



The effect of sacral neuromodulation on pregnancy: a systematic review

Mahran A, Soriano A, Safwat AS, Hijaz A, Mahajan ST, Trabuco EC, Siegel SW, El-Nashar SA

Abstract:

INTRODUCTION AND HYPOTHESIS: To evaluate the effects of sacral neuromodulation (SNM) on pregnancy and the impact of delivery on SNM function. **METHODS:** A systematic search was conducted through January 2016. We selected studies including women who had SNM and a subsequent pregnancy. **RESULTS:** Out of 2,316, eight studies were included, comprising 22 patients (26 pregnancies). SNM indications were Fowler's syndrome in 11, urinary retention in 6, fecal incontinence in 1, fecal and urinary urgency in 1, overactive bladder in 1, intractable interstitial cystitis in 1, and myelodysplasia in 1. SNM stayed on in 8 pregnancies. In the remaining 18 pregnancies in which the device was deactivated, 7 had recurrent urinary tract infections, including 1 with pyelonephritis and 2 who requested reactivation owing to recurrent symptoms. Outcomes were reported in 25 pregnancies, 16 had Cesarean section (CS) and 9 had vaginal delivery, including 2 operative deliveries. Out of 25, two infants had pilonidal sinus and motor tic disorder (exhibited at the age of 2 years), both from the same mother. After delivery, SNM was functioning in 15 (60%), 4 required reprogramming, and 3 required replacement (1 had recurrence of fecal incontinence after her operative delivery with evidence of displaced leads and 1 patient reported decreased SNM effects after her two CS), and 3 decided to remove the device (2 out of 3 patients were free of symptoms after SNM deactivation and requested removal). **CONCLUSION:** Within the current limited evidence, the decision regarding SNM activation or deactivation should be individualized. A registry for those patients is recommended.

Keywords:

Delivery and outcome; Pregnancy; Sacral neuromodulation

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