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Sexual Dysfunction with Stroke

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SEXUAL DYSFUNCTION WITH STROKE

by

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Bachelor of Science in Physical Therapy
University of North Dakota, 1998

An Independent Study

Submitted to the Graduate Faculty of the

Department of Physical Therapy

School of Medicine

University of North Dakota

in partial fulfillment of the requirements

for the degree of


Master of Physical Therapy

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May
1999



This Independent Study, submitted by Scott R. Ziegler in partial fulfillment of the requirements for the Degree of Master of Physical Therapy from the University of North Dakota, has been read by the Faculty Preceptor, Advisor, and Chairperson of Physical Therapy under whom the work has been done and is hereby approved.


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Department Physical Therapy

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ABSTRACT

A cerebral vascular accident (CVA) or stroke is one of the most common traumatic diseases in the world today that can lead to death or long-term physiological or psychological disability. The level of disabling features that each person experiences following a CVA can range from barely noticeable signs to the extreme loss of functional ability. Sexual functioning in stroke survivors is an area in the rehabilitation program that has often been overlooked or neglected. Available information and research regarding sexual dysfunction in stroke survivors are also very limited.

The purpose of this study is to examine the problem of sexual dysfunction within the stroke patient population. The procedure being used to perform this study will be a review of the literature focusing on the epidemiology of a stroke, the physiological changes in sexuality with aging, the probable causes of sexual dysfunction with stroke, sexual functioning in post-stroke patients, and prevention and treatment for sexual dysfunction. The desired outcome is to increase the cognizance of healthcare providers to the problem of sexual dysfunction with stroke.

CHAPTER I

INTRODUCTION

One of the most common afflictions that lead to major long-term morbidity in North America is a cerebral vascular accident (CVA).¹ A CVA or stroke is an extensive disease that can leave patients physically, cognitively, and emotionally handicapped. These patients very seldom make a complete residual-free recovery.² Patients and their families are subjected to a drastically changed lifestyle as a consequence of the stroke. Dramatic adjustments occur occupationally, socially, physically, and emotionally.³ As stroke patients are subjected to these changes, it often affects their self-images, which in turn may affect their sexual relations. Therefore, it is not surprising that strokes have been found to cause serious disruptions of sexual functioning in post-stroke patients.²

Sexual functioning following a CVA is a neglected topic in many rehabilitation programs. The subject is rarely discussed in traditional medical reference texts and many health care providers quite simply do not know where to find pertinent information on the topic.³ Furthermore, even though sexual dysfunction is a topic of concern for many patients and their sexual partners, there is generally a reluctance to raise the issue with health care professionals.¹ Stroke patients who do experience sexual dysfunction may believe that this is a normal repercussion of a CVA without any effective treatment options.³

There is a definite lack of available information and research regarding sexual dysfunction for stroke survivors of any age group. Society has shown a tendency to deny the sexuality of the elderly or physically disabled people in general, even though sex or sexual relations are a significant part of normal life. These people are often categorized as being asexual.¹ According to Ducharme et al,⁴ sexuality, broadly defined, is the most important part of rehabilitation because of its relationship to self-esteem, body image, interpersonal attachment, and motivation. One must remember that sexuality is a form of “social intercourse” which should be a valued goal. Therefore, sexuality and its various expressions should be given a major consideration in successful planning in the rehabilitation process for stroke patients and all physically disabled people.² Because sexuality is considered to comprise a whole range of behaviors from smiling to orgasm, the detrimental effect of a stroke can interfere with sexual functioning on many levels.⁵

The purpose of this literature review is to examine the problem of sexual dysfunction with the stroke patient population. The next chapters will focus on the epidemiology of a stroke and the physiological changes in sexuality with aging, possible causes of sexual dysfunction with stroke, sexual function in post-stroke patients, prevention and treatment for sexual dysfunction.

CHAPTER II
EPIDEMIOLOGY OF STROKE AND PHYSIOLOGICAL CHANGES
IN SEXUALITY WITH AGING

Each year in the United States, there are well over 500,000 new cerebral vascular accidents making it the third leading cause of death.⁶ Today, there are approximately three million stroke survivors in the United States and, due to this significant rate, the demand for effective stroke rehabilitation is vital. This rate is double compared to the survival rate 25 years ago.⁷

With regard to incidence, cerebral vascular accidents have no preference for gender but do occur more often in the elderly compared to the younger age groups.⁶ The rate of incidence increases from 3 per 100,000 individuals per year in the third and fourth decades of life to 300 per 100,000 individuals in the eight and ninth decades of life. There is an 80% chance of death following a stroke for people aged 65 or older.⁷

Strokes are often described as a sudden onset of neurologic dysfunction caused by an insufficient blood supply to the cerebral vasculature and its brain tissue. They typically originate from either an embolism, hemorrhage, or thrombosis with the latter of the three occurring most frequently.⁸ The effects of a stroke can vary widely from the absence of noticeable signs to the extreme signs of loss of function in many areas. These may include hemiplegia and

losses of sensation, speech, vision, muscle power, and understanding along with psychological and personality disruptions.⁹ One area often bypassed by health professionals is the impact that a stroke may have on sexuality or sexual function. Until recently, there has been very little emphasis placed on sexual problems or sexual adjustment for stroke patients in their rehabilitation.⁸ Before investigating these specific problems in post-stroke patients, it is necessary to gain some insight into the physiological changes of sexuality in the body that occur through the normal aging process since a large majority of the patients are greater than 65 years old.

Human beings have distinct physiological changes in their sexual capability and functioning with aging just as there are changes in their biological and psychological functions.¹⁰ The key to remember is that sexual performance is only altered with these changes and not destroyed. Active and consistent use of sexual abilities is likely to be maintained well into old age, whereas prolonged abstinence may result in impotence or sexual inhibition.¹¹ For men and women, these changes can be broken down into three categories: hormonal, physical, and sexual.

Women

In women, the hormonal changes normally start between the ages of 45 and 55 with the onset of menopause, the ceasing of the female menstrual cycle. Menopause seems to have an effect on all three of the previously mentioned categories.⁷ The hormonal alterations consist of decreased serum estrogen and progesterone levels in conjunction with increased follicle-stimulating hormone

(FSH), increased leutenizing hormone (LH), and increased leutenizing hormone-releasing hormone.¹

From these hormonal changes, women often experience physical changes of vaginal dryness and constriction, thinning of the labia minora, shrinkage of the labia majora, decreased tone in the perineal musculature, amenorrhea (absence of menstrual cycle), sterility, and osteoporosis (reduction in bone mass).¹⁰ For those who have had a stroke, osteoporosis can be significantly worse and the chance of sustaining a hip fracture is significantly higher on the hemiplegic side. Osteoporosis prevention and treatment is best accomplished with weight-bearing exercises, calcium (vitamin) supplementation, and estrogen hormonal replacement therapy, which also aides in decreasing the amount of hormonal changes throughout the body.⁷ The combination of hormonal and physical changes may result in sexual changes of dyspareunia (pain during and/or after intercourse), orgasmic difficulties, and loss of femininity, libido, and pleasure.¹⁰

Men

For the men, the physiological changes are occurring subtly as they grow older. The hormonal changes include a decrease in testosterone levels, starting at the age of 20, and this decreasing trend accelerates after the age of 60.³ Men will also experience an increase of LH, FSH, and leutenizing hormone-releasing hormone during this period which appears to enhance the physical changes.¹

The physical alterations consist of testicular atrophy, oligospermia (decreased seminal sperm), sperm abnormalities, and pendulous scrotum.

Sexually, men will experience a loss of libido, erectile difficulties like slow and poor response to stimulation, and decreased semen volume with ejaculation.¹

Good³ reports that these sexual experiences tend to occur in approximately 40% of men aged 70 to 79 and in 60% of men over 80 years of age.

CHAPTER III

PROBABLE CAUSES OF SEXUAL DYSFUNCTION WITH STROKE

In stroke patients, determining the cause of their sexual dysfunction is both complex and multi-factorial in nature.³ Some feel the sexual problems of stroke patients are seldom due to the stroke itself but are often associated with a variety of medical conditions.¹¹ From reviewing the literature, both physiological and psychological factors seem to have the greatest impact on the problem of sexual dysfunction with stroke patients.

The physiological factors are composed of associated medical conditions, medication side effects, and the severity of physical disability. The psychological factors involve clinical depression, anxiety and fear, loss of self-esteem, fear of rejection by their partner/spouse, lack of patient education, and fear of performance failure.¹ The following paragraphs of this chapter will examine these factors in more detail as well as substantiate the need for continuing research into the exact cause of sexual dysfunction with stroke patients.

Physiological

Some of the concurrent medical conditions associated with decreased sexual function in stroke patients are alterations in vision, hearing, touch, and smell; diabetes; osteoarthritis or chronic pain; cancer; chronic kidney and liver failure; hypothyroidism; and chronic pulmonary disease. All of the above

conditions have been associated with decreased sexual activity due to either the direct effect of the medical condition or indirectly from the treatment being received due to the condition.³ Medications and their side effects are one of the most important organic reasons for sexual dysfunction following a stroke.³ The most popular medication classes associated with sexual dysfunction in men and women are anti-hypertensives (diuretics), anti-depressants, anti-psychotics, and anxiolytics.¹ However, most of the attention in research seems to be focused on the anti-hypertensives due to their effects as a major risk factor for sexual dysfunction in stroke patients.

Anti-hypertensive drugs can produce an effect on a patient's sexual function by depleting the potassium storage and thus producing overpowering fatigue.¹² The most overwhelming evidence for erectile difficulties in men comes from studies involving these diuretics. It is also felt that combination drug therapy (i.e., anti-hypertensives and anti-depressants) may be associated with sexual dysfunction more than mono-therapy.³ Anti-hypertensives may also affect either the peripheral or central adrenergic functions, which can decrease the penile perfusion pressure of males and influence the hormonal events of the female menstrual cycle.¹² According to Bansal,¹³ any effect that anti-hypertensives may have on sexual function may be questionable due to the increased occurrence rate of sexual dysfunction in untreated hypertensive men also.

The relatively few research studies that have been performed on women pertaining to the effects of anti-hypertensives on sexual function have discovered

no clear relationship.¹⁴ Sexual side-effects associated with many anti-hypertensives may be reduced in up to 85% of all the patients with stroke.¹² The key to achieving this success will be the physician's professional knowledge base of both the direct and indirect side effects of medications on sexual function.

As it will be further discussed in the psychological section of this chapter, depression frequently accompanies stroke and doctors will prescribe antidepressants to treat it. These drugs are very effective in treating depression in stroke patients, but they may also affect the patient's sexual function. However, it is very difficult to separate the influence of depression itself from the possible side effects of the medication on sexual function.¹² Most antidepressants have been associated with erectile dysfunction and almost all have been reported to decrease libido or cause orgasmic dysfunction.¹⁵

Finally, anti-psychotic and anxiolytic drugs have also been associated with causing sexual dysfunction, and this has been reported in 25% of the patients using these drugs.¹ In summary, many associated medical conditions and medications may result in disrupted sexual desire or performance; however, these patients may have already been suffering from a pre-stroke decline in sexual function which may be further affected by a stroke.³

Despite the illness and medication problems that may be experienced, it is still likely that sexual dysfunction can be caused by the stroke itself.¹¹ The brain, spinal cord, and peripheral nerves regulate sexual function, whereas control of sexual desire and pleasure are mediated by the cortex, midbrain, and brain

stem.⁷ Some feel that the location of the lesion and the structures involved influence the patient's sexual behavior more than the lesion side itself.⁴ Kalliomaki et al¹⁶ reported that impairment of sexual interest was more common with the dominant hemisphere lesions than with nondominant hemispheric involvement; however, Sjogren and colleagues¹⁷ reported no significant correlation between the side of the lesion and in any of the sexual parameters they investigated. Due to these conflicts of study, there is no general agreement on the incidence of sexual disturbance and the side of the lesion.

The most common physical disability facilitated by stroke is hemiparesis, weakness and paralysis on one side of the body, and the resulting awkwardness can hinder sexual relations.¹⁸ Neurologic disability (sensory and motor) can cause organic impotence by hindering blood flow for erections as well as problems with emission and ejaculation in males and with lubrication, clitoral engorgement, and orgasm in females, although the research is inconclusive.⁷

Lesions of the dominant hemisphere can cause aphasia or apraxia, both of which could impede sexual activity with increased difficulty of physical and verbal communication.¹⁹ Aphasia is the inability to communicate through speech, writing, or signs due to dysfunction of brain centers. Apraxia is the inability to perform purposeful movements, although there is no sensory or motor impairment.²⁰ There is limited information regarding sexual problems in both apraxic and aphasic patients. The literature portrayed no agreement on the information available for apraxic and aphasic sexual dysfunction.¹

The final disability to be discussed related to sexual dysfunction is impaired bladder function, affecting 51% to 60% of patients after stroke.⁷ The fear of involuntary urination during sexual relations can be very stressful and often leads to inhibition of sexual relations.¹⁶ However, with proper education and training from health professionals, these fears and stressful situations can often be minimized.⁷

Psychological

The effect of a stroke on psychological function is quite enormous. It is a significant and traumatic event in an individual's life, affecting the well being of the stroke patient and that of their immediate family and friends.⁷ Stroke survivors require initial psychological screening and monitoring, including periodic assessment for the diagnosis and treatment of psychosocial impairments.³

Negative emotional reactions are quite common following a stroke.¹ According to Anderson,²¹ the reaction of each patient is shaped by his or her premorbid personality, the individual's manner of coping with stress, support of family and friends, and the cognitive deficits created by the stroke itself. The location of the brain injury will also influence psychological reaction; however, little evidence exists to support the belief that a specific brain location solely determines emotional problems.²²

One of the psychological consequences within six months after a stroke is depression, which is seen in 20% to 63% of stroke patients.²³ The depression may last for a short period of time, but often it is present for undetermined years

after the initial stroke.²⁴ Depression can hinder function, just as a lack of progression in rehabilitation may cause depression. It is difficult to diagnose depression in stroke patients because many of the symptoms of depression (e.g., sleep apnea, loss of appetite, fatigue, and lack of psychological and motor function) may themselves be a presentation of stroke or many other medical conditions.¹ There is a dramatic decrease in frequency and firmness of night erections (characteristic of depression) in male patients suffering from a stroke, and this often leads to further psychosocial problems and declines in sexual function.²⁵ According to Costello-Smith,²⁶ clinical depression may potentiate secondary symptoms, including decreased libido, erectile dysfunction, and anorgasmia. It also must be kept in mind that strokes may cause a reduction in appetite and energy level, and this may lead to a disinterest in sex, regardless of the presence of depression.

According to Monga and Kerrigan,¹ one of the main factors identified in the decline in sexual function after stroke was the anxiety and fear that sexual intercourse might precipitate another stroke. Some other researchers have also reported that anxiety and fear may be responsible for the decline in sexual function following a stroke.^{17,27} The reason for this fear appears to be similar to those reported in patients with coronary artery disease, who fear myocardial infarction (MI) during sex. However, the chance of causing another stroke or MI during sexual activity appears to be very small, only around .09% of total cases studied. Thus, Good³ feels it is reasonable to reassure stroke patients and their partners that resumption of sexual relations poses minimal risks. Hawton¹⁸ and

Renshaw²⁸ feel that this fear of precipitating another stroke may be displayed more by the sexual partner than by the patient. In contrast, Muckleroy²⁹ does not believe that fear is a major factor in the decrease of sexual activity for stroke patients but that anxiety from performance failure is a major factor.

In addition to the fear of causing another stroke, other factors such as loss of self-esteem, fear of rejection by their sexual partner/spouse, or fear of performance failure may also be contributing factors to a decrease in sexual activity.²² Reduced self-esteem resulting from the inability to perform according to expectation has been reported by many researchers. For this reason, males may feel that they are either “less than a man” or only “half a man” after a stroke.³⁰ Finger^{31(p50)} stated that “a man who has lost his perceived virility in life will often view himself as being sexually impotent as well.”

Similarly, females compare their own sexuality with their physical appearance, especially with facial appearance and body contour. Any noticeable changes caused by the stroke may induce her to view herself as physically and sexually unappealing.³⁰ Unfortunately, sexual partners and spouses may fall into these same perceptions and find their affected mates as unattractive and sexually undesirable. For some couples, these obstacles may be too difficult to overcome thus leaving their sexual relationship possibly non-repairable.³¹ Fortunately, a number of therapists feel strategies that employ positive reinforcement, physically and mentally, may help to prevent or decrease these occurrences.²⁹

Even though hyposexuality is common in stroke patients, occasionally patients may also present with hypersexuality. According to Monga and Kerrigan,¹ the source of this phenomenon may be a temporal lobe lesion in the brain. Hypersexuality is more commonly seen in persons with traumatic brain injuries.³ The symptoms of hypersexuality patients are similar to those in Kluver-Buey Syndrome (loss of fear, rage responses, hypersexuality, and overreaction to certain stimuli).¹ Physicians often prescribe anticonvulsants as treatment for this condition, but this treatment seems to have had limited success in altering this behavior.³ Unfortunately, the literature did not provide statistical data on the rate of occurrence of hypersexuality in stroke patients.

It should be emphasized that sexual dysfunction in post stroke patients is complex and an evaluation of these sexual difficulties should be done only in patients who wish to remain sexually active. In Chapter IV, sexual function in male and female stroke patients and their long-term effects will be discussed.

CHAPTER IV

SEXUAL FUNCTION WITH STROKE

Before the mid 1980s, sexual functioning after a stroke was an area of stroke rehabilitation which had received very little professional attention or investigation.³⁰ Very few authors have approached the general topic of sexual functioning following a stroke. Given this fact, very little has been published concerning the specific impact of strokes on sexual function.^{16,18,32} Most studies of sexual function have been limited to relatively small numbers of participants, with the exception of the studies conducted by Bray et al³⁰ and Sjogren and Fugl-Meyer³⁵ which both involved over 100 subjects.³ This chapter will focus on the sexual functioning of both male and female patients following stroke along with the long-term effects of stroke on sexuality.

Men

The profound effect of cerebral vascular accidents on many male patients' sexual desire has been well documented by researchers.^{1,3,13,17,18,27} In a study of 113 elderly male patients interviewed one year after their stroke, Monga and Kerrigan¹ reported that although 75% of the men claimed normal libido before the stroke, only 21% acknowledged a normal libido after the stroke. Goddess et al³³ also reported that diminished sexual desire is common after stroke,

especially when the dominant hemisphere is damaged, but there is much controversy regarding the side of the lesion and its effect on sexual function.

Not all studies have confirmed that there is in fact a reduction of libido following stroke. Bray et al³⁰ found no significant decrease in sexual interest or desire in their study of male stroke patients. Ford and Orfirer³⁴ also reported that 60% of their male stroke patients had no loss of libido after a CVA. According to these investigators, the men who did report a full return of pre-stroke libido either tended to be younger or that their libido was extremely intense or very active prior to the stroke.¹

Difficulties with achieving penile erections have been reported in male stroke patients. From a study by Sjogren and Fugl-Meyer,³⁵ erectile difficulties were found to be very common (64%) in male stroke patients with hemiplegia. In another study, 75% of the men proclaimed the ability to have full erections before the stroke, but only 46% could obtain full erections after the stroke.³⁰ Monga and Kerrigan¹ also noted that 94% of males could achieve satisfactory erections before stroke, but only 31% could attain erections following the stroke. In contrast to these findings, Boldrini et al²⁷ noted that 61% of patients did not notice any change in their ability to achieve full erections. According to the literature, the average delay of return of erections (nocturnal, sexual activity, and fantasy) post-stroke is approximately seven weeks with the longest reported delay ranging from 20 to 40 weeks.¹⁸

Problems with ejaculation or orgasm are also common in male stroke patients. Monga and Kerrigan¹ reported that although 22% of the men

acknowledged premature ejaculation before the onset of stroke, around 35% had experienced premature ejaculation after the stroke. Other studies, such as Sjogren et al,^{17,35} have confirmed similar findings. This particular study found that although 80% of the males achieved ejaculation regularly before the stroke, only 36% could do so at a mean of 14 months after the stroke.¹⁷ Aloni et al³⁶ also found that unorgasmia or retarded ejaculation was more common in males than in females following a stroke. They reported that emissions from ejaculation were less forceful and that the sperm volume was decreased, but these findings have been found to be inconsistent.

Other authors from the literature have reported a decline in frequency of sexual activity following a stroke. The investigators used the frequency of sexual intercourse or coitus as a tool of measurement for their study.^{3,13,35} Even though coitus is not the only form of sexual expression, it does provide a measure of interaction for a variety of variables, such as desire, physical sexual ability, and interpersonal or psychological variables.³ From a study by Gitlin¹⁵ of 78 men, 11% of the men recorded no sexual activity before their stroke, whereas 64% stopped all sexual activity after the stroke. Gitlin¹⁵ also reported that the reduction or ceased activity in intercourse appeared to be more common in males than in females. In another study by Sjogren et al¹⁷ which applied to both sexes, changes in frequency of intercourse were thought to be related to the degree of cutaneous sensibility impairment and with the levels of dependence with activities of daily living (ADLs), but not with the degree of motor function impairment. In contrast to this, Jaasko and Fugl-Meyer³⁷ reported that the

degree of motor impairment was a main factor in causing the decline of sexual activity.

In addition to the reduction of sexual activity, it appears that stroke patients between 45 to 60 years old enjoy sex less.³ Sjogren and Fugl-Meyer³⁵ found a decline in mutual verbal and nonverbal responsiveness, a decrease in frequency of caressing and touching, and a reduction in intimate foreplay following stroke. From the men studied, 31% of them stopped foreplay completely.³⁵ In contrast to Sjogren and Fugl-Meyer³⁵, Boldrini et al²⁷ found no significant change in sexual satisfaction between patients and spouses following a stroke. Stroke patients may also engage in what is called spectating. This is where the individuals removes themselves from an active sexual role to more of an observer or evaluator role on their own and their partners' sexual performance.¹

Women

Similar to male post-stroke sexual function and sexuality, in women there are also substantiated problems in sexual function after a stroke. From a study of elderly female CVA patients, 60% of the women stated having a normal libido prior to the stroke, whereas only 12% of the women experienced normal libido after the stroke.¹ Other investigators, like Kaliomaki et al¹⁶ and Aloni et al,³⁶ also reported similar findings in their studies.

While on the contrary, studies by Bray et al³⁰ and by Ford and Orifer³⁴ found no loss or reduction in sexual desire or interest for women following a stroke. The literature also stated that the conflicting results might be due to the

methodological differences of the studies.¹ The Bray et al³⁰ and Ford and Orifer³⁴ studies used subjects that, on the average, were younger than the subjects in the Monga and Kerrigan¹ study. Furthermore, Bray et al,³⁰ along with Ford and Orifer,³⁴ interviewed people while they were in the hospital, whereas Monga and Kerrigan¹ conducted interviews using only outpatient subjects.

Problems with vaginal lubrication in women with CVA is the counterpart to the erectile difficulties in male CVA patients. Monga and Kerrigan¹ reported that a majority of 75 female patients experienced problems with vaginal lubrication after their stroke. From these patients, 63% had normal vaginal lubrication before the stroke with only 29% acknowledging normal lubrication after the stroke.¹ From exploring the literature, it appears that none of the other researchers have asked this specific question regarding lubrication problems in their studies.

Bray and colleagues³⁰ recorded that only one of eleven female patients experienced orgasm after stroke versus five of the eleven (45%) women who regularly had orgasms before their stroke. Sjogren et al¹⁷ also reported similar findings of unorgasmia in 3 of 12 female stroke patients from his research. An exception to these findings is that of Boldrini et al²⁷ who reported that 14 (67%) of 21 sexually active women had no change or cessation of orgasms after the stroke. The literature states that very little is known regarding the broader aspects of sexuality in female stroke patients.³ The frequency of the different means of sexual expression, like masturbation, oral sex, and sexual fantasy, is

also unknown and has not been researched at this time in post stroke females or males.

Like the males, post-stroke females also reported a decline in mutual verbal and nonverbal responsiveness as well as a decrease in the frequency of caressing and touching with intentions of having sex.³⁵ Sjogren and colleagues¹⁷ observed that 27% of 22 women ceased foreplay altogether, but Boldrini et al²⁷ reported no changes in foreplay for 18 (86%) of 21 female CVA patients in his study. With regard to frequency of sexual activity, Monga and Kerrigan¹ reported that 21% of female stroke patients reported no coital activity before their CVA, whereas 54% stopped all coital activity after the stroke. Sjogren et al¹⁷ also reported similar findings of either a stoppage or decrease in frequency of intercourse after stroke.

Long-Term Effects of Stroke on Sexuality

There have been relatively few studies published on the long-term effects of stroke on sexuality.¹ In a long-term study of life after stroke, Viitanen et al³⁸ reported that 61% of 62 stroke patients, with a follow up of four to six years, experienced a decreased general or domain-specific satisfaction with life, which included a reduced satisfaction with sex life in 42 of the subjects studied.¹ Sjogren and Fugl-Meyer,³⁵ in a study on adjustment to life after stroke, found that subjects with previously known conditions of myocardial infarction and diabetes mellitus had little change in their sexual function compared to people without these ailments.

In summary, the information from the literature reviewed indicates that the sexual function problems experienced by post-stroke patients are of sufficient magnitude, frequency, and controversy to warrant further indepth investigation. The information to be presented in Chapter V will concentrate on prevention and treatment of sexual dysfunction in people with stroke.

CHAPTER V
PREVENTION AND TREATMENT OF SEXUAL
DYSFUNCTION WITH STROKE

Due to the fact that sexual problems in CVA patients are multifactorial, the management of these patients often requires a multifactorial approach.³⁹ This multifactorial approach is very important when trying to prevent and minimize the residual physical and psychological problems resulting from stroke through appropriate interventions in a timely manner. Monga and Kerrigan¹ feel this goal can be obtained by integrating the current information on sexual function treatments into the existing stroke rehabilitation material or through structured stroke support groups.

Researchers and health professional opinions differ significantly regarding the best time at which this aspect of care should be discussed with patients. Monga and Kerrigan¹ think that the topic of sexuality should be discussed early during the recovery from stroke and that this topic should not be delayed. However, many stroke rehabilitation teams feel that the patient and family are more concerned with survival, recovery, and suffering rather than sexual function, so this issue should be addressed much later in the recovery period.³¹ Regardless of when this discussion occurs, Monga and Ostermann³⁹ feel that

most patients will welcome an open and honest discussion of this topic as well as suggestions and guidance.

In the literature, there is some controversy about who should provide the sex education and counseling. One group of researchers believes that the physicians should discuss the sexually related issues during the initial history taking or during routine rounds. Other researchers have suggested that the nursing staff is more qualified to handle the social and sexual problem issues.⁴⁰ Conine and Evans⁵ state that it does not matter who starts the discussion with the patients as long as the health professional is qualified and comfortable to discuss the issue. Another element that may prove helpful is that the healthcare provider be of the same sex as the stroke patient which may help to decrease the uneasiness for both people. If the patient is unwilling or uncomfortable talking about this issue, the use of pamphlets, books, and videos are an alternative resource for patient education on sexual dysfunction with stroke. In some cases, the topic of sexual activity may not be of significant concern or the couple may not covet sexual activity as part of their relationship.³

Assessment

The possible cause or causes of any sexual dysfunction as well as pre-stroke relationship issues, sexual interactions, and sexual attitudes toward various expressions of sexuality should be included in the assessment.¹ Problems related to communication barriers, sensory/perceptual deficits, weakness, contractures, and bowel and bladder incontinence also need to be assessed.³⁹ Consequently, a thorough assessment is best accomplished by a

team format composed of neurology, physical therapy, speech therapy, occupational therapy, neuropsychology, and internal medicine.³¹

Staff Education

According to Monga and Kerrigan,¹ healthcare providers should reassure stroke patients and their partners that, in many cases, the physiologic sexual responses remain normal following stroke. However, because of sensory and motor disturbances, adaptive changes in sexual behavior and expression may be necessitated. Healthcare providers must emphasize the importance of other means of sexual expression, such as hugging, kissing, caressing, and verbal affection between couples.³⁹

Practitioners also need to address patient fears about having another stroke or heart attack, about rejection, and about sexual performance.¹ Stroke survivors and their partners are often uncertain as to when to resume sexual activity and feel that waiting longer would be safer or better for them. On the contrary, resuming sexual activity as soon as the patient feels interested and comfortable may help to minimize the likelihood of psychological complications.⁴⁰

Permission-giving is a fundamental intervention for physicians and this should provide reassurance that concerns and questions following stroke are normal.⁴¹ All practitioners should advise stroke patients to seek medical advice if they experience any shortness of breath, chest pain, and dizziness during sexual intercourse.¹ Furthermore, patients should be reassured of the safety regarding exercises and intercourse. Even though there is no proven data available on

sexual intercourse, it appears that sexual intercourse and exercise within limits of fatigue have been found to be safe.³⁹

Treatment

According to Good,^{3(p160)} "It should be abundantly clear that treatment for sexual dysfunction is not necessary for all persons following stroke". It has been found that for a substantial number of patients, sexual interest and abilities were minimal or unimportant even before the stroke. While in others, this ability will return to pre-stroke normality after a period of weeks or months. If treatment intervention is indicated for the patient, this may range from basic sexual counseling and education to invasive, performance orientated treatments.¹

For stroke patients with hemiplegia, there is information on alternate sexual positions that can be provided by health professionals. Conine and Evans,⁵ along with Fugl-Meyer and Jaasko,³⁷ offer suggestions on methods for enhancing sexual performance in male hemiplegics. They suggest that the patient lie on the affected side so that the unaffected arm is free to caress his/her partner. If this position is painful, the affected partner can remain supine or on his/her back during coitus while the other partner can adopt a top-superior position. Also, the spouse should be advised to concentrate kissing and caressing on areas where sensation is intact and comfortable.¹ In some female patients, hip adductor muscle spasticity may block smooth intromission. For this, Costello-Smith²⁶ recommends a position of rear vaginal entry or a supine (lying on your back) position, lying at a right angle to her partner. Couples may also

find the use of assistive devices like handles on the headboard or footboard along with pillows to support the body to be very helpful.²⁸

If possible, associated/concurrent medical conditions, including depression, need to be addressed and treated.³ The prescribed medications need to be evaluated and may need to be adjusted or changed to medications with fewer side effects on sexual function. Monga and Kerrigan^{1(p211)} state that, "All physicians should discourage empirical use of antidepressants and tranquilizers as treatments because of their detrimental effect on sexual function." In addition, doctors should take a complete history of non-prescription drug usage because these may also be associated with sexual dysfunction.

For arousal problems, like erectile difficulties and vaginal lubrication, the treatment intervention used will depend on the origin of the sexual dysfunction either physiological or psychological. If the problem appears to be psychogenic, then the likely issues of depression, performance anxiety, changes in self-image, partner rejection, and lack of patient education should be evaluated and addressed by the proper psychological therapies along with pharmacotherapy, if indicated.⁴¹

When the source appears to be organic, a number of treatment options are available to male stroke patients. While blood pressure control is essential, alternative medications with fewer side effects (Prazosin) could be utilized if the presently used medications are thought to be causing the erectile difficulties.³¹ A new medication that may be able to treat these erectile difficulties is Viagra, but

Dr. Clark McCoy (phone conversation, August 1998) advises caution in the use of this drug for stroke patients due to the lack of research.

Other treatments for male stroke patients include invasive and non-invasive devices such as vacuum devices and penile implants. These procedures seem to be growing in popularity, but the role and need for these devices has not been researched in stroke patients.¹ Intracavernous injections by the primary physician of vasoactive agents (drugs that affect blood vessels) have also received considerable attention, but these too have not been studied and they may have cardiovascular side effects.³¹

For younger female stroke patients, the physical causes of arousal problems also need to be investigated and treated. An endocrinology assessment should be carried out to identify any underlying hormonal changes which could interfere with lubrication.¹ If indicated, the clinician should refer the patient to a gynecologist or internist. Even though it is controversial, hormone replacement therapy may also be used to alleviate some of the common symptoms of post-menopause including insufficient lubrication in older post-stroke women.³¹ Nonestrogen topical lubricants, suppositories, and vaginal moisturizers can also be used to treat female stroke patients with painful coitus or vaginal lubrication problems.¹

The role of the physical therapist (PT) is pivotal in helping the stroke patient to improve his/her motor function, range of motion, balance, coordination, strength, flexibility, mobility, and endurance to be a satisfied participant in sexual relations, if so desired. Occupational therapy (OT) also serves an important role

in sexuality intervention by using their skills of activity analysis and adaptation as well as their knowledge of behavioral sciences to help them deal effectively with a stroke patient's sexual difficulties. Physical therapy and occupational therapy are very important in effective sexual rehabilitation; however, they are only a part of the extensive interdisciplinary team approach that this area requires.

In summary, many options, suggestions, and recommendations have been brought forward for management and treatment of sexual problems in stroke patients, but little information is available to validate these approaches.¹ Thus, the need for further research and sexual counseling is significant.

CHAPTER VI

CONCLUSION

Even though there has been significant progress in the approach and practice of rehabilitation medicine, little emphasis has been placed on sexuality and sexual dysfunction in stroke patients. The causes of this sexual dysfunction are numerous and seem to include both psychological and physiological factors. Pre-existing and associated illnesses, medications, and aging are also considered to be contributing factors. However, there is much controversy regarding these factors since they have not been researched uniformly.

The literature has reported a noticeable decline in the many areas of sexuality in the stroke patient. The problems that appear to occur most often in both genders are decreases in coital frequency, libido, and ejaculation or orgasm. Separately, vaginal lubrication for women and erectile difficulties for men are the most common. Stroke patients with sexual dysfunction also seem to be finding less enjoyment and gratification with sexual activity after stroke. The general consensus for all of these declines seem to be multi-factorial in principle.

There appears to be much room for investigation apparently in the area of treatment for sexual dysfunction in stroke patients. Depending on the problem source, these treatments may include general sex education and counseling,

availability and openness of all healthcare providers to provide information, psychological therapies, evaluation and adjustments of medications, invasive or non-invasive devices, alternate positioning and expression for sexual relations, and topical lubricants or moisturizers.

Future studies should focus more on the universal aspects of sexuality, the regularity of different means of sexual expression, and the long-term effects and quality of life issues for CVA patients with sexual dysfunction. New findings in the pharmaceutical area, such as Viagra, as well as the growth of interdisciplinary treatment teams may provide new or complimentary approaches and broader insight to the often-neglected area of treatment of sexual dysfunction in stroke patients.

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