

SEXUALITY AFTER STROKE WITH HEMIPLEGIA. II

II. *With Special Regard to Partnership Adjustment and to Fulfilment*

Kerstin Sjögren

*From the Department of Physical Medicine and Rehabilitation,
University of Umeå, Sweden*

ABSTRACT. Aspects of sexual function, partnership responsiveness and fulfilment after stroke were, together with sexually performance orientated and stigmatic attitudes, investigated in 51 subjects. Erectile and orgasmic spectating were frequent after stroke and were in the males significantly associated. Retarded ejaculation occurred for no males before but for 15% after the stroke. Marked decreases in different kinds of caressive behaviour were followed by discontentment and up to and about half the subjects felt that sexual partnership responsiveness had deteriorated. After the stroke the commonly occurring reduction in general sexual satisfaction was significantly associated with symptoms of increased sexual dysfunction, disturbed partnership responsiveness and reduced sexual fulfilment. The high prevalence of sexual maladjustment in stroke victims appears mostly to be psychogenic. Important precipitating factors are performance orientation and sexual stigmatism. Moreover, lack of sexual information and counselling may contribute to deterioration of partnership sexuality.

Key words: Sexuality, stroke, hemiplegia, coping, marital roles

The present investigation is the second part of a study of sexual life in 51 hemiplegic or hemiparetic former stroke victims. It was previously (20a) found that onset or increase of erectile and orgasmic incompetence were common sequelae of stroke and that these sexual dysfunctions were more common in males than in females who, on the other hand had a higher degree of orgasmic incompetence than the males before the stroke. Frequency of sexual intercourse and durations of excitatory caressings (foreplay), and of total sex-play were drastically reduced if not abolished in the majority of males and females. The neocortical-hypothalamic-pituitary-gonadal axis functioned normally in the males, and the site of the brain lesion was not associated with any of the investigated parameters of sexual function. Furthermore, decreases in the subjects' "partnership drive" were associated with several parameters of sexual dysfunction. These results suggest that psychological rather than organic

factors contributed towards precipitation of the sexual dysfunction. This suggestion is supported by the findings that dependence upon spouse in self-care ADL outweighs signs of physical disability per se for predicting resumption of frequency of sexual intercourse after stroke (21).

This study was designed to explore further aspects of sexual function, responsiveness and fulfilment in the same stroke victims and to relate the findings to prevalence of performance orientated attitudes and to sexually stigmatic tendencies.

MATERIALS

A consecutive series of 51 single stroke (25) subjects with hemiplegia/hemiparesis who were referred to the Department of Physical Medicine and Rehabilitation, University Hospital, Umeå, after discharge from the acute hospital wards. Thirty-nine were males (mean age 54 ± 9 years) and twelve were females (mean age 50 ± 12). All were married and had been at home for at least two months prior to the investigation. All were sexually active (including coitus) until the time of the vascular catastrophe. Mean interval between stroke and investigation was 14 months (range 3-68). Fifteen subjects were still in the process of rehabilitation; none were undergoing treatment for psychiatric illness. The criteria for selection of subjects have been presented in detail elsewhere (20a).

METHODS

Subjects volunteered to participate in a structured interview containing questions about their sexual life. The interviews were conducted under undisturbed conditions and were performed by one investigator. Each interview lasted approximately 90 min.

This investigation focussed on aspects of: *sexual function*, *sexual fulfilment* and *partnership responsiveness* (cf. Table I). For the functional parameters A: 1-8 questions were also asked about degree of liking and degree of satisfaction with frequency. All items were related to the stroke as subjects were asked about their experiences *before* and *after* the stroke.

Subjects were, moreover, asked if they could give

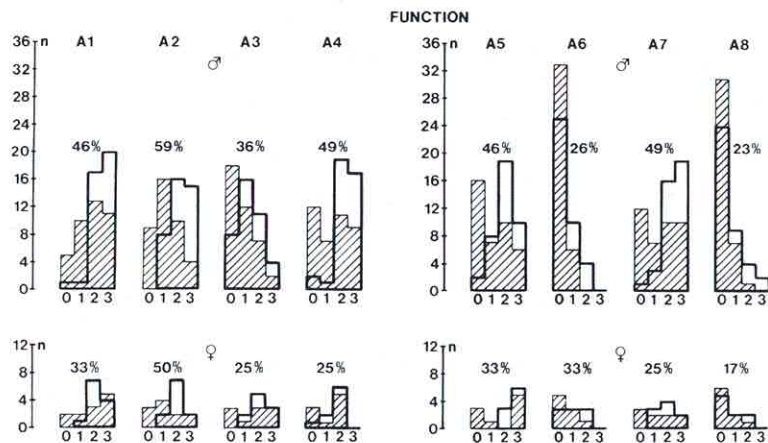


Fig. 1. Sexual function before □ and after ▨ stroke in 39 males (♂) and 12 females (♀). For items see Table I. Coding: 0: never; 1: rarely; 2: occasionally; 3: often. Per cent of subjects reporting decreases are also given.

reasons for reduced sexual pleasure, if such reduction occurred. They were also asked if they had been given opportunity for or had themselves sought sexual counselling after the stroke.

Attitudes of *sexual performance orientation* (five items) and of *sexual stigmatization* towards the disabled (nine items) were explored in 39 (unselected) subjects through the statements presented in Table III. For each item, a score of one was given for a stigmatic or a performance orientated attitude and a score of zero when the answer did not indicate such attitude. Thus, ad hoc indices ranging between 0-5 (performance orientation) and between 0-9 (stigma) could be constructed.

Statistical methods. For analyses of associations between pairs of variables simple cross-tabulations were performed. The sample size did not permit use of multiple regression methods. The chosen level of significance was $p \leq 0.05$. In general, parameters concerning fulfilment, responsiveness and sexual function were dichotomized into no change vs. change. For cross-tabulations performance orientation and sexual stigma indices were trichotomized into little or no such attitudes (0-1 and 0-2 for performance orientation and stigma, respectively), intermediate amount of such attitudes (2-3 and 3-5, respectively) and pronounced performance orientation or stigmatization (4-5 and 6-9, respectively). For separate analyses in males and females the indices were (due to small sample size) dichotomized (performance orientation: 0-2 vs. 3-5; stigmatism: 0-4 vs. 5-9).

RESULTS

Only for one single (female) subject increase had occurred in one aspect (general caressings). For all other subjects no improvement of any aspects of sexual life was registered after stroke.

Sexual function. In general all caressive expressions (Fig. 1, also cf. Table I) became rarer after the stroke, especially for the male hemiple-

gics. This impoverishment of non-verbal communication was for each parameter accompanied by decrease in the level of satisfaction with frequency (χ^2 between 19.90 and 43.37, 1 df). However all, but one, had unaltered wishes (i.e. liking) for every single of these activities.

Among the males relatively few often or occasionally were orgasmic and/or erectile spectators before the stroke (Fig. 2). The majority were so after stroke—if they at all achieved orgasm or erection. In contrast, pre-stroke about 60% of the female hemiplegics were frequent or occasional orgasmic spectators and one was anorgasmic. Post-stroke significantly fewer females than males had increased level of spectating (χ^2 : 3.54; 1 df), but three females were now anorgasmic.

Whereas no males felt they had ejaculatory disturbances before stroke, six (15%) complained of retarded and one of premature ejaculation after the stroke. At this time also two subjects, one male and one female, were dyspareunic. None of the females reported vaginismus. Erectile and orgasmic spectating were also significantly associated (χ^2 : 10.03; 1 df). This may indicate that, at least in the males, several sexual dysfunctions often occurred simultaneously. Cross-tabulations with the data obtained in the previous investigation (cf. Introduction) demonstrated that this was, indeed, the case.

The explanations provided by subjects for reduced sexual enjoyment during intercourse are presented in Table II. For the males, erectile problems dominated followed by fatigue, which was the main female cause of pleasure reduction. Other reasons given included fear of relapse, reduced

Table I. Associations (χ^2) between no change/change in parameters of sexual function, fulfilment and responsiveness after stroke with hemiplegia by no change/change in sex life in general

P denotes partner, S denotes respondent, 51 subjects included

	Sex life in general χ^2
A. Function	
1 General caressings (touching, hugging)	7.18
2 Deep kissing	12.63
3 P caresses S's breast	6.98
4 S caresses P's breast	16.92
5/6 Manual (5)/oral (6) caressing of S's genitals by P	12.31/NS
7/8 Manual (7)/oral (8) caressing of P's genitals by S	16.92/NS
9 Orgastic spectatoring	13.62
10 Erectile spectatoring (males only)	4.39
11 Ejaculatory problems ^a (males only)	4.27
B. Fulfilment	
1 Sex life, in general	-
2 Foreplay, duration	9.31
3 Sex-play, duration	17.01
4 Intercourse, frequency	22.96
5 Intercourse, as such	23.51
C. Responsiveness	
1 Mutual verbal communication on sexuality	7.27
2 S's reaction to P's sexual initiatives	12.09
3 P's reaction to S's sexual initiatives	15.24
4 P's emotional involvement during sex activities	18.14
5 P's shown interest in mutual sexuality	5.94

With one df (degree of freedom) $p \leq 0.05$ for $\chi^2 \geq 2.71$; $p \leq 0.01$ for $\chi^2 \geq 6.64$; $p \leq 0.001$ for $\chi^2 \geq 10.83$. Only $\chi^2 \geq 2.71$ included.

^a Dichotomy: yes/no.

Table II. Given reasons for restriction of full sexual enjoyment in 39 males and 12 females with hemiplegia due to stroke

Some subjects gave more than one reason. *n* denotes number of subjects

	Males <i>n</i>	Females <i>n</i>
Fatigue	12	7
Fear	5	4
Pain	1	1
Hemi-hypesthesia	3	3
Reduced genital sensation	2	0
Orgastic problems	4	2
Ejaculatory problems	7	-
Erectile problems	14	-

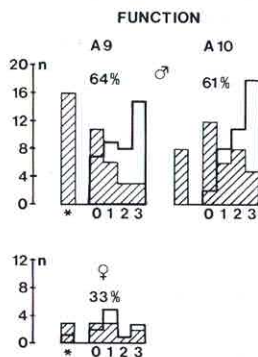


Fig. 2. Orgastic spectatoring (A9) and erectile spectatoring (A10) before □ and after ▨ stroke. Coding: 0: always; 1: usually; 2: rarely; 3: concentration to achieve orgasm and/or erection. * no orgasm/erection. Per cent of subjects reporting decreases are also given; 39 males (♂) and 12 females (♀) included.

sensibility and orgastic problems. No subject felt that spasticity or decreased mobility and only two felt that extragenital pain had lead to reduced sexual enjoyment.

Partnership responsiveness. Males and females rated pre-stroke sexual communication and responsiveness alike (Fig. 3). After the stroke verbal and especially non-verbal responsiveness was experienced as reduced. Thus, about half of the subjects felt that they were less responsive to partner's sexual initiative and about 50% of the males, but one-third of the females found the partner less responsive to sexual initiatives and less emotionally engaged than pre-stroke.

Fulfilment. Marked reduction in levels of sexual fulfilment (Fig. 4, also cf. Table I) occurred for the males and some reductions occurred for the females after the stroke. In fact, while 54% of the males and 50% of the females felt satisfied with all of these five aspects of sexual life before the stroke only 8% and 33% of males and females, respectively, felt so when interviewed. Table I illustrates that reduction in general sexual satisfaction was significantly associated with changes in nearly all other investigated details of sexual function, responsiveness and fulfilment.

Performance orientation and stigmatism. Table III shows that for the unselected sub-sample of 39 subjects, performance orientation was very common and between 33–67% of stroke victims gave answers suggestive of stigmatism to each stigmatism. Whereas 26% had less than three such atti-

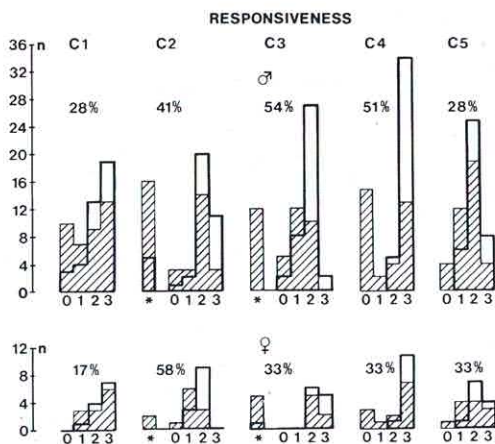


Fig. 3. Sexual partnership responsiveness before \square and after ▨ stroke in 39 males (δ) and 12 females (♀). For items see Table I. Coding C1: 0: difficult; 1: rather difficult; 2: rather easy; 3: easy to communicate. C2/C3: 0: usually avoids; 1: accepts with hesitation; 2: accepts without hesitation; 3: responds eagerly. * no sexual initiatives taken by the partner and the subject, respectively. C4: 0: never; 1: rarely; 2: occasionally; 3: often. C5: 0: disinterested; 1: rather disinterested; 2: rather interested; 3: interested. Per cent of subjects reporting decreases are also given.

tudes, 33% had six or more (Fig. 5). The dichotomized indices of performance orientation and stigmatism covaried significantly (χ^2 : 2.78; 1 df). Cross-tabulations (cf. Methods) were performed for both indices against all variables of fulfilment, re-

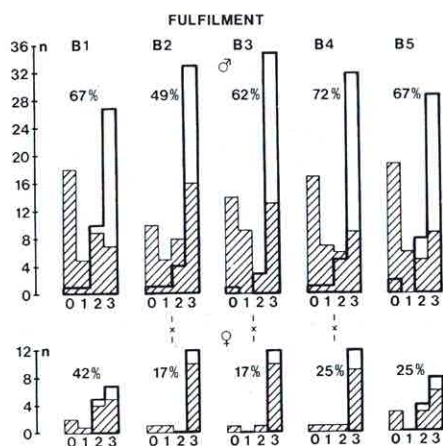


Fig. 4. Sexual fulfilment before \square and after ▨ stroke in 39 males (δ) and 12 females (♀). For items see Table I. Coding: 0: dissatisfied; 1: rather dissatisfied; 2: rather satisfied; 3: satisfied; * denotes significant ($p \leq 0.05$) gender differences. Per cent of subjects reporting decreases are also given.

sponsiveness and function. Sexual stigmatism was significantly associated with experiences of decreases in general sexual satisfaction (χ^2 : 4.92; 1 df) and in satisfaction with frequency of intercourse (χ^2 : 5.07; 1 df), with decreased own responsiveness to partner's initiative (χ^2 : 10.71; 1 df) and with increased frequency of erectile spectating (males; χ^2 : 4.84; 1 df). Performance orientation was significantly associated with decrease in satisfaction with intercourse (χ^2 : 6.65; 1 df) and for the males with increase in frequency of erectile and orgasmic spectating (χ^2 : 8.15 and 2.92, respectively; 1 df).

Table III. Mean per cent affirmative answers to statements included in indices of sexual stigmatism (9 items) and performance orientation (5 items) in 30 males (δ) and 9 females (♀) with hemiplegia due to stroke

	δ n	♀ n	All %
<i>Sexual stigmatism</i>			
Disabled males can never fully satisfy their partner sexually	12	5	44
Disabled females can never fully satisfy their partner sexually	9	4	33
Males who are interested in disabled females are insecure of their masculinity	21	5	67
Females who marry disabled males want to avoid competition for spouse	19	4	59
Females who are attracted to disabled males want to dominate their partners sexually	16	4	51
Disabled individuals are less interested in sex than are the able-bodied	14	3	44
Individuals who are physically incapable of intercourse have little or no thought of sex	11	3	36
The healthiest way for the disabled to deal with diminished sexual capacity is to choose other goals	19	6	64
A disabled individual's partner should not initiate sex	9	4	33
<i>Performance orientation</i>			
Greater number of coital techniques guarantees better sexual life	23	2	64
Orgasm cannot be achieved from non-genital areas	20	7	69
Erection is necessary for male sexual satisfaction	28	7	90
Orgasm is always the goal of sexuality	23	7	77
Partners' simultaneous orgasms are important	20	3	59

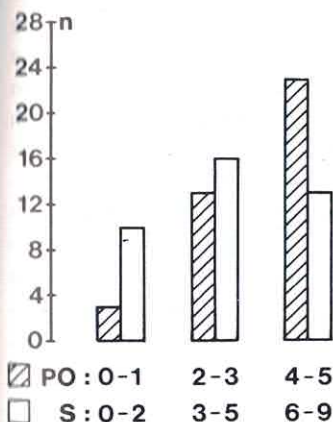


Fig. 5. Distribution of number of performance oriented (▨, PO) and of sexually stigmatic (□, S) attitudes in 39 stroke survivors. Obtained number of PO or S attitudes trichotomized into little or no (0-1 and 0-2), intermediate (2-3 and 3-5), and pronounced (4-5 and 6-9) PO and S answers.

Finally, when the subjects were asked if staff had offered counselling on sexual matters after the stroke only one answered in the affirmative. Moreover, only two subjects had, themselves, sought such advice.

DISCUSSION

The profound negative influence of stroke with hemiplegia on the established partnership sexuality is illustrated by experiences of decline in mutual verbal and non-verbal sexual responsiveness. A common loss of relatedness and closeness is also symbolized by the marked decrease in frequency of caressing and touching without intentions of having sex. Furthermore, and to an even greater extent, frequency of intimate caressing, which is often regarded as sexual overtures, "foreplay", was reduced. It might be hypothesized that these changes reflect lowered libido, which Kalliomäki et al. (10) and Goddess et al. (8) feel occurs after stroke. It is, though, important to stress that the subjects' wishes (liking) for continuation of intimate body contact were unaltered. If libido is defined as the subconscious sexual drive based upon primitive wishes and upon sexual impulses (cf. 6) it appears unlikely that libido is decreased after stroke. However, consciously the stroke victims acknowledge that they have less thoughts of and show less interest in mutual partnership sexuality (20a).

We can only speculate in the explanation for this

decrease in sexual partnership drive which might be classified as avoidance behavior. Firstly, changes in own responsiveness may serve to legitimate subjects' previous sexual dysfunction, which was more common in females than in males. Secondly, changes may reflect frustration over onset of increase of sexual dysfunctions post-stroke (cf. 20a). Thirdly, changes may be a result of stigmatism. These suggestions are supported by the fact that 64% of the subjects felt that "the healthiest way for the disabled to deal with decreased sexual capacity is to choose other goals" (cf. Table III). Fourthly, the non-disabled partner may factually endeavor to avoid or may be ambivalent towards mutual sexuality (cf. below). As Kaplan (12) pointed out, sexual avoidance is a sign of fear of sex not of decreased desire. It is necessary to separate these states as avoidance may present a barrier to therapy.

The finding that only about 50% were satisfied with intercourse and sex-life in general (cf. Fig. 4) before stroke is in agreement with other reports (23, 26). The significantly greater decline in these aspects of sexual satisfaction after stroke in males than in females may be due to the previously described (also cf. 20a) pre-stroke latent and expected (13, 24) high female rates of orgasmic dysfunctions; latent because they are, generally, not accompanied by correspondingly low levels of contentment. This partial female self denial rights of sexuality is most likely a result of sociocultural requirements. Thus it appears that Swedish females silently accept rather than focus sexual dysfunctions; an assumption which is further discussed in and appears substantiated by our report on students of health care professions (7).

The fact that several sexual dysfunctions tended to appear simultaneously is in agreement with other findings (16). There appears, though, to be no available "normative" data on occurrence of erectile and orgasmic spectating. The significant associations for performance orientation and sexual stigmatization with male increases in spectating support the suggestion of Masters & Johnson (14) and Sarrel & Sarrel (19) that spectating is a sequela of performance anxiety.

The passive dysfunctional role as spectator is not only confined to the sexual sphere but occurs in other parts of life after stroke. Thus, leisure time is also characterized by passive discontentment (20). The change from being a participator to a psycho-

logically maladjusted spectator resembles that reported by Power (17) in male subjects with multiple sclerosis. Although the present investigation was not designed to analyse the reactions and behaviour of the spouse it must be pointed out that when a subject is critically ill or becomes permanently disabled, the partner is generally also in a crisis (15, 22).

Evidently performance oriented—mechanistic—sexual attitudes were accompanied by sexual stigmatism. It is suggested that the negative influence of such attitudes on several aspects of sexual fulfilment, responsiveness and function reflect the vulnerability of the performance orientated subjects. These apparently have great difficulties in coping with major changes in their habitual lifestyle. In other words, not being able to perform according to own expectations leads to reduced self-esteem (stigmatism) and in turn, or concurrently, to frustrated sexual spectating. Role expectations and role changes govern both the disabled and his or her partner's adjustment to the new life situation (2, 17). The fact that dependence upon spouse in self-care ADL is a main predictor for resumption of sexual intercourse after stroke overriding the disability per se (21) suggests that changes towards discontented sexual passivity and spectating are caused largely by changes in marital roles. In this context, Racy (18) emphasized that sexual and interpersonal aspects of a partnership are so interwoven that changes within one aspect leads to changes in the other.

A major explanation of the marital maladjustment, in particular that of the hemiplegic males, may be that reduced somatic and perhaps mental capacity, loss of occupation and fear of relapse render the subject a ready victim to adopt maladaptive defence mechanisms with stigmatized loss of self-esteem and fixation in a dependent sick role (20). The same precipitating factors may cause the non-disabled spouse to turn custodial, with tendencies to infantilize the disabled partner. Thus, the spouse identifies with and is identified by the hemiplegic as the caretaker (a mother figure). These new partnership roles may create ambivalence towards mutual sexuality as illustrated by reduced partnership responsiveness and sexual communication accompanied by unaltered libido. In support of this explanation Jääskö & Fugl-Meyer (9) found that after stroke the partner's custodial attitudes lead to lower frequency of intercourse.

Many subjects, particularly females, felt that the decrease in sexual enjoyment was due to fatigue which may be a symptom of reactive depression that commonly occurs after stroke (5, 20). The high rate of fatigue in the females may furthermore serve to legitimate post-stroke avoidance of pre-stroke unrewarding sexual intercourse. An attempt to explain the emergence of ejaculatory retardation in 15% of the males shall also be offered. Kaplan (11) suggested that retarded ejaculation represents fear and/or inhibition of aggression. Moreover, the "role shift hypothesis" may provide an explanation for the sexual deprivation of hemiplegic males in that both fear (fear of being still more dependent—or die; fear of intercourse with the caretaker/mother) and aggression (wishes to punish the female who "is in power") may precipitate this sexual dysfunction.

Extremely few patients were offered or asked for sexual counselling. There may be many reasons accounting for this apparent defeatism. During the early phases denial (cf. 5) may block search for information. Furthermore, the patients' depression and/or stigmatization may lead to passivity and sexual taboos may inhibit even the simplest question on sexual matters. It is worth noting that the only subject in this investigation who actually had a stroke during intercourse, a fact well known by staff, neither approached nor was approached by the medical or paramedical staff at the departments of internal medicine or rehabilitation to discuss sexual matters. Since this subject and his spouse dreaded iterated stroke during intercourse, his sexual life deteriorated.

It is felt that medical and paramedical staff members must actively deal with the sexual maladjustment of the disabled as has been maintained by other authors working in the field of sexuality and disability (1, 3, 4). This may, though, not be easy as a fair amount (about 1/3) of staff may be sexual stigmatizers towards the disabled (7). Therefore, sexological education should be incorporated in the curriculae of medical and paramedical future staff members.

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Address for offprints:

Kerstin Sjögren
 Department of Physical Medicine and Rehabilitation
 University of Umeå
 Umeå
 Sweden