

Ejaculation induced by electrical stimulation of the intermesenteric nerves in anaesthetised rat

Objective:

To induce a complete ejaculatory response in anaesthetised rat. In this model, physiological markers of the emission and expulsion phases of ejaculation induced by electrical stimulation of the intermesenteric nerves (IMN), which contains both pelvip erineal afferents and efferents, can be measured. Contractions of the seminal vesicle and the bulbospongiosus muscle are regarded as physiological markers of, respectively, emission and expulsion phases of ejaculation (figure 1).

Summarized methodology:

Rats are anaesthetised with isoflurane and seminal vesicle pressure (SVP) as well as bulbospongiosus muscle (BS) electrical activity (BS EMG) are monitored. A stimulating electrode is placed on the IMN and electrical stimulation is applied consisting of 5 square wave pulses (1 ms duration, 6 V, 60 Hz) during 30 s.

Endpoints:

- Number and latency of ejaculations (corresponding to the expulsion of a seminal plug)
- Number, latency, amplitude, duration and area under the curve of SVP increases
- Number, latency, frequency and duration of BS contractions

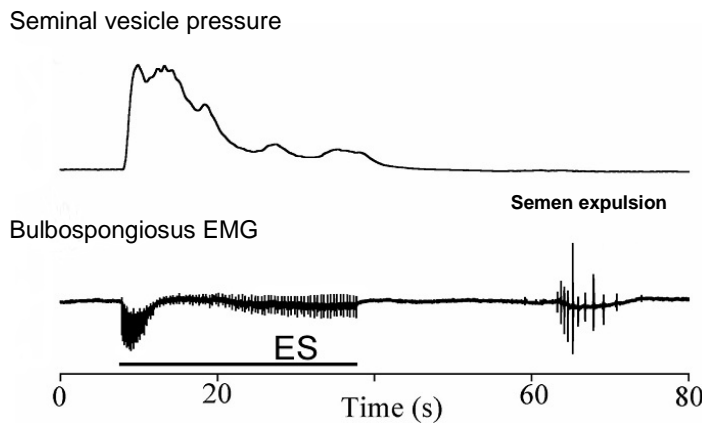


Figure 1: Example of seminal vesicle pressure and bulbospongiosus muscle electromyogram (EMG) responses following electrical stimulation (ES) of the intermesenteric nerves (Pelvipharm, internal data).

Related Pelvipharm bibliography:

Bernabé, J. et al. *Biol Reprod* (2007) : 77:717-722

Links to applicable therapeutic areas / targeted disorders:

- Sexual pharmacology

* Ejaculatory Disorders