

Update on Vasectomy Occlusion Techniques

First, two important qualifying statements:

- This discussion of techniques must in no way be construed as recommending one or more techniques over others; it is merely a report on current practice.
- No-Scalpel Vasectomy is NOT a method of occlusion; once the vasa have been delivered through the wall of the scrotum, the practitioner occludes the vasa using his or her preferred technique.

Occlusion Techniques

The following methods of occlusion are frequently used in the United States during both conventional incisional and no-scalpel vasectomy.

1. Ligation with sutures
2. Cauterization (fulguration)
3. Application of metal clips
4. Fascial interposition
(not an occlusion technique per se, but used to help guard against recanalization)

Most Common Methods

A recent (1995) survey of vasectomists in the United States indicates that cauterization, or fulguration, of the vasal lumen during vasectomy is the most frequently employed method of occlusion. Fully 70% of all vasectomists cauterize. The second most popular occlusion technique involves ligation, used by about 60% of practitioners. Additionally, about one quarter of all vasectomists occlude by applying metal clips to the vas deferens.

U.S. Vasectomy Occlusion Methods in 1995		
Occlusion Method	All	Urologists
Cautery	70.5 %	70.0 %
Ligation	59.0 %	60.2 %
Clips	25.6 %	23.7 %
Fascial Interposition	48.2 %	49.1 %

Source: Urology 52: 688, 1998

Trends in Occlusion

Perhaps of even greater interest to practitioners are the trends in the use of occlusion methods identified by the recent study. Physicians want to know what directions others in the field are taking and why. From the recent survey, which compared occlusion techniques in 1995 to those used in 1991, several trends are evident.

First, and most important, in recent years there has been a clear increase in the reliance on multiple occlusion methods for each patient. The reason for this trend is not known, but physician worries about liability in case of failure

have probably played a role.

Interestingly, practitioners from different specialties have come to rely primarily on different combinations of occlusion techniques. Urologists, for example **doubled** their use of **cautery -plus- ligation** in only four years. Family physicians increased their use of **cautery -plus- clips** almost **fifteenfold** in those same four years.

Second, in recent years there has been a marked increase in the use of cauterization, especially by urologists. In the study, no distinction is drawn between the use of thermal cautery and electro-cautery, so

U.S. Vasectomy Occlusion Methods Use by Specialty in 1995				
Occlusion Method	All	Urologists	Family Practitioners	General Surgeons
Ligation & Cautery	38.4 %	39.9 %	33.4 %	34.3 %
Ligation Only	18.4 %	17.7 %	15.7 %	29.3 %
Cautery Only	17.6 %	18.7 %	16.1 %	10.6 %
Cautery & Clips	14.5 %	11.4 %	30.2 %	13.5 %
Clips Only	8.9 %	9.7 %	2.8 %	10.0 %
Ligation & Clips	2.2 %	2.6 %	0.0 %	2.3 %

Source: Urology 52: 688, 1998

it is not known which of the two methods is now preferred. Schmidt's 1992 study strongly suggests that thermal (hotwire) cautery is better because it results in 50 times fewer cases of sperm granuloma post-vasectomy, but whether physicians follow this in practice is unknown.

Third, the percentage of physicians who use fascial interposition is rising. Currently over 55% of vasectomists avail themselves of this technique. Again, concerns about recanalization have probably been a factor in this change.

References and Resources

Video

No-Scalpel Vasectomy: The Goldstein Video. Marc Goldstein, M.D., F.A.C.S. of the New York Hospital-Cornell Medical Center. Training Video. English. VHS. 1996. Product Number: VED-2 [Go to the Video Product List](#)

Manual

No-Scalpel Vasectomy: An Illustrated Guide for Surgeons. Second Edition. New York, AVSC International, 1997. Product Number: VED-1 [Go to the Vasectomy Product List](#)

Cauteries

Product Numbers: AM-21, CH-HI, CT-2121 [Go to the Vasectomy Product List](#)

Articles

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4. Esho, J.O., and Cass, A.S. Recanalization rate following methods of vasectomy using interposition of fascial sheath of vas deferens. *Journal of Urology* 120: 178-179, 1978

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