Archives of Sexual Behavior, Vol. 10, No. 1, 1981

Sexual Behavior of Castrated Sex Offenders

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Data are reported on the sexual behavior of 39 released sex offenders who agreed voluntarily to surgical castration while imprisoned in West Germany. Findings indicated that frequency of coitus, masturbation, and sexual thoughts are seen as strongly reduced after castration. Sexual desire and sexual arousability are perceived by the subjects as having been considerably impaired by castration. In comparison with other studies, however, it was shown that male sexual capacity was not extinguished soon after castration. Particularly noteworthy is that 11 of 35 castrates (31%) stated they were still able to engage in sexual intercourse. Rapists proved to be sexually more active after castration than homosexuals or pedophiliacs. There seems to be a strong effect on sexual behavior only if castration is performed on males between the age of 46 and 59 years. In general, the findings do not justify recommending surgical castration as a reliable treatment for incarcerated sex offenders.

KEY WORDS: castration; sex offenders; treatment of sexual deviations; sexual behavior; testosterone.

INTRODUCTION

Surgical castration is one of the physical treatment methods that is performed on incarcerated sex offenders. This somatic means of altering sexual behavior is mainly used in European countries. The procedure has been widely used in Switzerland. In the region of Zurich alone far more than 10,000 inpatients have been castrated for various psychiatric reasons since 1910 (Plenge, 1961). In the Netherlands castration was the method of choice

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0004-0002/81/0100-0011$03.00/0

for all types of aggressive offenders, at least after World War II until the late 1960s. In the beginning of 1979, however, the Dutch government declared castration illegal for the treatment of institutionalized patients.

The European literature on surgical castration of sex offenders was recently reviewed by Heim and Hursch (1979). This overview showed that follow-up studies on castrated males are rare even though methodologically crucial. An empirical study on castrated sex offenders conducted recently by Heim (1980) tried to overcome some of these shortcomings. Topics of this study included aspects of social behavior, sexual behavior, and interpersonal perception of released castrates as well as assessment of somatic and psychological sequelae of castration. Also studied were the attitude toward castration, the recidivism rate, and the castrates' techniques of stigma management. Data were mainly generated by a mailed questionnaire. Some castrates were extensively interviewed. In addition, excerpts from the criminal records as well as documentary sources from the court were analyzed. In this article, we shall report some main results concerning the sexual behavior of castrates.

SUBJECTS AND METHODS

Subjects in this study were 39 sex offenders from West Germany who agreed "voluntarily" to surgical castration while incarcerated. These sex offenders can be classified as follows: 12 rapists (31%); 12 heterosexual pedophiliacs (31%); six homosexuals (15%); four homosexual pedophiliacs (10%); four bisexual pedophiliacs (10%); one sexual murderer (3%). Six subjects (15%) were first offenders. Thirty-three subjects (85%) committed two sexual crimes or more before castration was performed. In addition to the ordinary punishment, protective measures were imposed for 21 recidivists (64%) who were exceptionally dangerous by virtue of legal and/or psychiatric classification.

The mean age of the castrates is 49.3 years (range 32 to 69 years). The mean age of the subjects at castration is 42.5 years (range 25 to 59 years).

The study was conducted on castrated sex offenders after release. The median time since release from prison is 4.3 years (range 4 months to 13 years). Data on the sexual behavior of the surgically castrated sex offenders were gathered by a mailed questionnaire that contained 46 items concerning the subjects' sexual functioning before and after castration.

Statistical analyses, i.e., z values, are based on the technique of Cureton (1967). Cross tabulations sometimes yielded cells with small expected frequencies. Therefore, Kullback's $2\hat{I}$ test (Blöschl, 1966) was used instead of the chi-square test.

Table I. Frequency of Sexual Intercourse Before and After Castration ($N = 39$)

	After castration									
	(3)		(4)		(5)		(6)		Total	
Before castration	*N*	%	*N*	%	*N*	%	*N*	%	*N*	%
(1) Several times a day	2	5			2[a]	5	2	5	6	15
(2) Nearly every day	1	3			1	3	2	5	4	10
(3) Once to three times a week			1[a]	3	2	5	5	13	8	20
(4) Once to three times a month			1	3			6	15	7	18
(5) Less than once to three times a month	1	3	1	3	1	3	7	18	10	26
(6) Coitus not practiced							4	10	4	10
Total	4	11	3	9	6	16	26	66	39	99

[a] One subject states that he sometimes takes hormone preparations.

FINDINGS

Table I shows the subjects' frequency of sexual intercourse before and after castration. There is a significant decrement in the frequency of coital behavior ($z = 4.85$, $p < 0.001$).

In comparison with masturbation frequency before castration, the rate of masturbation declined significantly after operation ($z = 5.46$, $p < 0.001$). Table II reveals detailed information.

Table II. Masturbation Frequency Before and After Castration ($N = 39$)

	After castration							
	(4)		(5)		(6)		Total	
Before castration	*N*	%	*N*	%	*N*	%	*N*	%
(1) Several times a day			2	5	5	13	7	18
(2) Nearly every day			1	3	8	20	9	23
(3) Once to three times a week	1	3	2	5	10	26	13	33
(4) Once to three times a month			1	3	4	10	5	13
(5) Less than once to three times a month					4	10	4	10
(6) Masturbation not practiced					1	3	1	3
Total	1	3	6	16	32	82	39	100

Table III. Frequency of Sexual Thoughts Before and After Castration ($N = 39$)

Before castration	After castration: Often		Rarely		Never		Total	
	N	%	*N*	%	*N*	%	*N*	%
Very often	3	8	10	26	5	13	18	46
Often			9	23	5	13	14	36
Rarely			4	10	2	5	6	15
Never			1	3	0	0	1	3
Total	3	8	24	62	12	31	39	100

Table III shows that sexual thoughts appear significantly less frequently after castration than before ($z = 4.93, p < 0.001$).

Fourteen of 39 subjects (36%) reported that their masturbation and/or coital behavior, i.e., their sexual potency, had been extinguished immediately after operation. Two others (5%) claimed that it was only after 6 months following surgery that these sexual behaviors ceased. These 16 castrates whose sexual potency had been extinguished, in this sense, soon after castration, were grouped together to generate data that are comparable to those of Langelüddeke (1963) and Cornu (1973). Table IV shows that compared to the reports by Langelüddeke (1963) and Cornu (1973) significantly fewer castrated sex offenders stated that their sexual potency had been extinguished soon after castration ($2\hat{I} = 6.45$, df $= 1$, $p < 0.05$, and $2\hat{I} = 4.95$, df $= 1$, $p < 0.05$, respectively).

Eleven of 35 subjects (31%) who experienced coitus before the operation (see Table I) are still capable of having sexual intercourse although castration occurred years ago. The median for the post-castration period of these 11 respondents is 4.8 years (range 1.3 to 9.5 years). Table V shows that compared to Cornu's (1973) data significantly more castrated

Table IV. Castration Effects on Sexual Potency ($N = 39$), Data Comparison with the Studies of Langelüddeke (1963) and Cornu (1973)

Sexual potency	Author's study		Langelüddeke		Cornu	
	N	%	*N*	%	*N*	%
Extinguished soon after castration	16	41.0	58	65.2	43	63.2
Extinguished later or still prevailing	23[a]	59.0	31	34.8	25	36.8
Total	39	100.0	89	100.0	68	100.0

[a]Two subjects state that they sometimes take hormone preparations.

Table V. Coital Behavior of Castrated Sex Offenders (N = 35), Data Comparison with the Studies of Langelüddeke (1963) and Cornu (1973)

	Author's study		Langelüddeke		Cornu	
Coitus is:	N	%	N	%	N	%
Still practiced	11	31.4	16	18.0	7	10.3
No longer practiced	24	68.6	73	82.0	61	89.7
Total	35	100.0	89	100.0	68	100.0

Table VI. Sexual Behavior of Castrates – Classification by Type of Sex Offender (N = 36)

Masturbation and/or coitus is:	Homosexuals		Rapists		Pedophiliacs		Total	
	N	%	N	%	N	%	N	%
Still practiced	1	17	8	73	6	32	15	42
No longer practiced	5	83	3	27	13	68	21	58
Total	6	100	11	100	19	100	36	100

Table VII. Sexual Behavior of Castrates – Classification by Castration Age (N = 37)

Masturbation and/or coitus is:	Castration age				Total	
	25 - 44		46 - 59			
	N	%	N	%	N	%
Still practiced	14	58	1	8	15	40
No longer practiced	10	42	12	92	22	60
Total	24	100	13	100	37	100

Table VIII. Castrates' Sexual Desire and Their Sexual Behavior (N = 39)

Sexual desire after castration is perceived as:	Masturbation and/or coitus is:				Total	
	Still practiced		No longer practiced			
	N	%	N	%	N	%
Stronger	1	100	0	0	1	100
Unchanged	0	0	0	0	0	0
Reduced	16[a]	89	2	11	18	100
Absent	0	0	20	100	20	100
Total	17	44	22	56	39	100

[a] Two subjects state that they sometimes take hormone preparations.

Table IX. Castrates' Sexual Arousability and Their Sexual Behavior ($N = 39$)

Sexual arousability after castration is perceived as:	Masturbation and/or coitus is: Still practiced		No longer practiced		Total	
	N	%	*N*	%	*N*	%
Faster	0	0	0	0	0	0
Unchanged	2	100	0	0	2	100
Slower	15[a]	83	3	17	18	100
Absent	0	0	19	100	19	100
Total	17	44	22	56	39	100

[a]Two subjects state that they sometimes take hormone preparations.

sex offenders are still able to engage in intercourse ($2\hat{I} = 6.79$, df = 1, $p < 0.01$). Differences from the data reported by Langelüddeke (1963) proved not to be significant, but only when we excluded in the relevant category the two sexually potent castrates who claimed to be taking hormone preparations to revitalize their sex life.

Analysis of cross tabulation (see Table VI) indicates that castrated rapists are sexually active (masturbation and/or coitus) significantly more often than castrated homosexuals ($2\hat{I} = 5.21$, df = 1, $p < 0.05$) or castrated pedophiliacs ($2\hat{I} = 4.87$, df = 1, $p < 0.05$).

Castration age proved to have a significant effect on the castrates' sexual functioning. As shown in Table VII, sex offenders castrated between the age of 25 and 44 years are sexually more active (masturbation and/or coitus) than sex offenders surgically treated between age 46 and 59 ($2\hat{I} = 10.31$, df = 1, $p < 0.01$).

There is a significant relation ($CC = 0.72$) between the castrates' self-reports of sexual desire and sexual behavior (see Table VIII). It was also found that there is a significant relation ($CC = 0.69$) between the sexual arousability perceived by the castrates and their reported sexual behavior (see Table IX).

DISCUSSION

Data analyses demonstrated that the rate of coitus and masturbation, the frequency of sexual thoughts, and the extent of sexual desire as well as of sexual arousability are perceived by the castrates as having been strongly reduced. Although reliability and validity of self-report data on sexual behavior might be questionable, given that we found consistent differences it is unlikely that subjects' reports reflect such biases as response sets or dissimulation tendencies. Therefore, changes in the subjects' ability for

sexual functioning seem to be striking. It is, however, unclear whether these changes are due to hormonal, psychogenic, or combined effects.

Our data indicate that the sexual responsiveness of castrated males is much more varied than had been supposed. It may be a myth that male sexual capacity is extinguished soon after castration. Table IV shows that 16 subjects stated their sexual potency had been extinguished soon after castration. In our data, significantly fewer castrates had extinguished sexual activities than in the studies of Langelüddeke (1963) and Cornu (1973), and this provides a conservative comparison of the differences since several of the subjects informed us during interviews that they had been treated with antiandrogens (cyproterone acetate) at the same time. In other words, we cannot say whether the reported immediate cessation of sexual capacity is due exclusively to castration. On the basis of our data it seems justifiable to say that the general procedure of releasing sex offenders approximately 6 months after castration, based on the assumption that hormonal loss is complete within that time, is unfounded.

Furthermore, our data indicate that 11 of 35 castrates (31%) are still able to engage in sexual intercourse (see Table V). Significant differences from the study by Cornu (1973) might be due to the fact that the follow-up period was longer than in our study. Although 11 subjects reported reduced frequencies of coitus after castration, it is unclear whether this decline of sexual behavior occurred more rapidly than that usually brought on by advancing age.

It is interesting to note that rapists are sexually more active after castration than homosexuals and pedophiliacs. Rape is an offense that combines aggressive and sexual aspects, and there is some evidence that rapists can better handle their sexually colored aggressive impulses after castration than before.

There are several explanations offered as to why the sexual responsiveness of 11 subjects may have been relatively unimpaired by castration: (1) Hammond's (1934) explanation is based on the finding that after an amputation, in general, there is a persistent feeling as though the digits were gripped in a vice due to changes in the nerve endings. In this sense, the irritation of the spermatic nerve may set up sexual thoughts and lead to increased sexual desire through reflex action upon other sexual organs. (2) Beach (1944) argued that once the central excitatory mechanism had been sensitized by androgen, this neural mechanism may remain in an excitable state for a period of time even if testicular hormones are withdrawn. (3) Ford and Beach (1951) stressed that the effects of castration on male sex drive depend mainly on the subject's psychological attitude toward castration (see also Bauer, 1967; Oliven, 1974). (4) Egle and Altwein (1975) succeeded in demonstrating that the androgen release from the

adrenal glands compensates for the testicular androgen deficit (e.g., plasma testosterone level of a castrated sex offender suffering from a prostatic carcinoma was in the upper normal range). (5) Expression of sexual behavior is not controlled by a biological drive or instinct but mainly by experiential determinants (Hardy, 1964; Whalen, 1966). Once the pattern of sexual behavior has been established, it cannot be fundamentally disrupted by castration.

As for age at castration, we found that there is a strong effect on sexual behavior if the operation is performed on males between the age of 46 and 59 years. This result is in sharp contrast to data found by Langelüddeke (1963) and Cornu (1973). Langelüddeke claimed that only at a castration age over 30 years could a rapid extinction of sexual drive be expected. Cornu concluded that sexual potency would be rapidly extinguished at a castration age between 26 and 45 years. This conclusion, however, is in error, as Cornu did not base the percentages on the values of the independent variable "castration age" but rather on the total number of subjects ($N = 68$). The result we obtained corresponds largely to the information given by Bremer (1959). In general, there seems to be a tendency for castration effects to be stronger the higher the castration age, but only from around the age of 45 on.

The results reported in this article confirm our overall impression that sexual manifestations caused by castration vary considerably and that castration effects on male sexuality are not predictable with certainty. Therefore, surgical castration cannot be recommended as a reliable treatment for incarcerated sex offenders. Using this physical method represents an atheoretical pragmatism and a gross misunderstanding of the nature and psychodynamics of sexual deviations.

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