learned that even experienced vasectomists have difficulty teaching themselves the no-scalpel technique. Manipulating the special instruments requires manual skills and eye-hand coordination that are different from those used in conventional vasectomy. The skills can be learned with hands-on, supervised training, but even then they take time and practice to master.

A case in the United States illustrates the need for hands-on training. A group of experienced vasectomists attended a one-day group orientation on no-scalpel vasectomy that consisted of a lecture, observation of the procedure, and limited practice with a scrotal model. They then received the special no-scalpel instruments and returned to their practices to begin using the technique. Three months later, an EngenderHealth trainer evaluated the physicians' operating performance. The doctors understood and performed key elements of the procedure adequately; they stated that they had mastered about 80% of the technique without hands-on instruction. Yet the procedures observed by the trainer still resulted in too much bleeding; benefits of the no-scalpel technique were therefore diminished. Consequently, the EngenderHealth trainer provided hands-on training to help the surgeons fully master the no-scalpel technique.

No-scalpel vasectomy was developed and first performed in China in 1974 by Dr. Li Shunqiang of the Chongqing Family Planning Scientific Research Institute, located in Sichuan Province. At that time, vasectomy was unpopular with Chinese men, and tubal occlusion was the predominant method of voluntary sterilization. Today in Sichuan, vasectomy outnumbers tubal occlusion by a ratio of four to one; in the rest of China, tubal occlusion outnumbers vasectomy by five to one. More than 10 million Chinese men have already undergone no-scalpel vasectomy.

Under the sponsorship of EngenderHealth, an international team of experts visited Dr. Li Shunqiang in 1985 and observed his refined vasectomy technique. They were convinced that the technique should become the standard approach for vasectomy. One of the team members, Dr. Phaitun Gojaseni, introduced the no-scalpel technique in Thailand upon his return, while another member of the team, Dr. Marc Goldstein, performed the first no-scalpel vasectomy in the United States.

Based upon the findings of the international team, EngenderHealth recommended that training in the no-scalpel approach to the vas should be provided to doctors in other countries and that this would be facilitated if the instruction could take place outside of China. EngenderHealth's initial work in no-scalpel

## History of No-Scalpel Vasectomy

vasectomy focused on experienced vasectomists in large ongoing vasectomy services (Huber, 1989). In 1986, Dr. Li Shunqiang and Dr. Goldstein traveled to Bangkok to work with experienced vasectomists from Bangladesh, Nepal, Sri Lanka, and Thailand. Dr. Apichart Nirapathpongporn of Thailand was trained at this time. Dr. Goldstein and Dr. Apichart then trained other surgeons in their home countries. Clinical training then expanded to other countries. In several countries in Africa, where vasectomy is just being introduced, doctors who have never performed vasectomy are now being trained only in the no-scalpel technique.

**Clinical Findings** No-scalpel vasectomy results in fewer hematomas and infections than does conventional incisional vasectomy (Table 1).

**TABLE 1. Percentage of vasectomies in which infection or hematoma or bleeding occurred, by type of vasectomy and study**

Study	No. of vasectomies	% with infections	% with hematoma or bleeding
<b>Incisional vasectomy</b>			
Philp, Guillebaud, & Budd, 1984	534	1.3	4.5
Kendrick et al., 1987	65,155	3.5	2.0
Nirapathpongporn, Huber, & Krieger, 1990	523	1.3	1.7
Alderman, 1991	1,224	4.0	0.3
Sokal et al., 1999	627	1.3	10.7
<b>No-scalpel vasectomy</b>			
Nirapathpongporn, Huber, & Krieger, 1990	680	0.2	0.3
Li et al., 1991	179,741	0.9	0.1
Li et al., 1991	238	0.0	0.0
Viladoms Fuster & Shihua Li, 1994	400	0.0	0.0
Arellano Lara et al., 1997	1,000	0.0	2.1
Kumar et al., 1999	4,253	0.047	0.07
Sokal et al., 1999	606	0.2	1.7

Source: Adapted from Pollack & Barone, 2000.

Men undergoing no-scalpel vasectomy reported less pain during the procedure and early in the follow-up period than did men having an incisional vasectomy, and also reported earlier resumption of sexual activity after surgery (Skriver, Skovsgaard, & Miskowiak, 1997; Sokal et al., 1999).

Neither conventional nor no-scalpel vasectomy is time-consuming. However, there are reports of decreased operating time when skilled providers use the no-scalpel approach (Li et al., 1991; Nirapathpongporn, Huber, & Krieger, 1990). For example, in the United States, a 40% reduction in operating time has been reported with no-scalpel vasectomy (Li et al., 1991).