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SENSORY SEXUAL FUNCTION AFTER SPINAL CORD INJURY

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Abstract

Studies on the influence of spinal cord injuries on female sexuality have been conducted over the last seven years. This data explains how specific injury patterns influence various aspects of sexual function. The findings support the hypothesis that the sympathetic nervous system regulates the autonomic nervous system. Orgasm is an autonomic nervous system reflex response to genital vasoconstriction.This data explains how specific injury patterns influence various aspects of sexual function. The findings support the hypothesis that the sympathetic nervous system regulates the autonomic nervous system. Orgasm is an autonomic nervous system reflex response to genital vasoconstriction.

Based on these findings, a new system for classifying sexual function in women with spinal cord injury (SCI) is being developed. Furthermore, studies on the treatment of sexual dysfunction in women with spinal cord injury are being conducted.

Introduction

The influence of spinal cord injury (SCI) on female sexual response and sexuality is probably better understood than that of any other neurologic disorder. From a time when only questionnaire studies were available to address the effects of cord injury on female sexuality, there is now a relatively large body of literature documenting the impact of various types of cord injuries on female sexual response.

Treatment methods have also begun to be investigated. The purpose of this chapter is to review the literature on the impact of SCI on female sexual response, to discuss the issue of sexual dysfunction diagnosis in the Treatment options are being investigated.

The influence of SCI on female sexuality

Traumatic spinal cord injury frequently affects young women and men during their sexually active and reproductive years. A significant number of patients report sexual dysfunction in addition to deficits in motor and sensory function and autonomic control. Sexual dysfunction has a significant influence on quality of life and interpersonal relationships in both able-bodied and spinal cord-injured humans. Early research has shown that sexuality after spinal cord injury remains a major motivator in life and that successful sexual rehabilitation has a significant influence on the overall rehabilitation outcome.

There is little known about the influence of spinal cord injury on sexual health and little attention has been paid to this.

Effect of SCI on female sexual arousal

Female genital sexual arousal is controlled by two distinct pathways: a psychogenic pathway and a reflex pathway. As a result, the effect of SCI on sexual response is determined by which of these pathways is altered by the neurologic injury.

The effects of psychogenic and psychogenic combined with manual genital stimulation on heart rate, respiratory rate, blood pressure, vaginal pulse amplitude (as a measure of genital arousal), and subjective sexual arousal were studied in women with complete cord injury at or above the level of the 6th thoracic segment (T6). With audiovisual erotic stimulation alone, women with complete upper motor neuron injuries affecting their sacral spinal cord had significant increases in subjective sexual arousal but no increase in vaginal pulse amplitude. Adding manual genital stimulation to audiovisual stimulation increased vaginal pulse amplitude without prolonging the increased subjective sexual arousal. These findings were interpreted as evidence of reflex genital vasoconstriction in women with PCOS.

Women with incomplete SCI who were first subjected to psychogenic genital stimulation and then to manual genital stimulation had higher levels of genital arousal with manual stimulation, regardless of whether they also had higher levels of subjective arousal. This was interpreted as evidence for the preservation of reflex genital arousal in women with sacral spinal segment upper motor neuron injuries.

Effects of SCI on orgasm

Women with SCI were significantly less likely to experience orgasm than able-bodied control subjects. In comparison to 100% of able-bodied control subjects, 55% of women with SCI reported the ability to achieve orgasm. The characteristics of orgasm in able-bodied versus cord-injured subjects were also investigated. Despite previous reports that non-genital stimulation is frequently used to achieve orgasm, only one woman in this study (Sipski et al., 2001) chose non-genital stimulation in conjunction with genital stimulation. The average latency to orgasm was significantly longer in cord-injured subjects than in able-bodied subjects (26 min versus 16 min). The ability of women with spinal cord injuries to achieve orgasms was also compared. There were no statistically significant differences in orgasmic ability based on subject grouping based on remaining sensation at the T11–L2 or S2–S5 dermatomes, completeness of injury, or lower motor neuron damage affecting sacral cord segments.

Documentation of sexual dysfunction in women with SCI

The above documentation of the impact of SCI on sexual response provides a framework for understanding how the injury affects sexual response. It does not, however, tell us whether a woman with a spinal cord injury has sexual dysfunction. According to the International Consensus Development Conference on Female Sexual Dysfunction (Basson et al., 2000), sexual dysfunction is associated with personal distress. As a result, a woman with a spinal cord injury who experiences changes in her sexual response as a result of her injury but does not complain of distress does not have sexual dysfunction. A woman with a SCI who has no injury-related changes in her sexual response but complains of sexual distress has sexual dysfunction. To address this lack of documentation, the Female Spinal Sexual Function Classification (FSSFC) was proposed (Sipski et al., 2002). Based on previous research, this classification system defines four categories of sexual function after SCI, documents their presence and associated characteristics, and determines which aspects of the neurologic examination should be used to determine the likely capacity for sexual response. Based on the neurologic examination and detailed history, it should be possible to document the expected effects of the injury on specific components of sexual response, as well as whether the subject reports any sexual dysfunction. This latter point becomes especially important when discussing clinical trials for treating sexual dysfunction after SCI. The FSSFC is currently being used in a study of women with SCI and multiple sclerosis to determine its utility in documenting remaining sexual function and the presence or absence of sexual dysfunction in women with SCI.

Improving Sexual Sensitivity

Several studies have begun to test therapies to improve sexual sensitivity in SCI women. Except for one drug study that tested the efficacy of medications used in men, the majority of these studies used treatments previously used in able-bodied women. . With the exception of one drug study that tested the efficacy of medications used in men, the majority of these studies used treatments previously used in able-bodied women . The first set of therapies can be classified as cognitive. It was unclear whether these women had experienced sexual dysfunction. False positive feedback was found to increase psychogenic arousal in women with either complete or incomplete SCI; however, genital arousal was only increased in women with incomplete injuries who had sensory function preserved in the T11–L2 dermatomes. . According to the findings of this study, cognitively based therapies may be beneficial in improving function in this subset of women with SCI.

In comparison to other neurologic injuries, understanding of the effect of SCI on female sexual response is relatively advanced. A female study with predominantly spinal multiple sclerosis has recently begun to see if the influence of spinal multiple sclerosis lesions on sexual response in women is similar to that of traumatic SCI. It is hoped that understanding the influence of SCI on female sexual response can be used to study not only multiple sclerosis but also other neurologic disabilities.

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