

Title: Clinical and electrophysiological indices as predictors of fertility in males with spinal cord injury

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Objective: Prospective observational pilot study to assess the fertility spinal cord injured males (SCI) using penile vibrator and to predict the response to PVS using clinical tests and electrophysiological tests.

Materials and Methods:

Paraplegic males, duration > 6 months, T6 or below AIS A were included.

Assessment of

- (i) clinical reflexes → bulbocavernosus response (BCR), hip flexor response (HFR), cremasteric reflex and superficial abdominal reflexes ,
- (ii) somatic responses → abdominal contraction, hip adduction during stimulation
- (iii) electrophysiological responses → H reflex from Soleus and F wave from tibial nerve
- (iv) Response to PVS

Specificity and sensitivity for Bulbocavernosus reflex (BCR) → 90% (CI = 10%).

Total sample size was calculated as 72 (36 → BCR +ve & 36 → BCR -ve).

- Statistical analysis → Pearson chi square & Fischers exact test

Results:

Among the 23 patients recruited, seven had successful ejaculation with Penile Vibratory Stimulation (responders). All persons with T6-T8 neurological level of injury (n=4) and three among persons with neurological level T9 - T12 (n=19) were responders. Among these seven patients, 6 patients had somatic responses during stimulation, whereas, two of the responders showed correlation with electrophysiological tests.

Conclusion : Level of injury is a predictor of fertility using PVS in males with spinal cord injury.