Psychological State in Primary Idiopathic Galactorrhea

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Primary idiopathic galactorrhea is defined as galactorrhea in the presence of normal menses, normal prolactin and thyroid hormone levels, a negative drug history, and a normal skull and sella roentgenogram. Primary idiopathic galactorrhea is a rather common condition among galactorrheic women, accounting for 30 to 40 percent of the diagnoses,[1] or even more.[2] No cause has been demonstrated for primary idiopathic galactorrhea, and some investigators have suggested that the condition "may be of no clinical significance."[3] Some authors have suggested that stress may be involved as a possible etiologic factor of "galactorrhea-amenorrhea syndrome."[4]

In the present study the psychological state of five patients who suffered from primary idiopathic galactorrhea were evaluated using the Minnesota Multiphasic Personality Inventory (MMPI)-168 questionnaire.[5]

METHODS

The study was carried out in a rural primary care practice in Israel with a total population of 4,200. The entire population is insured by the Labor Sick Fund (Kupat Holim) and benefits from health services offered by this fund.

All new diagnoses are coded in computer files. Six women were found to complain of galactorrhea during the two-year period of 1983 to 1984. The galactorrhea was bilateral in all cases and appeared only when pressing the breast. The duration of the symptom ranged from a few months to two years. One patient moved from the area, while the rest were tested to rule out organic endocrinological or drug causes. Examination included prolactin and thyroid hormone levels and skull x-ray examination. The thyroid stimulating hormone (TSH) levels of all patients were not tested. One patient had normal TSH levels (2.7 mIU/mL) (patient 3), and one patient had normal results on a thyroid scan using the isotope iodine 131 (patient 5). The other three showed normal free triiodothyronine (T_3), free thyroxine (T_4), and free thyroxine index (FTI) levels at the time of the complaint and at the two year follow-up. The MMPI-168 questionnaire was completed, and a personality profile was defined for each woman.[6]

RESULTS

The age, history, and clinical and laboratory characteristics are presented in Table 1. All five patients had regular menses, and in none was the galactorrhea associated with recent pregnancy. The hormonal profiles and skull x-ray examinations were normal in all the women. The final diagnosis of all these patients was therefore primary idiopathic galactorrhea.

The continuous follow-up of the patients of up to two years did not reveal any development of additional symptoms or signs that could change the diagnosis of primary idiopathic galactorrhea.

The T scores of the MMPI-168 scales are presented in Table 2. Normal scores range between 45 and 59. The moderate elevation range is between 60 and 69, while any score above 70 indicates a pathological value.

Pathological mean T scores were found in the scales indicating depression, hysteria, paranoia, and schizophrenia. The mean high score for the schizophrenia scale was due to two markedly high scores found in patients 1 and 5. The high scores indicate acute, severe situational stress rather than a schizophrenic trend.[7] The other pathological scales indicate that the patients suffered from "markedly depressed mood either about life or about themselves."[7] The patients were, in general, "naive, lacking in insight into their own behavior and that of others, and they denied any psychological problems." "Under stress-specific physical complaints," it appears that these

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TABLE 1. CLINICAL AND LABORATORY CHARACTERISTICS OF PATIENTS WITH GALACTORRHEA

Case No.	Age (years)	Marital Status	Number of Previous Pregnancies	Menses	Physical Examination	Prolactin (ng/mL)	T_4 mIU/mL	Skull and Sella X-ray Examination
1	24	Married	3	Regular	Normal	3.5	8.9	Normal
2	33	Married	4	Regular	Normal	13.9	5.0	Normal
3	26	Married	1	Regular	Normal	5.5	7.6	Normal
4	31	Married	2	Regular	Normal	20.5	6.5	Normal
5	34	Single	1	Regular	Normal	14.1	7.0	Normal

TABLE 2. T SCORES OF THE MMPI-168 (pathological values > 70)

	Validity Scales			Clinical Scales									
				1	2	3	4	5	6	7	8	9	10
Patient No.	L	K	F	Hypochondria	Depression	Hysteria	Psychotic Deviation	Male/Female	Paranoia	Psychasthenia	Schizophrenia	Mania	Introversion
1	53	86	38	78	75	87	83	63	82	69	101	65	45
2	50	64	53	44	73	63	55	39	67	36	63	33	58
3	63	55	53	52	75	80	48	55	73	41	52	48	70
4	63	50	74	35	67	77	41	45	62	25	37	43	53
5	53	100	38	62	73	64	67	78	105	61	107	48	70
Mean	56.4	71	51.2	54.2	72.6	74.2	58.8	56	77.8	46.4	72	47.4	59

patients are likely to be "suspicious, hostile and overly sensitive."[7]

DISCUSSION

The estimated annual incidence of galactorrhea in the study population was 0.07 percent. Nyirjesy[2] found a rate of 0.6 percent in a gynecological department. Friedman and Goldfien,[3] however, reported that the prevalence of galactorrhea among women with a history of pregnancy was 25 percent. His study was conducted in a family planning clinic. The difference in incidence may be due to the different patient population.

The reported rates of primary idiopathic galactorrhea among all galactorrheic women varied between 30 and 40 percent.[1-3] These rates were calculated in hospitals or specialized clinics, however, where the selection of patients differs from that of a primary care clinic. The evidence that all five of the patients studied had primary idiopathic galactorrhea may indicate that the proportion of incidence is higher when the entire population is screened.

A rather unique psychological profile was found of the women studied: all patients had at least one pathological scale on the MMPI-168 scores. Patient 5 had four and patient 1 had six pathological scales. Both evidenced severe situational stress. Tyson et al[4] had suggested that psychological disturbances may be related to the galactorrhea-amenorrhea syndrome. Zacur et al[8] found that two out of three women with galactorrhea-amenorrhea syndrome had distorted psychometric tests, mainly excessive depression, and Nicolls et al[9] have demonstrated that rats began to lactate when exposed to nonspecific stress.

Naguib et al[10] found that 8 out of 12 women with symptoms of idiopathic galactorrhea had hypothyroidism, and the other four had markedly elevated levels of adrenalin (suggesting stress). All complained of physical fatigue and were found to suffer from depression and obsessions. Psychological tests did not discriminate between the hypothyroid and idiopathic patients, and these test results may be related to hypothyroidism rather than galactorrhea.

Although stress can cause a loss of hypothalamic control

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(prolactin-inhibiting factor) over the pituitary, the mechanism by which psychological disturbances may cause or be related to galactorrhea in the absence of hyperprolactinemia is unknown. Kleinberg et al[1] suggested that in primary idiopathic galactorrhea, the breast had adapted itself to secrete milk in the presence of normal prolactin levels. Perhaps it is possible that another nonprolactin mechanism that is stimulated by psychological factors is involved in the secretion of milk.

Further studies are needed to elucidate the role of psychological aspects in the etiology of many endocrinological disturbances.

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