No-Scalpel Midline Scrotal Mini-Incision Two Layer Vasovasostomy: An Approach with Minimal Morbidity and High Efficacy

Introduction and Objective: The request for vasovasostomy increases the tendency to safer and more effective methods. We explain our experience in two layer vasovasostomy using no-scalpel midline mini-incision.
Materials and Methods: During an 11-year period, 187 male underwent vasectomy reversal using no-scalpel midline scrotal mini-incision two layer vasovasostomy under spinal anesthesia by a single surgeon. Sperm granuloma remained intact. Oral analgesic use >2 doses was considered as postoperative significant pain. Success was defined as presence of sperm in semen at 1 or 3 or 6 months after operation or pregnancy. Asospermia after primary presence of sperm in postoperative semen was defined as secondary obstruction.
Results: Mean age and mean vasectomy-vasovasostomy interval were 41.07±8.81 and 6.05±4.18 years. Microscopic/loupe ratio and unilateral/bilateral ratio of cases were 172(92%)/15(8%) and 95(50.8%)/92(49.2%), respectively. In 166 cases (88.8%), fluid exited from the testicular end of vas (clear:25.3%; creamy:31.3%; turbid:43.4%). Mean operative time was 73.29±16.72 minutes (the last 7 surgeries: 65.86±9.72 minutes). The same day, all patients were discharged and returned to ordinary activities. The only complication was significant pain in one patient (0.5%). Success and secondary obstruction rates were 84% (unilateral:74.7%; bilateral:94.2%) and 3.9%. Mean sperm count was 9.57, 11.64, 18.64 millions/ml semen at 1, 3, 6 months after operation respectively. Pregnancy rate was 69.1% (71.2% in cases with success and without secondary obstruction). No significant differences were seen in success rate between age groups and in success and pregnancy rates between groups of magnification, presence or absence of fluid exit from testicular end of vas and its multiple appearances. Success and pregnancy rates in vasectomy-vasovasostomy interval ≤6 years (90.1%, 64.4%) and bilateral vasovasostomy (93.2%, 69.6%) were significantly ($P<0.05$) higher than group with interval >6 years (72.7%, 44.7%) and unilateral procedures (75%, 43.8%) respectively. Microscopic vasovasostomy (75.14±18.94 min) had significantly shorter mean operative time than loupe vasovasostomy (107.13±7.23 min).
Conclusion: No-scalpel midline mini-incision two layer vasovasostomy results in minimal morbidity, fast recovery and superior outcomes. Vasectomy-vasovasostomy interval and laterality influence success and pregnancy rates.