

Autonomic Dysreflexia Among Men With Spinal Cord Injury Undergoing Penile Vibratory Stimulation

THOMAS J. PSHAK AND
RANDALL B. MEACHAM

From the School of Medicine, University of Colorado, Denver, Colorado.

Note: Postings to *Androlog* have been lightly edited before publication.

The management of an ejaculation among men with spinal cord injuries has been greatly improved in recent years through the use of electroejaculation and vibratory stimulation. Moreover, advances in the use of assisted reproductive technologies has contributed to better utilization of the sperm obtained from such patients. One of the challenges that may be encountered in the management of this population of patients, however, is the development of autonomic dysreflexia in response to electroejaculation or vibratory stimulation. In this edition of *Androlog*, Dr Jim Daitch describes such a patient and asks for the opinion of *Androlog* contributors.

Dr. Daitch posed his question:

I have a 44-year-old patient who is a C6–C7 quadriplegic with a history of autonomic dysreflexia, upon whom I performed penile vibratory stimulation in my office. He was pretreated with nifedipine 10 mg sublingually, and his blood pressure was continuously monitored. The patient's blood pressure increased to a maximum of 152/90 at which time he felt nauseated and diaphoretic. The penile vibratory stimulation was withdrawn, and an additional 10 mg of sublingual nifedipine was given. The penile vibratory stimulation was repeated and ejaculation occurred; maximum blood pressure was 138/90, but the patient developed substernal chest tightness.

His symptoms seem disproportionately severe given the blood pressure changes. Assuming cardiac workup is normal, do you think penile vibratory stimulation could be done again in the office setting? Would penile vibratory stimulation be successful if a general anesthetic or midazolam sedation were given?

Dr Robert Oates replied and offered some suggestions:

I agree that his response seems exaggerated; did you check the blood pressure in his other arm? Perhaps there would be a discrepancy. Penile vibratory stimulation would not

Androlog Summary

work with general anesthesia because it depends on a reflex reaction (stimulation of the ejaculatory reflex center located around T12–L1). Sedation would probably blunt that as well. Was he completely supine or was his head raised? His bladder should be empty as well. Perhaps cryopreserving his next specimen and moving to in vitro fertilization would be appropriate if his autonomic dysreflexia cannot be controlled.

Dr Peter Schlegel offered his thoughts and suggested caution in this situation:

It would seem risky, at best, to perform an elective procedure that is likely to induce angina if other alternatives exist. Spinal anesthesia is highly effective at ablating autonomic dysreflexia and carries little to no risk for such a patient. Alternatively, a very limited stimulation could be tried. Unfortunately, it sounds as though you have already attempted that approach without success.

Dr Martin Bastuba describes a useful plan for the ongoing evaluation and treatment of such patients:

I would not give up yet, especially if the first ejaculate looked at all useful for an insemination. Penile vibratory stimulation with inseminations may be the couple's only realistic alternative for financial reasons. These couples are usually highly motivated. The cardiac work up is critical, and the cardiologist should be informed of the plan prior to that work up. When the work up comes back negative, as expected in a 44-year-old, it is time for a strong informed consent as to possible risks for the procedure in this setting. On the other hand, if cost is a nonissue for the couple, then sperm retrieval in an operating room setting for use with inseminations or in vitro fertilization would be an easy alternative. In my experience, in vitro fertilization is often required secondary to poor seminal parameters on electroejaculation specimens. Such specimens sometimes improve with repeated attempts.

Related Reading

- Brackett NL, Ferrell SM, Aballa TC, Amador MJ, Padron OF, Sonksen J, Lynne CM. An analysis of 653 trials of penile vibratory stimulation in men with spinal cord injury. *J Urol.* 1998;159:1931–1934.
- Sonksen J, Ohl DA. Penile vibratory stimulation and electroejaculation in the treatment of ejaculatory dysfunction. *Int J Androl.* 2002;25:324–332.
- Sheel AW, Krassioukov AV, Inglis JT, Elliott SL. Autonomic dysreflexia during sperm retrieval in spinal cord injury: influence of lesion level and sildenafil citrate. *J Appl Physiol.* 2005;9:53–58.