



Title	Systematic Review of Post-vasectomy Testing to Confirm Sterility
Agency	ASERNIP-S, Australian Safety and Efficacy Register of New Interventional Procedures – Surgical PO Box 688, North Adelaide, South Australia 5006, Australia; Tel +61 8 8239 1144, Fax +61 8 8239 1244, college.asernip@surgeons.org; www.surgeons.org/asernip-s
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Aim

To make evidence-based recommendations on the appropriate protocol for post-vasectomy testing to confirm sterility.

Conclusions and results

The review included 65 studies, whereof 2 were comparative and 63 were case series or case reports. The quality of the evidence was poor. The evidence base was weakened by the lack of comparability among studies and losses to followup (with some studies reporting up to 66% loss). While compliance varied greatly among studies, it did not appear to depend on the number of tests in the post-vasectomy testing protocol or the timing of the first or last tests.

The time taken to reach azoospermia varied widely, although the median percentage of azoospermic patients consistently stayed over 80% from 3 months onward and after 20 ejaculations. The percentage of patients reaching azoospermia between the first and second tests always increased, and this increase got smaller when the initial tests were conducted later.

A small proportion of patients exhibited persistent non-motile sperm, and some patients showed the reappearance of sperm after azoospermia had been shown. The reappearance of sperm occurred up to 22 months post-vasectomy.

Pregnancies that were confirmed by DNA analysis showed that pregnancy could occur 10 years post-vasectomy.

Recommendations

The evidence presented in this review supports a post-vasectomy testing protocol with only one test (showing azoospermia) at 3 months post-vasectomy and after a minimum of 20 ejaculations. If the sample is positive at 3 months, then periodic testing can continue until azoospermia is reached. In patients who do not reach azoospermia after prolonged testing, cautious assurance of success could be given provided only low levels of

non-motile sperm are present. No evidence was found to support a recommendation of histological testing of the excised vas deferens. The proposed protocol could considerably reduce costs of post-vasectomy testing.

Methods

Searching Current Contents, EMBASE, MEDLINE and The Cochrane Library until March 2003 identified relevant literature on post-vasectomy semen analysis. Studies reporting time to azoospermia, number of ejaculations to azoospermia, time to loss of sperm motility, pregnancy, repeat vasectomy patient compliance with test protocol, sperm function post-vasectomy, and histological analysis of vas specimens were included for review. Studies, with no language restrictions, detailing comparative studies, case series and case reports were included (no RCTs were available).