A STUDY OF PSYCHIATRIC ASPECTS OF HYSTERECTOMY

J. N. VYAS
R. S. KATHORE
P. SHARMA
A. K. SINGHAL

SUMMARY

Thirty women patients who were hysterectomized for non-malignant pathologies were compared with thirty comparable patients who underwent other gynaecological operations. Each patient was subjected to semi-structured psychiatric interview, standardised Hindi version of G. H. Q., Hindi version of PEN, I.P.I.S. and BDRI. The diagnosis was made according to I.C.D.-9. It was observed that patients undergoing hysterectomy do suffer significantly higher psychiatric morbidity (60%), had higher G. H. Q. and BDRI scores at the time of discharge from hospital.

Traditionally, hysterectomy has been ascribed adverse psychiatric sequelae. Kraft Ebing in 1890 has stated that psychoses were more frequently caused by hysterectomy than by any other surgical procedure (Raphael, 1972). Apparent support had come from some recent retrospective studies reporting an excess of psychiatric and somatic symptoms in post-hysterectomized women. Richards (1974) posits "Post hysterectomy syndrome", with depressed mood, hot flushes, urinary symptoms, fatigue, headaches, dizziness and insomnia. Dannerstein & Wood (1977) report deterioration of sexual functioning in one third of patients. Kaltreider & Wallace (1979) suggest a post-hysterectomy "stress response syndrome" as a reaction to the loss of child bearing capacity. Subramaniam and Subramaniam (1982) concluded that psychiatric disturbances are more frequent after hysterectomy than after other major gynaecological operations. About 20% of their patients who became psychiatrically ill after hysterectomy, had some symptoms of depressive illness. The previous personality pattern seems to be related to the tendency to get psychiatric disturbance. None of their sample, however, showed the clear cut hysterectomy syndrome described by Richards in 1974.

Four prospective studies published from 1977 to 1989 in sharp contrast to most earlier studies, concluded that hysterectomy seldom led to psychiatric disorder (Meikle and Brody, 1977; Martin and Roberts, 1977, 1980; Gath and Cooper, 1981, 1981a; Gath et al, 1982; Coppen and Bishop, 1981). These discrepant findings can be explained largely in terms of research design and method. First, in nearly all studies the patients were assessed only after hysterectomy. Hence it is not clear whether any psychiatric morbidity detected after the operation was due to the operation itself or to the patient's pre-operative condition. Second, only a few studies have used standardized psychiatric measures (Hampton and Tarnasky, 1974; Meikle and Brody, 1977; Martin and Roberts, 1980). The others
have either been based on the investigator's clinical judgement, with little or no attempt to quantify data, or they have used indirect measures such as admission to mental hospital (Bragg, 1965), referral to a psychiatrist (Barker, 1966) or the prescribing of medication in general practice (Richards, 1973). Third, nearly all studies have used mixed gynaecological samples e.g. patients hysterectomized for menorrhagia, prolapse, cancer or in combination with abortion or child birth, with or without removal of both ovaries.

In view of the above objections the present study was planned with the following aims to find out the psychiatric morbidity in patients undergoing the operation for removal of uterus i.e. hysterectomy:

1. To determine psychiatric morbidity and its nature among patients undergoing hysterectomy.
2. To determine whether psychiatric manifestations after hysterectomy are its consequence.
3. To study the relationship of personality profile with psychiatric manifestations after hysterectomy.

Material and Method

(I) Sample:

The present study consists of 30 patients undergoing hysterectomy for nonmalignant pathologies and another thirty patients for comparable gynaecological operations other than hysterectomy serving as control. These patients were admitted to department of gynaecology and obstetrics, S.M.S. Medical College, Jaipur from December, 1983 to February, 1984. The two groups were matched for education, economic status, domicile and marital status. However, the two groups could not be matched for age and parity on account of this being a factor in pathogenicity of conditions calling for hysterectomy and the other comparative surgeries.

(II) Tools:

A specially designed proforma was used for a thorough evaluation of the patients. It included the identification data, socio-demographic data, personal history, detailed gynaecological history and examination, psychiatric history and mental status examinations. The following psychological instruments were used in addition to quantify the psychiatric status of the sample population. These were:

1) Standardised Hindi version of General Health Questionnaire GHQ (Goldberg, 1978).
2) Hindi version of P. E. N. Inventory (Eysenck and Eysenck, 1963).
3) Beck Depression Rating Inventory (BDRI) (Beck & Ward, 1961).
4) Section (d) and (e) of Indian Psychiatric Interview Schedule (I.P.I.S.).

(III) Technique:

Most patients were interviewed immediately after their gynaecological consultation before operation and at the time of discharge from hospital after operation. In all cases the husband and wife were interviewed separately. The interview was semi structured and all information was recorded in a carefully developed structured schedule. Following this they were subjected to Hindi version of G. H. Q. and P. E. N. inventory. Those subjects who scored 12 or more points on G. H. Q. or had high neuroticism (11+) or Psychoticism (7+) scores on P. E. N. were subjected to detailed psychiatric evaluation by using section (d) and (e) of Indian Psychiatric Interview Schedule (I.P.I.S.) and Beck's depression rating scale was also administered. The psychiatric diagnosis was made.
A STUDY OF PSYCHIATRIC ASPECTS OF HYSTERECTOMY

Observations

Both the groups were comparable on almost all socio-demographic characteristics excepting age. It is evident that the majority of patients of hysterectomy group were between 30-40 years and control group were between 20-30 years. The obvious difference in age distribution corresponds to the gynaecological pathologies which were indicated for operation in the two cases (Table I).

Five patients in the hysterectomy group and 2 in the control group had past history of psychiatric illness. After the

Table I—Socio demographic data of Hysterectomy and Control group

| Age (in Years) | Hysterectomy Group (N=30) | Control Group (N=30) |
|---------------|--------------------------|----------------------|
| 20-25         | N 7                      | N 17                 |
| 26-30         | N 7                      | N 13                 |
| 31-35         | N 23                     | N 23                 |
| 36-40         | N 37                     | N 37                 |
| 41-45         | N 37                     | N 37                 |
| 46-50         | N 3                      | N 3                  |
| 51 and above  | N 10                     | N 10                 |

Table II—Scores on Psychological inventories of two groups pre and post-operatively

|                    | Hysterectomy Group (N=30) | Control Group (N=30) |
|--------------------|---------------------------|----------------------|
|                    | Mean | s.d. | Mean | s.d. |
| G.H.Q.             |      |      |      |      |
| Pre operative      | 14.0 | 3.16 | 10.2 | 2.94 |
| Post operative     | 21.0 | 2.56 | 12.0 | 2.90 |
|                    | t=20.92, p<0.01            | N.S.                 |
| F.E.N.             |      |      |      |      |
| (i) Neuroticism    |      |      |      |      |
| Pre operative      | 10.11| 1.36 | 9.2  | 2.21 |
| Post operative     | 12.12| 1.81 | 9.6  | 3.40 |
|                    | t=6.05, p<.001             | N.S.                 |
| (ii) Extraversion  |      |      |      |      |
| Pre operative      | 9.14 | 1.38 | 8.16 | 2.20 |
| Post operative     | 9.24 | 2.16 | 9.16 | 1.96 |
| (iii) Psychoticism |      |      |      |      |
| Pre operative      | N.S. |      | N.S. |      |
| Post operative     | 4.25 | 0.84 | 4.20 | 0.90 |
|                    | t=3.17, p<0.01             | N.S.                 |
| B.D.R.I.           |      |      |      |      |
| Pre operative      | 7.3  | 1.04 | 7.9  | 1.11 |
| Post operative     | 13.3 | 2.01 | 7.6  | 2.90 |
|                    | t=18.89, p<0.001           | N.S.                 |
operation 4 patients developed psychiatric illness in the hysterectomy group and none developed it in the control group.

Table No. II is clearly showing that there is a significant increase in G.H.Q. and B.D.R.I. scores post operatively in hysterectomy group but a marginal difference though mildly significant was observed on neuroticism and psychoticism scores, whereas no significant difference was found in extraversion, pre and post operatively in both the group.

Table No. III shows frequency of the common psychiatric symptoms in the two groups-pre and post operatively. Patients of hysterectomy were found to suffer more with psychiatric symptoms. In the control group not much change was observed, however psychiatric morbidity had increased after operation.

Table No. IV shows the overall psychiatric morbidity in both the groups.

In hysterectomy group only 8 (26%) patients were psychiatric cases pre-operatively while there were 18 cases (60%) post-operatively. The increase is significant. For the control group no significant change is observed.

Table No. V is clearly showing that all the patients in both the group had neurotic disorder and none had psychosis.

Discussion:

The present study had found a significant increase in psychiatric morbidity after hysterectomy on psychiatric interview as well as on psychometric questionnaires. The nature of psychiatric morbidity was of neurotic disorder like reactive depression (20%), neurotic depression (10%), anxiety neurosis (26%), phobic neuroses (3%). These observations are supported by majority of studies in this field. The high risks of adverse psychological

**Table III—Frequency of psychiatric symptoms in the groups of patients pre and postoperatively.**

| Symptom                              | Hysterectomy (N = 30) | Control (N = 30) |
|--------------------------------------|-----------------------|-----------------|
|                                      | Pre       | Post       | Pre       | Post       |
|                                      | No. of cases | % | No. of cases | % | No. of cases | % | No. of cases | % |
| Loss of interest                     | 8         | 26 | 13         | 43 | 6         | 20 | 4         | 14 |
| Hypochondriacal preoccupation        | 9         | 30 | 12         | 40 | 5         | 16 | 3         | 10 |
| Self blame                           | 10        | 33 | 12         | 40 | 7         | 23 | 5         | 16 |
| Free floating anxiety                | 9         | 30 | 12         | 43 | 6         | 20 | 4         | 14 |
| Feeling of incompetence             | 9         | 30 | 12         | 40 | 7         | 23 | 6         | 20 |
| Feelings of inferiority              | 9         | 30 | 12         | 40 | 3         | 10 | —         | —  |
| Worries about sexual performance    | 10        | 33 | 14         | 46 | 10        | 33 | 8         | 26 |
| Delayed sleep                       | 12        | 40 | 16         | 52 | 7         | 23 | 4         | 14 |
| Suicidal ideas                       | 2         | 7  | 3          | 10 | —         | —  | —         | —  |
| No intercourse                      | 26        | 86 | 26         | 86 | 27        | 90 | 3         | 10 |
| Difficult sexual relations           | 4         | 14 | 10         | 33 | —         | —  | —         | —  |
| Phobia                              | 6         | 20 | 8          | 26 | 4         | 14 | 1         | 3  |
A STUDY OF PSYCHIATRIC ASPECTS OF HYSTERECTOMY

TABLE IV—Psychiatric morbidity in Patients of both groups.

| Psychiatric Morbidity | Hysterectomy group (N=30) | Control group (N=30) |
|-----------------------|---------------------------|----------------------|
|                       | Pre | Post   | Pre | Post |
|                       | No. of cases | % | No. of cases | % | No. of cases | % | No. of cases | % |
| Present               | 8   | 27     | 18  | 60   | 3  | 10     | 2  | 7 |
| Absent                | 22  | 73     | 12  | 40   | 27 | 90     | 28 | 93 |

TABLE V—Diagnostic break-up of the two groups as regards diagnostic categories

| Diagnostic categories | Hysterectomy group | Control group |
|-----------------------|--------------------|---------------|
|                       | Pre | Post   | Pre | Post |
|                       | No. of cases | % | No. of cases | % | No. of cases | % | No. of cases | % |
| Reactive depression   | 4   | 14     | 2   | 7    | —  | —     |
| Neurotic depression   | 1   | 3      | —   | —    | —  | —     |
| Anxiety neurosis      | 1   | 3      | 1   | 3    | 2  | 7     |
| Phobic neurosis       | 2   | 7      | 3   | —    | —  | —     |
| Others                | —   | —      | —   | —    | —  | —     |
| No psychiatric illness| 22  | 73     | 27  | 90   | 28 | 93    |

Reactions to hysterectomy have been reported by numerous other workers also (Lindemann, 1941; Stengel and Zeitlyn, 1958; Ackner, 1960 and Barglow and Gunther, 1965). These reactions have been described not only as depression (Barker, 1968, Richards, 1973, Subrahmaniam and Subramaniam, 1982) but also as agitation and insomnia (Lindemann, 1941), non-specific anxiety (Drelch and Bieber, 1956), reduced psychosexual functioning (Hollender, 1960; Ellison 1969, Dennerstein and Wood, 1977) and psychosomatic disorder (Zervos and Papaloucas, 1972).

Amongst five patients of hysterectomy having past history of psychiatric illness, four (80%) developed psychiatric illness post-operatively. This confirms the findings of Lindemann (1941), Melody (1962), Patterson and Craig (1963), Richards (1973) and Gath et al (1981) who found that patients with a history of psychiatric referral had a 50% risk of developing postoperative psychiatric problems.

The increase in psychiatric morbidity only in hysterectomy group and not in comparable control group signifies the importance of uterus, which depends on her emotional investment in her uterus.
and the functions that it symbolizes. Hollender (1960) said that hysterectomy is perceived as blow by nearly every woman. How different woman react to this operation depends mainly upon individual personality structure and feminine experience as well as on how the physician and family handle the situation. Kaltreider and Wallace (1979) also suggest a post hysterectomy "stress response syndrome" as a reaction to the loss of child bearing capacity.

Scores of three personality dimensions e.g. Psychoticism, Extroversion and Neuroticism (PEN) in both the group did not have significant difference which is in contradiction to the findings of Gath et al (1982) and Subramaniam and Subravaniam (1982). Both these studies have demonstrated a relationship between preoperative neuroticism and postoperative psychiatric morbidity.

REFERENCES

Ackner, B. (1960). Emotional aspects of hysterectomy. Advances in Psychosomatic Medicine., 1 : 248-252.

Barglow, P., Gunder, M. S. (1965). Hysterectomy and tubal ligation : a psychiatric comparison. Obst. Gynec., 25 : 91-95.

Barker, M. G. (1968). Psychiatric illness after hysterectomy. Brit. Med. J., 2, 91-95.

Beck, A. T., Ward, G. H. (1961). An inventory for measuring depression. Archives of General Psychiatry, 4, 561-571.

Bragg, R. L. (1965). Risk of admission at mental hospital following hysterectomy or cholecystectomy. Amer. J. Public Health, 55, 1403-1410.

Coppen, A., Bishop, M. (1981). Hysterectomy, hormones and behaviour : a prospective study. Lancet, 1, 126-128.

Dennerstein, L. & Wood, C. A. (1977). Sexual response following hysterectomy and oophorectomy. Obst. and Gynec., 19, 92-96.

Drellich, M. G. & Bieber, I. (1953). The psychological importance of the uterus and its function. Journal of Nervous and Mental Disease, 126, 322-336.

Ellison, R. M. (1964). Psychiatric complications following sterilization of women. Medical Journal of Australia, 2, 625-628.

Eysenck, H. J. and Eysenck, S. B. G. (1963). The Eysenck Personality Inventory. University of London Press, London.

Gath, D., Cooper, P. (1981). Psychiatric disorder after hysterectomy. Journal of Psychosomatic Research, 25, 347-355.

Gath, D., Cooper, P., (1981a). Hysterectomy and psychiatric disorder : demographic, psychiatric and physical factors in relation to psychiatric outcome. Brit. J. of Psychiatry, 140, 343-350.

Gath, D., Cooper, P., Day, A. (1982). Hysterectomy and psychiatric disorder : Levels of psychiatric morbidity before and after hysterectomy. Brit. J. of Psychiatry, 140, 335-350.

Goldberg, D. (1978). Manual of the General Health Questionnaire. NFER Oxford.

Hampton, P. T., Tarnasky, W. G. (1974). Hysterectomy and tubal ligation : a comparison of the psychological aftermath, American Journal of Obst. and Gynec., 119, 949-952.

Hollender, M.H. (1960). A study of patient admitted to a psychiatric hospital after pelvic operations. American Journal of Obst. and Gynec., 79, 496-503.

Kaltreider, N. B., Wallace, A. (1979). A field study of the stress response syndrome. Journal of American Medical Association, 242, 1499-1503.

Lindemann, E. (1941). Observations on psychiatric sequelae to surgical operations in women. American Journal of Psychiatry, 98, 152-157.

Martin, R. L., Roberts, W. V., (1977). Psychiatric illness and noncancer hysterectomy. Diseases of the Nervous System, 38, 974-980.

Martin, R. L., Roberts, W. V., (1980). Psychiatric status after hysterectomy : one year prospective follow-up. Journal of the American Medical Association, 244, 350-353.

Meikle, S., Brody, H. (1977). An investigation into the psychological effects of hysterectomy. Journal of Nervous and Mental Disease, 164, 36-41.

Melody, G. F. (1962). Depressive reactions following hysterectomy. American Journal of Obst. & Gynec., 83, 110-413.

Patterson, R. M., Craig, J. B. (1963). Misconceptions concerning the psychological effects of hysterectomy. Am. J. Obst. and Gynec., 85, 104-111.

Raphael, B. (1972). Crisis of hysterectomy. Aust. N. Z. J. of Psychiatry, 6, 106.

Richards, D. H. (1973). Depression after hysterectomy. Lancet, 2, 430-432.

Richards, D. H. (1974). A post hysterectomy syndrome. Lancet, 2, 983-985.
Stengel, E., Zeitlyn, E. B. (1958). Post operative psychoses. Journal of Mental Science, 104, 389-402.

Subramaniam, D., Subramaniam, S. K. (1982). Psychiatric Aspects of Hysterectomy. India J. Psychiatry, 24(1), 75-79.

Zervos, S. K., Papaloukas, A. L. (1972). Psychosomatic disturbances following hysterectomy performed at a premenopausal age. Int. Surg., 57, 802-804.