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Spinal cord stimulation: Retrograde occipital lead placement, technique and complications

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Spinal cord stimulation (SCS) utilizing paddle lead placement in the upper cervical spine remains difficult due to the dynamics of the vertebral anatomy and relative paucity of data regarding optimal surgical technique. Equipment optimization and improving surgical proficiency are paramount to maximize patient outcomes. Our objective was to determine if a posterior approach utilizing a thoracic paddle lead in the upper cervical spine could yield results which were superior to previously reported techniques. We report a case series which was conducted over a 6 year period, from 2008-2014. 32 patients, ages 35-96, with diagnoses that included reflex sympathetic dystrophy, cervical post laminectomy syndrome and degenerative disc disorder were included in this study. Symptomatic complaints included, but were not limited to, occipital headaches, axial cervical pain and upper extremity neuropathic pain. All patients had failed conservative medical management which included opiate and non-opiate medications, as well as previous surgical correction. Outcome measures included surgical revisions, post-operative complications and lead removal for any/all causes. The range of follow-up was 3 months to 2 years. Seven lead revisions were performed in total, four of which were due to lead migration. Two of the remaining patients fractured or dislodged their leads as a result of a fall and one pulse generator wound infection was noted. No significant spinal cord injury or neurologic sequelae occurred in this sample and blood loss was minimal. In conclusion, we have demonstrated this technique to be a safe and effective method of lead implantation with reduced morbidity in comparison with previous techniques which have utilized alternative anchoring methods.

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Overweight or obesity and risk of developing rheumatoid arthritis among women: A pooled analysis from two large prospective cohort studies

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The objective of this study was to examine the relationship between being overweight or obese and developing rheumatoid arthritis (RA) in two large prospective cohorts, the Nurses' Health Study (NHS 1984-2014) and Nurses' Health Study II (NHSII 1991-2013). We followed 76,597 women aged 30-55 years enrolled in NHS and 93,392 women aged 25-42 years in NHSII at baseline and free from RA or other connective tissue diseases, which provided lifestyle, environmental exposure and anthropometric information through biennial questionnaires. We used the pooled data from two large cohorts and assessed the association between time-varying body mass index (BMI) in WHO categories of normal, overweight and obese (18.5≤25, 25.0 ≤ 30, ≥30.0 kg/m2) and incident RA meeting the 1987 American College of Rheumatology (ACR) criteria. We estimated HRs for overall RA and serologic subtypes with Cox regression models adjusted for potential confounders. During 4,832,369 person-years of follow-up, we validated 1220 incident cases of RA. There was a significant trend towards increased risk of all RA among overweight and obese women [HR (95% CI): 1.23 (1.08, 1.40) and 1.36 (1.17, 1.58), p for trend=0.001]. Among RA women aged 55 years or younger, this association appeared stronger [HR 1.48 (1.20, 1.81) for overweight and 1.76 (1.42, 2.20) for obese women (p trend <0.001)]. In conclusion, risks of RA were elevated among overweight and obese women, particularly among young or middle aged women.

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