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THE INCIDENCE OF SCHIZOPHRENIA AND SEVERE PSYCHOLOGICAL DISORDERS IN PATIENTS 10 YEARS AFTER COSMETIC RHINOPLASTY

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PART of a recent 3-year investigation into the phenomena of schizophrenia was to try to detect early signs of body image disturbance in apparently normal people and to follow them up to see whether such individuals subsequently developed schizophrenia or serious psychological disorder.

Much has been written on complaints of physical defects as symptoms of schizophrenia. In 1886 Morselli first coined the term "dysmorphophobia" for the complaint of some physical defect which the patient thinks is noticeable to other people, although their appearance is within normal limits. This has always been regarded as an ominous symptom. Bychowski (1943) gave detailed case histories of patients in whom changes in body image appeared as the initial phase of a psychosis and Fenichel (1945) mentioned bodily complaints in incipient schizophrenia. Stekel (1950) described dysmorphophobia and states that in his opinion monosymptomatic hypochondriacal obsessions frequently occur in psychotic conditions. Hunter Gillies (1958) considered early symptoms of schizophrenia to include such disorders of affect as self-consciousness over asymmetry of the face and deformity of the nose and stated that these early symptoms may precede the fully developed symptom by a few years. Korkina (1959) described 41 cases, many of which were referred to her by the Institute of Medical Cosmetics in Moscow; 33 of the 41 cases were dysmorphophobic and 35 were schizophrenic.

Hay (1960*b*) suggested that there is abundant evidence for regarding dysmorphophobia as a malignant symptom. He studied 17 patients whose presenting complaint was dysmorphophobia and found that 5 were psychotic, 11 had severe personality disorders and 1 a depressive illness. Hay only studied dysmorphophobics in this paper and the fact that these patients had already been labelled dysmorphophobic and referred to a psychiatrist makes it not surprising that such a high level of psychological disturbance was present.

In an earlier paper, however, Hay (1970*a*) reported 45 cases of patients requesting cosmetic rhinoplasty, 29 of whom were originally referred to surgeons and 16 of whom were originally referred to psychiatrists. Of the 45, 18 were found to have personality disorder and only 1 was psychotic. No mention of long-term follow-up on these patients is made. This we feel is important; if these complaints are to be regarded as the early presenting symptoms of what is essentially a malignant process, a much higher frequency of schizophrenia years later would be expected. We are unaware of any previous long-term follow-up of this kind.

METHOD

The notes of all patients requesting cosmetic rhinoplasty at the plastic and jaw unit in Sheffield between 1955 and 1960 were studied. No attempt to grade the degree of deformity was made although pre-operative photographs were usually present and it

was obvious that some deformities were marked and some mininal. Patients who were thought to be psychologically disturbed when first seen were not operated on and are therefore not included in this series.

An attempt was made to obtain a control group matched for age and sex who had been in the hospital at the same time and who had a cosmetic rhinoplasty performed for deformity caused by relatively recent trauma or disease. It was felt that a few who attributed their nasal deformity to trauma many years previously were using this as an excuse for surgery, feeling that the surgeon would be more sympathetic to their case and these patients were not included.

The family doctors were contacted and asked about the mental health of each group and where possible the patients were interviewed by F. H. C. Kurt Schneider's classification of personality abnormalities was used as was his criteria for the diagnosis of schizophrenia.

The mean age at the time of operation and the time since operation for the first group was 28 years and 10 years respectively, and for the second group 27 years and 10·5 years respectively.

Results

The results set out in the Table show clearly the significantly greater incidence of serious psychological disturbance in the first group compared with the second. The result is rather surprising considering the screening process to which the first group was

Table

	No.	Psychological disorder including schizophrenia	Stable	Significance
Rhinoplasty for aesthetic reasons	86	32 (38%) (5 schizophrenic)	54 (62%)	$P<0.001$
Rhinoplasty following disease or recent trauma	108	8 (8%) (0 schizophrenic)	100 (92%)	

subjected prior to operation. Plastic surgeons in Sheffield are well aware of the psychological significance of requests for cosmetic surgery and avoid operating on those who appear to be psychologically disturbed. This does not mean of course that every patient requesting cosmetic nasal surgery has an expert psychiatric assessment and it is not therefore possible to assess whether all patients in the first group would have been considered psychologically normal, when they requested surgery initially, had they been evaluated by a psychiatrist.

Because of this screening, one might have expected a decreased incidence of psychological disturbance in this group.

Discussion

Significance of the results in relation to the pathology of schizophrenia. In the complete 3-year investigation into the symptomatology of schizophrenia certain hallucinations, delusions of sexual change and body image disturbance were studied. It is possible that the association between all these represents some, as yet unspecified, dysfunction of the temporal limbic lobe system. Delgado (1959) found that electrical stimulation of the temporal lobe induced doubts about the subject's sexual identity. Jaspers (1883) and many others, have described distortions of the body image in both schizophrenia and temporal lobe epilepsy. It is an interesting thought that one day a

surgeon might operate on the temporal lobe to cure a patient's complaint of minimal nasal deformity!

Significance of the results with regard to the selection of patients for surgery. Much less has been written on patient selection for surgery. Barsky (1944) said that a disfigurement bore no inevitable proportional relationship to the mental distress it might engender. He divided neurotics into the basic neurotic and the situational type (where neurosis is a temporary lack of adaptation to a particular trying situation). In the former he suggested that surgery will relieve the anxiety just as it will repair the defect. He also pointed out that surgical responsibility in the borderline case (between his 2 neurotic categories) was not to be ignored nor treated lightly.

Clarkson and Stafford Clark (1960) made a more complicated classification, dividing patients into psychotic and non-psychotic. Of the psychotics, 1 group had obvious deformity and here it was felt that operation might help; the second had no obvious deformity and it was felt no surgery was indicated. In the non-psychotic group, group 1 had obvious deformity and surgery was indicated while the patients in group 2 had minor deformity and disturbed personalities or neuroses and there were variable indications for surgery.

Edgerton (1960) who studied patients seeking cosmetic surgery found that 45 out of 48 had good results judged by the patient, surgeon and psychiatrist. Of 98 patients with minimal deformity studies, 70 per cent had a psychiatric diagnosis (35 per cent a personality trait disorder, 20 per cent neurotic and 16 per cent psychotic), but as judged by the post-operative results he felt this had not helped as an indication for or against surgery.

Hay (1970) simplified the classification, again dividing the patients into 2 groups: the first who tend to be minimally disfigured and are either neurotic patients using the symptom as an excuse or scapegoat for deeper emotional difficulties, or also early psychotics. In these he felt surgery was risky. In the second group, the patients, although distressed because of their more marked deformities, had fundamentally well-adjusted personalities; in these he felt the patient was likely to benefit from surgery.

Finally, Druss (1971) suggested that co-operation between plastic surgeon and psychiatrist can be helpful in 2 instances: the diagnosis of somatic delusions in puzzling or unclear circumstances and the conjoint treatment of the willing patient who has some insight and realistic expectations.

It is to be assumed that the ultimate desire of any doctor is to help the patient remedy his complaint. Therefore we must consider whether surgery is likely to help the patient, do nothing for him or even make him worse.

Klabunde and Falces (1964) in a survey of 300 rhinoplasties stated that 95·6 per cent of all rhinoplastic procedures apparently resulted in pleased, satisfied patients although approximately 10 per cent may have needed 1 or more secondary procedures. These patients had at least a 1 year follow-up and in their group of 300 it is likely that some patients were psychologically disturbed.

In our survey, the study of patients' notes post-operatively shows that every patient was eventually satisfied with the result of his operation even though in some cases he may have required secondary procedures as in the Klabunde and Falces series.

What we do not know, of course, is whether this satisfaction was maintained for a long period or whether the correction of his nasal complex merely made him transfer his body image disturbance to some other feature of his anatomy.

Unless we jump to the highly improbable conclusion that rhinoplasty actually caused a large number of the patients in our series to become psychologically disturbed, and in the controls the lower incidence of serious psychological disturbance does not

support this, we feel we must conclude that in every case operation was beneficial, even if only for a limited period and that in no instance was it positively harmful.

That the operation, in the group of patients who eventually became psychologically disturbed, could be considered a waste of time, as being merely an attempt to remedy a symptom of a more sinister underlying psychological illness, is quite likely.

Significance of the results with regard to referral by the plastic surgeon for psychiatric evaluation. It is likely that patients who appear to the plastic surgeon to be dysmorphophobics, particularly if anything about their behaviour suggests psychological instability, should be referred to the psychiatrist for evaluation, assuming that the patient is agreeable.

This may be desirable in avoiding unnecessary surgery and in possibly allowing these patients who may be early schizophrenics to be followed up closely with the chance of early treatment, delaying or preventing the onset of the fully developed illness.

In our results it is possible that some of the patients now diagnosed as psychotic would still escape psychiatric attention as the plastic surgeon might not consider them dysmorphophobic. Perhaps the only answer would be for all patients seeking cosmetic surgery to have some sort of psychiatric evaluation, for example in a joint clinic attended by plastic surgeon and psychiatrist. This is, of course, likely to be unacceptable to most of the patients.

Certainly the plastic surgeon should be aware of the possibility that some of the patients who request cosmetic rhinoplasty from him may be exhibiting an early symptom of schizophrenia or serious psychological illness and we reiterate the plea of Clarkson and Stafford Clark for more active co-operation between plastic surgeon and psychiatrist.

SUMMARY

Body image disturbance may be an early sign of schizophrenia. The significance of this and dysmorphophobia with relation to patients seeking cosmetic rhinoplasty is discussed.

Results of a follow-up of patients 10 years after cosmetic surgery to see whether they developed schizophrenia or serious psychological disorder are presented. The literature, significance of the findings and the clinical implications are all discussed.

REFERENCES

BARSKY, A. J. (1944). Psychology of the patient undergoing plastic surgery. *American Journal of Surgery*, **65**, 238.

BYCHOWSKI, G. (1943). Disorders of the body image in the clinical picture of the psychoses. *Journal of Nervous and Mental Disease*, **97**, 310.

CLARKSON, P. and STAFFORD CLARK, D. (1960). The role of the plastic surgeon and psychiatrist in the surgery of appearance. *British Medical Journal*, **17**, 1768.

DELGADO, J. M. R. (1959). Electronic command of movement and behaviour. *Transactions of the New York Academy of Science*, **21**, 689.

DRUSS, R. G., SYMONDS, F. C. and CRIKELAIR, G. F. (1971). The problem of somatic delusions in patients seeking cosmetic surgery. *Plastic and Reconstructive Surgery*, **48**, 246.

EDGERTON, M. T., JACOBSON, W. E. and MEYER, E. (1960). Surgical-psychiatric study of patients with minimal deformity. *British Journal of Plastic Surgery*, **13**, 136.

FENICHEL, O. (1945). "The Psycho-analytic Theory of Neurosis." New York: Norton and Co.

GILLIES, HUNTER (1958). Clinical diagnosis of early schizophrenia. *In* "Topics in Psychiatry", edited by T. Ferguson Roger, R. M. Mowbray and J. R. Roy, p. 47. Cassell & Co.

HAY, G. G. (1970*a*). Psychiatric aspects of cosmetic nasal operations. *British Journal of Psychiatry*, **116**, 85.

HAY, G. G. (1970*b*). Dysmorphophobia. *British Journal of Psychiatry*, **116**, 399.

JASPERS, KARL (1883). Experience of bodily distortion. *In* "General Psychopathology", 7th Edition, p. 91. University of Chicago Press, 1963.
KLABUNDE, E. H. and FALCES, E. (1964). Incidence of complications in cosmetic rhinoplastics. *Plastic and Reconstructive Surgery*, **34**, 192.
KORKINA, M. B. (1959). The clinical significance of the syndrome of dysmorphophobia. *Zhurnal Nevropatologii i Psikhiatrii imeni S.S. Korsakova*, **59**, 994.
MORSELLI, E. (1866). Sulla Dismorfofobia e Sulla Tafefobia. *Bollettino Accademia delle Scienze Mediche di Genova*, **VI**, 110.
STEKEL, W. (1950). "Compulsion and Doubt", vol. II. London: Peter Nevill.