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## Findings on the Prevalence and Quality of Cryopreserved Sperm Obtained During Microsurgical Reconstruction

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**Objective:** Sperm banking during microsurgical reconstruction is routinely performed to provide sperm for future use with IVF and ICSI in instances of surgical failure. Although the literature addresses the fate of such banked sperm, very little information exists concerning the actual intraoperative findings in these cases. We examined the patterns and quality of sperm cryopreservation during reconstruction for obstructive azoospermia.

**Design:** Retrospective review of consecutive cases by a single surgeon.

**Materials and Methods:** The intraoperative findings from 85 patients who underwent microsurgical reconstruction were reviewed. Obstruction was due to vasectomy in 74 cases, and idiopathic in 11 patients. Surgical procedures included bilateral vasovasostomy (Bil. VV), vasovasostomy with epididymovasostomy (VV/EV), and bilateral epididymovasostomy (Bil. EV). Only motile sperm was cryopreserved at surgery and a formal semen analysis was performed in a single andrology laboratory on all retrieved specimens. Pre-freeze total motile sperm counts (TMC) were calculated and are reported here.

**Results:** Among all patients, 63% had motile sperm within the intraoperative fluid at surgery. Other results are given below:

	Total # patients	# Pts. with motile sperm at surgery	# Pts. accepting banking	TMC of banked sperm (millions)	Pre-freeze motility (%) range of sperm
Bil. VV	45	20 (45%)	18 (90%)	8.0 ±3.2	1-60
VV/EV	21	16 (76%)	11 (69%)	3.5 ±1.1	1-60
Bil. EV	19	17 (89%)	16 (94%)	9.8 ±3.3	0.5-50

**Conclusion:** Although the likelihood of finding motile sperm varies by the procedure performed, it can be retrieved in most cases of microsurgical reconstruction. In addition, most patients will accept banked sperm if it is offered to them. Reasonably good sperm quality can be expected with each type of surgical procedure performed.