

# PSYCHIATRIC HEADACHE

## A CLINICAL STUDY

By

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### INTRODUCTION

HEADACHE is a common problem (Rangell, 1953). Cohen (1939) concluded that relatively few cases were organically based and Shapiro (1955) in an American series found that only four out of a hundred cases presenting with headache could be explained on an organic basis, even though there are fifty odd causes of the symptom (Harris, 1936).

Headache with no obvious organic cause is a frequent symptom in psychiatric practice and is often an early one (Curran, 1939). Other authors have made the same point (Hazell, 1942; Grinker and Gottschalk, 1949; Brown, 1936). Lesse (1956), discussing atypical facial pain syndromes, stresses the frequency of an underlying involuntional melancholia.

Shapiro (1955) divides the causes of headache into three groups. His first group is where the symptom is primarily determined by gross organic pathology, e.g. brain tumour. The second group is where a pathological physiological change can be demonstrated, e.g. fever, migraine, epilepsy. The third group is where no organic pathology or pathophysiology can be demonstrated. Shapiro goes on to state that although emotional factors can affect all three groups, in the third group it is the primary determinant of the headache.

This group consists of patients suffering from headache in association with personality disorders, a functional psychosis (schizophrenia or affective psychosis) or combination thereof. The headache of migraine, organic brain disease and epilepsy are excluded from this group as they fall into Shapiro's second group. In this study the term "psychiatric headache" is used to describe the headache of the third group. "Psychogenic headache" would be an unsuitable term to use in association with the functional psychoses. The term "tension headache" implies a greater understanding of causation than we in fact possess.

The previously cited authors all stress the obsessional nature of personality structures of patients with "psychiatric headache". This clinical impression was confirmed in a pilot study on an out-patient series.

If it could be shown that different patterns of headache are associated with different diagnostic categories, then this information would have diagnostic and predictive value.

This study was undertaken to examine the accuracy of these statements and to ascertain whether the headache was linked with other psychiatric variables.

### METHODOLOGY

All patients admitted to the Manchester University Psychiatric Clinic over a two-year period, who complained of headache or head pains, either alone or

with other symptoms, were studied. Out-patients were excluded as it is not possible to investigate them as fully as in-patients. All patients had a routine physical examination and complete diagnostic and consultative facilities were available so that organic disease, including epilepsy, could be excluded. All patients were reviewed at a full Staff Conference.

Although Stenbäck (1954) points out many of the difficulties in the use of the migraine concept and denies its validity, it was felt that cases of migraine should be excluded from the series. The criteria used were those of most clinicians (Worster-Drought, 1939; Friedman, 1957; Cohen, 1939; Ebaugh and Drake, 1956; Friedman *et al.*, 1954). In no case was there any real doubt about the decision as to whether an individual did or did not have migraine. This group, termed the headache group, comprised 19 males (36 per cent.) with a mean age of 40·58 (range 23–60) and 34 females (64 per cent.) with a mean age of 43·03 (range 17–69).

The diagnostic categories were as follows: Schizophrenia: males 5, females 7; Schizo-affective Psychosis: males 0, females 1; Affective Psychosis: males 2, females 2; Affective Psychosis coupled with a marked personality disorder: males 6, females 7; Personality Disorder: males 6, females 17.

A parallel series of patients from a surgical ward of the hospital was studied, only those who denied that they suffered from headaches were included. Information was gathered about a family history of headache and a history of head injury. A thirty-minute interview specially directed towards assessing their personality was then given. Patients in this group who had taken medical advice on account of "nerve trouble" were excluded. This group, termed the surgical group, comprised 19 males with a mean age of 53·21 (range 33–83) and 34 females with a mean age of 42·68 (range 12–79).

A third group of patients comprised all those admitted to the Manchester University Psychiatric Clinic over the same period with the exclusion of cases with organic states and of course those suffering from non-organic headache. This third group included those diagnosed as migraine. The third group of patients were all seen at a full Staff Conference (where they were interviewed) and all except eight were seen personally, with a view to personality assessment.

This third group, termed the non-headache group, comprised 69 males (37·1 per cent.) with a mean age of 39·16 (range 16–73) and 117 females (62·9 per cent.) with a mean age of 41·09 (range 18–75). The diagnostic categories were as follows: Schizophrenia: males 15, females 23; Schizo-affective Psychosis: males 2, females 2; Affective Psychosis: males 14, females 44; Affective Psychosis coupled with a marked personality disorder: males 10, females 5; Personality Disorder: males 28, females 43.

## RESULTS AND DISCUSSION

### *Diagnostic Categories*

Comparing the incidence of diagnostic categories in the headache and non-headache groups (combining the sexes) we obtain no significant difference for schizophrenia. There is a significantly lower incidence of patients classified as suffering from uncomplicated affective psychosis in the headache group ( $\chi^2=13$ ;  $0\cdot01 > P$ ). There is a significantly greater incidence of patients in the headache group classified as suffering from affective psychosis coupled with a marked personality disorder ( $\chi^2=9$ ;  $0\cdot01 > P$ ). Combining uncomplicated affective psychosis and affective psychosis coupled with a marked personality disorder there is no significant difference. This suggests that affective

psychosis *per se* considered independently of whether or not there is an associated personality disorder is evenly distributed between the headache and non-headache groups.

Whether the sexes are considered separately or together, there are no significant differences between the incidences of uncomplicated personality disorder in the two groups. However, combining personality disorders with affective psychosis coupled with a marked personality disorder, we find that there is a significantly higher incidence in the headache group taking both sexes together (chi-squared=6.9; 0.01>P). This suggests that personality disorder *per se* considered independently of whether or not there is an associated affective psychosis is more frequent in the headache group. Further analysis shows that this higher incidence is present only in the women. (For women only, chi-squared=8.08; 0.01>P. For men only, chi-squared=0.13; 0.8>P>0.7).

#### *Mean Ages of Diagnostic Categories*

There are no significant differences between the mean ages of the diagnostic groups of patients suffering with headache and the mean ages of the corresponding diagnostic groups of those patients not suffering with headache.

#### *Sex Ratio*

In the headache group 64 per cent. were women. Friedman (1957) and Friedman *et al.* (1954) found that of sufferers from tension headache 65 per cent. were women. In two series of atypical face pains, Campbell and Lloyd (1954) found a figure of 60 per cent., McElin and Horton (1947) found women twice as numerous as men. It could be argued, however, that atypical face pain is not the same symptom-complex as headache and head pains. H. Wilson (1938) found only a slight preponderance of women in patients referred for psychotherapy. The non-headache group of patients shows a similar preponderance of women and the difference of sex ratios is not significant (chi-squared=.11; 0.8>P>0.7).

#### *Age of Onset*

The ages of onset alongside the age ranges of the patients are shown in Table I.

TABLE I

Years	Age of Patient with Headache		Age of Onset of Headache	
	Men	Women	Men	Women
0-10	0	0	1	2
10-19	1	2	1	2
20-29	4	3	5	4
30-39	4	12	3	13
40-49	3	5	5	5
50-59	6	4	4	5
60-69	1	8	0	3

It can be seen that the scatter is wide, but it agrees approximately with Friedman *et al.* (1954), who found that 55 per cent. had an onset between 20 and 40 years of age. McElin and Horton (1947) studying atypical face pain found a maximum onset between 30 and 50 years.

*Duration of the Headache Symptom*

The total duration of headache as a symptom is shown in Table II.

TABLE II

Duration of Headache in Years	Men	Women
0- 1 .. .. .	6	9
1- 2 .. .. .	4	8
2- 5 .. .. .	4	9
5-10 .. .. .	3	2
10-20 .. .. .	2	3
20-40 .. .. .	0	2
40-50 .. .. .	0	1

This scatter in view of the heterogeneity of the diagnostic groups is not surprising. Those with symptoms of very long duration (over five years), were suffering from personality disorders.

*Family History of Headache and History of Head Injury*

The family histories of the headache group were compared with the control group of surgical patients. They were also compared for a history of head injury. The family history was positive for headache in 4 men and 11 women in the headache group, and in 3 men and 10 women in the surgical group.

Friedman (1957) and Friedman *et al.* (1954) found a positive family history in tension headache in 40 per cent., Stenbäck (1954) found a family history of headache in 61 per cent. This series gives 21 per cent. for men and 32 per cent. for women with no significant difference between the headache group and surgical patient controls.

A history of head injury associated with loss of consciousness was elicited in 2 men and 2 women in the headache group and in 1 man and 6 women in the surgical group. A history of head injury not associated with loss of consciousness was elicited in 7 men and 10 women in the headache group and in 8 women and 9 men in the surgical group.

There is thus no significant difference between the groups for history of head injury which is 47.4 per cent. for men and 35.3 per cent. for women. Stenbäck (1954) found an incidence of 17.2 per cent. H. Wilson (1938) found a history of injury in only four out of seventy-five, i.e. 5.3 per cent. The higher incidence in this series is probably due to the fact that all trauma remembered was counted as an injury. The criterion therefore was not its severity, but whether it was remembered.

*Variation of Effect of Menses*

Wilson (1938) was unable to discover any relationship between the sexual life and the headache pattern. No attempt was made in this study to assess the degree of sexual adjustment. Enquiry was made, however, about the effect of the menses in the female patients, and all of them stated that the menses, especially the premenstrual and first days, worsened the headache if it was present at that time.

*Constancy of the Headache*

Sixteen of the male patients (84.2 per cent.) and 25 of the female patients (73.5 per cent.) suffered from the headache constantly or every day. One male

patient (5·3 per cent.) and 3 female patients (8·8 per cent.) suffered more than three attacks per week. Two male patients (10·5 per cent.) and 6 female patients (17·7 per cent.) suffered less than three attacks per week.

Friedman (1957) found those with daily headache formed 30 per cent. and were the largest group, and in an earlier paper (Friedman *et al.*, 1954) he found that 50 per cent. had headache daily or constantly. Hazell (1942) and Ebaugh and Drake (1956) stress the constancy of the headache. A similar viewpoint is stressed in regard to atypical face pain by Frazier and Russell (1924) and McElin and Horton (1947). Curran (1939) stresses the unpleasant quality of the headache in agreement with Butler and Thomas (1947). Hazell (1942), Friedman *et al.* (1954), Friedman (1957) and Shapiro (1955) stress the vagueness and variability of the headache when the patient is "pinned down" to describe. This was not so in this series, but this may have been due to the relatively high proportion of obsessional personalities in the group.

#### *Description of Headache*

Wilson (1938) pointed out that nearly half the terms used were not considered exaggerated. In this series seven men (37 per cent.) and fourteen women (41 per cent.) were considered to be exaggerating, in most cases, however, it was not gross. This opinion was based on observing the patients during occupational therapy, etc., and is extremely subjective. Amongst women, the phrase "like my head pressed between two boards", was once used by a hysteric. "As though a hammer is hammering on my head" was used once by an obsessional. "As though something pushed in" by an obsessional. One obsessional used the phrase "it's a crawling feeling". One hysterical man used the phrase "crawling wetness". Even so, odd turns of phrase by no means suggest schizophrenia or hysteria. Nine male patients (47 per cent.) and twenty female patients (59 per cent.) described the sensation as severe.

The terms used to describe the sensation were as follows (each word used by the patient to express a component of the sensation was noted). Pressure: 14 men (74 per cent.) and 24 women (71 per cent.); Aching: 5 men (26 per cent.) and 16 women (44 per cent.); Pain: 4 men (21 per cent.) and 11 women (32 per cent.); Burning: 3 men (16 per cent.) and 7 women (21 per cent.); Tight: 3 men (16 per cent.) and 6 women (18 per cent.); Throbbing: 2 men (11 per cent.) and 6 women (18 per cent.); Numb: 2 men (11 per cent.) and 1 woman (3 per cent.); Sharp: 1 man (5 per cent.) and 6 women (18 per cent.); Boring: 2 men (11 per cent.) and 3 women (9 per cent.); "Like a band round the head": 2 men (11 per cent.) and none of the women; Stabbing: 4 women (12 per cent.); Bursting: 4 women (12 per cent.). No men used the last two descriptions.

It can be seen that pressure and aching are the most commonly used terms. This is in agreement with the majority of clinical opinions such as those of Curran (1939), Wilson (1938), Chideckel (1939), Hazell (1942), Friedman *et al.* (1954), Harris (1936) and Shapiro (1955). Worster-Drought (1939) states that the headache associated with mild psychotic depression is a feeling of "oppression".

The views of Butler and Thomas (1947) that the sensation is a strange and terrifying feeling, and of Ebaugh and Drake (1956) that it is boring or like a tight hand are not supported by this series. Throbbing sensations do not appear very often. Harris (1936) states that local tenderness is common. Hazell (1942) denies this. Local tenderness was present in this series in two men (11 per cent.) and five women (15 per cent.).

### *Site of Headache*

The sites of the headache were as follows: Occipital: 6 men (32 per cent.) and 16 women (47 per cent.); Frontal: 14 men (74 per cent.) and 29 women (85 per cent.); Temporal: 8 men (42 per cent.) and 13 women (38 per cent.); Vertical: 9 men (47 per cent.) and 16 women (47 per cent.); Facial: 3 men (16 per cent.) and 9 women (26 per cent.); Eyelids and Eyes: 5 men (26 per cent.) and 13 women (38 per cent.).

These results are in agreement with the views of Grinker and Gottschalk (1949) and Wilson (1938). Friedman (1957) and Ebaugh and Drake (1956) describe tension headache as occipito-frontal. Harris's view that the commonest site is the vertex is not supported (Harris, 1936), nor is the view of Worster-Drought that the headache is occipito-vertical.

Friedman *et al.* (1954) found only 10 per cent. were unilateral. In this series one man (5 per cent.) and seven women (21 per cent.) had unilateral symptoms. Unilaterality showed no relationship to site. The male patient was a hysterical personality with endogenous depression. The women comprised two hysterical personality disorders, three obsessional personality disorders, one schizophrenic with an obsessional personality and one obsessional with depressive psychosis. Unilaterality did not appear to have any diagnostic or other significance.

### *Associated Circumstances*

Twelve men (63 per cent.) and seventeen women (50 per cent.) said the headache limited their activity. In fifteen (79 per cent.) of the men and twenty-eight (82 per cent.) of the women a precipitating cause was found. These causes came under three headings. First the onset of a psychosis—where it was in fact an early symptom and often the sole one for weeks or months. Second, external environmental traumatic events. Third, the development of symptoms of a personality disorder either with or without any apparent external trigger. Six men (32 per cent.) showed diurnal variation—the headache being in all six cases worse in the morning and all were suffering from depressive psychoses. The other thirteen showed no diurnal variation. Seven women (21 per cent.) showed diurnal variation worse in the morning. These comprised four patients suffering from depressive psychosis, one from paraphrenia and one from schizo-affective psychosis. Four women (12 per cent.) were worse in the evening, two with depressive psychosis (one of whom felt worse in the evening) and two obsessionals.

### *Response to Drugs*

The response to drugs was as follows: Ten men (53 per cent.) and eighteen women (53 per cent.) stated that the headache responded to sedatives. Seven men (37 per cent.) and seven women (21 per cent.) stated that the headache responded to analgesics. Two men (10 per cent.) and nine women (26 per cent.) found the headache did not respond to either type of drug.

In no case was there difficulty in deciding that the sensation did not follow an anatomical distribution.

### *Causation of the Headache*

All patients were asked what they thought was the cause of their headache. The replies of "nerves", "worry", "anger", "I get tensed up" and "when I get overstrained or overexcited", are collected together below under the heading

“nerves”, which was the commonest word used. Twelve men (63 per cent.) and twenty women (59 per cent.) gave the cause as “nerves”. Six men (32 per cent.) and thirteen women (38 per cent.) gave other causes, and one man (5 per cent.) and one woman (3 per cent.) did not know what the cause might be. It was surprising that so many patients had one sort of insight at least, into their condition.

Various views have been put forward to explain the mechanism by which the headache is produced. Friedman *et al.* (1954) believe that somatic muscle contraction or autonomic nervous system changes causing blood vessel changes are implicated and Fenichel (1946) agrees. Stenbäck (1954), though rejecting the concept of migraine, separates out these two types of headache. McElin and Horton (1947), talking of atypical facial pain, agree. Chideckel (1939) suggests that emotion may release some kind of toxin that alters the secretion of cerebrospinal fluid by the choroid plexus. Kubie (1953) suggests that tensions and emotions generated psychologically are converted into autonomic changes via the visceral brain—the rhinencephalon. Some clinicians, Grinker and Gottschalk (1949) and Rosenbaum (1947) stress anger, hate or frustration which cannot be expressed as a determinant of the headache. While Rosenbaum (1947) states that their feelings may be conscious or unconscious, others (Brenner *et al.*, 1949; Shapiro, 1955; Eisenbud, 1937), stress the unconscious nature of the hostility, aggression or conflict. Eisenbud implanted complexes hypnotically into a hysteric suffering from headache; post-hypnotically he could reproduce the headache by touching on the implanted complex.

The importance of the head to the patient has been discussed elsewhere in another study. Wolff (1948) stresses the fact that misinterpretation of normal head sensations is due to previous conditioning experiences. These experiences may well act by altering the “Gestalt” of the head in the body image.

#### *Relationship to Personality*

Shapiro (1955), Engel (1956, 1951), Grinker and Gottschalk (1949), Rosenbaum (1947), Wilson (1932) and Sperling (1952) all stress that the majority of patients had obsessional personalities with a relatively small number of hysterical personalities. Lesse (1956), discussing psychogenic atypical facial pain syndromes, agrees.

The various obsessional and “masochistic” traits which are so frequently mentioned in the literature fit well into the group of “insecure personalities” described by Schneider (1958), which includes the “sensitives” of Kretschmer (1952) and the obsessional. The attention-seeking personality group of Schneider (1958) corresponds to the hysterical personality described by Mayer-Gross *et al.* (1954).

The headache group, the surgical patient group and the non-headache group admitted over the same period (excluding organic syndromes), were compared clinically for assessment of personality. The headache group and the surgical group were all seen personally—the former in addition to a full review including the life history at a full Staff Conference. The non-headache group were all reviewed at a full Staff Conference and all but eight were seen personally in addition.

In assigning the ratings, the term “attention-seeking—personality disorder (hysterical)” was used only if there was definite evidence of frank conversion symptoms. The term “insecure traits” was used to label all those patients who showed marked lifelong sensitive or obsessive compulsive traits. Checking and

morbid doubt were specially investigated. Feelings of insecurity, tidiness, meticulousness, etc., were not sufficient in themselves to place a patient in this group unless severe. The term "insecure personality disorder" was used only if frank obsessive compulsive symptoms were present and if in addition the patient felt that they had "got out of hand" or he wished he could "stop it". The term "personality disorder" was used in Schneider's sense (1958), namely "abnormal personalities who either suffer personally because of their own abnormality or make the community suffer because of it". Phobias, unless gross and crippling, were not deemed sufficient as they are widely spread across the population.

The results are shown in Table III. The pre-morbid personality was assessed and classified independently of whether or not it was associated with a psychosis, that is, independently of the diagnostic category.

TABLE III

*Pre-morbid Personality*

Schneider's term ..	Attention-seeking Personality Disorder	Insecure Traits	Insecure Personality Disorder	Others
Common term ..	Hysterical Personality Disorder	Obsessional Traits	Obsessional Personality Disorder	Others
<i>Men:</i>				
Headache group ..	2 (11%)	3 (16%)	9 (47%)	5 (26%)
Non-headache group (Group III)	2 (3%)	15 (22%)	16 (23%)	36 (52%)
Surgical group ..	0	3 (16%)	2 (11%)	14 (74%)
<i>Women:</i>				
Headache group ..	4 (12%)	6 (18%)	24 (71%)	0
Non-headache group (Group III)	21 (18%)	19 (16%)	12 (10%)	65 (56%)
Surgical group ..	0	4 (12%)	3 (9%)	27 (80%)

Approximate percentages only.

Personality assessment is extremely subjective and difficult to quantify. The unreliability of the basic data and therefore of any further analysis based on them must be stressed.

By combining patients classified as possessing insecure traits and those classified as suffering from insecure personality disorders one can compare the incidence of "insecurity" as opposed to "non-insecurity" ("Attention-seeking personality disorders" and "Others") in the headache and non-headache groups.

The male patients show no significant difference in the incidence of "insecurity" between the headache group (63 per cent.) and the non-headache groups (45 per cent.) ( $\chi^2=1.32$ ;  $0.3 > P > 0.2$ ). The female patients show a greater incidence of "insecurity" in the headache group (89 per cent.) than in the non-headache group (26 per cent.). The difference is statistically highly significant ( $\chi^2=39.2$ ;  $0.01 > P$ ).

For the male patients the incidence of those classified as suffering from an insecure personality disorder was not significantly different in the headache group (47 per cent.) as compared with the non-headache group (23 per cent.) ( $\chi^2=3.17$ ;  $0.10 > P > 0.05$ ).



The female patients showed a greater incidence in the headache group of those classified as suffering from an insecure personality disorder (71 per cent.) than in the non-headache group (10 per cent.), and this difference is highly significant statistically ( $\chi^2=49.5$ ;  $0.01 > P$ ).

Patients possessing insecure traits seem to be distributed more or less evenly throughout the headache, non-headache and surgical groups.

The preponderance of "insecurity" in the female patients with headache might therefore be due to a preponderance of sufferers from a frank insecure personality disorder rather than to a preponderance of patients possessing insecure traits only. In order to test this hypothesis, the relative incidence of possessors of insecure traits versus the incidence of those suffering from a frank insecure personality disorder was compared in the headache and non-headache groups.

Of the twelve male patients in the headache group possessing "insecurity", nine (75 per cent.) had frank insecure personality disorders. Of the thirty-one male patients in the non-headache group possessing "insecurity", sixteen (52 per cent.) had frank insecure personality disorders. This difference is not statistically significant ( $\chi^2=1.10$ ;  $0.3 > P > 0.2$ ). This is in agreement with the previous finding that the male patients of the headache group do not show a preponderance of "insecurity" compared to the non-headache group. Of the thirty female patients in the headache group possessing "insecurity" twenty-four (80 per cent.) had frank insecure personality disorders. Of the thirty-one female patients in the non-headache group possessing "insecurity" twelve (39 per cent.) had frank insecure personality disorders. This preponderance of sufferers from frank insecure personality disorder in the headache group possessing "insecurity" is statistically highly significant ( $\chi^2=9.11$ ;  $0.01 > P$ ). There is no significant difference in incidence of those patients possessing insecure traits only, between the female patients in the headache group (18 per cent.) and those in the non-headache group (16 per cent.) ( $\chi^2=0.046$ ;  $0.9 > P > 0.8$ ). One may conclude therefore with a high degree of statistical probability that the preponderance of "insecurity" in the females of the headache group is due to the predominance of sufferers from a frank insecure personality disorder. It follows therefore that insecure traits themselves are not strongly associated with sufferings from psychiatric headache.

If the insecure traits are developed to the extent of causing society or the patient to suffer because of these traits then this constitutes a personality disorder in Schneider's (1958) sense. The female patients suffering with "psychiatric" headache show a marked preponderance of patients with such an insecure personality disorder as compared to the non-headache control group.

Comparison of the mean age of each personality group in those patients with headache with the mean age of the corresponding personality group in those psychiatric patients without headache showed no significant differences.

There were no significant differences between the distribution of the following factors amongst the various personality groups of those patients suffering from headache.

Age of onset of headache, age of the patient, duration of symptoms, constancy of duration of the headache, "exaggeration" of symptoms, severity of headache, terms used to describe the headache, site of headache, unilaterality or bilaterality, limitation of activity by the headache, diurnality or its absence, response or lack of response to sedatives or analgesics or both, or response to treatment.

The replies given by patients to the question asking them for their views as to the cause of the headache can be classified as "nerves" and "non-nerves". The latter is made up of "other causes" and "don't knows".

If those classified as "insecure personality disorder" are compared with the group named here as "other personalities" formed of "attention-seeking personality disorder", "insecure traits" and "others", we obtain the following:

Of the nine male patients suffering from an insecure personality disorder (whether or not in association with a psychosis) eight (89 per cent.) gave the cause as "nerves". Of the ten male patients in the group named here as "other personalities" four (40 per cent.) gave the cause as "nerves". The number of male patients is just too small to be significant but is similar in pattern to the replies of the female patients. Of twenty-four female patients rated as suffering from an insecure personality disorder (whether or not in association with a psychosis) eighteen (75 per cent.) gave the cause as "nerves". Of the ten female patients in the group named here as "other personalities" two (20 per cent.) gave the cause of the headache as "nerves". This difference is significant statistically ( $\chi^2=6.69$ ;  $0.01 > P$ ).

If the male and female patients of the headache group are combined the result is as follows: of thirty-three patients suffering from an insecure personality disorder (whether or not in association with a psychosis) twenty-six (79 per cent.) gave the cause as "nerves". Of the twenty patients in the group named here as "other personalities" six (30 per cent.) gave the cause as "nerves". This difference is even more significant statistically ( $\chi^2=10.43$ ;  $0.01 > P$ ).

It can be concluded therefore that those patients who recognize the "psychiatric" nature of their headache are much more likely to be classifiable as suffering from an insecure personality disorder (whether or not they are also suffering from a psychosis in addition) than those who do not possess this insight.

A surprising finding was five cases (9 per cent.) in the surgical control group, who had gross and partly disabling obsessive compulsive symptoms which would have been quite severe enough to bring them within the range of a psychiatric clinic. None of these patients had in fact ever taken medical advice about their obsessive-compulsive symptoms.

#### *Pattern of Headache*

No significant differences between the patterns of headache could be discerned in the various diagnostic categories. The headache was, so to speak, the same syndrome whatever the associated diagnostic category.

There were also no significant differences in the headache patterns when considered in relation to the various personality groupings except for the patients' view of the "cause" which has previously been discussed.

The descriptions of the headache given by patients rated as suffering from attention-seeking personality disorders tended to be more often rated as "exaggerated". The ratings were as follows: patients suffering from an attention-seeking personality disorder: two men, of whom one exaggerated; four women of whom three exaggerated. Patients possessing insecure traits: three men of whom two exaggerated; six women of whom two exaggerated. Patients suffering from an insecure personality disorder: nine men, of whom three exaggerated; twenty-four women of whom nine exaggerated. Of five men possessing other personality-structures, one exaggerated. There are no significant differences between the incidence of "exaggeration" in any one personality group as opposed to the other personality groups combined.

It must be stressed, however, that this assessment is an extremely difficult one to make and one would be most reluctant to place much value on it. Indeed, one was impressed by the similarity of the complaints of patients with widely differing psychiatric conditions and personality assessments.

Those patients with organic brain disease such as dementia, toxic confusional states, Korsakow's psychosis—which are not included in this series—showed more similarities to the psychogenic headache group than differences.

One female schizophrenic patient gave a classical description of "psychiatric headache". Asked for her views as to its cause, she replied: "It's done to me by that policeman with a machine." Wilson (1938) was unable to discern any syndromes with any particular distribution or type of pain though his series excluded psychotics and frank neurotics. He states that "psychogenic cephalgia" is a good example of the way in which psychoneurotic symptoms may crop up in any form of neurosis.

Curran (1939) believes that headache is a symptom that can be encountered in every type of mental disorder. Hazell (1942) stresses that "psychogenic headache is but one symptom of a neurosis or psychosis". Grinker and Gottschalk (1949) and Brown (1936) agree that headache is often the early symptom of a psychosis and this series confirms their view. Mayer-Gross (1938) and Eugen Bleuler (1911) state that headache is often an early symptom of schizophrenia and that it is often not described in a bizarre way, but more often as what would now be called a typical "tension headache". Eugen Bleuler (1916) considered that anxiety is the symptom most frequently accompanied by physical symptoms, such as headache, which he considers as one form of "localization" of the anxiety. Schneider (1959) points out that melancholia is often sharply localized as a body feeling ("vital feeling") in the forehead, chest and stomach as a sense of apprehension or weight, or, as Worster-Drought (1939) puts it, an "oppression".

As anxiety is an almost universal symptom in psychiatric disorder, this would explain in part the occurrence of headache in all forms of mental disorder. This series suggests that psychogenic headache occurring in diverse types of psychiatric disorder tends always to be the same syndrome. It is tempting to postulate tentatively that psychogenic headache is perhaps a preformed mechanism, which can be triggered by various types of illness or stress. The predominance of patients suffering from insecure (obsessional or anankastic) personality disorder in the females of the headache group is striking. It might be tentatively suggested that the premorbid personality structure is a more important determinant than the psychiatric diagnostic category.

#### *Relationship to Depersonalization*

In view of the frequency of depersonalization in patients with self insecure personalities, it was felt worthwhile to investigate it in this series.

Curran (1939) points out that patients in a depersonalized state often complain of their heads and that this is because the head is felt to be the seat of the Ego. The last statement has been investigated in another study.

The headache group was investigated by personal interview for the presence or absence of depersonalization and the results are as follows: three out of a total of nineteen male patients were depersonalized, i.e. 16 per cent. approximately. Fifteen out of a total of thirty-four female patients were depersonalized, i.e. 44 per cent. approximately. Thus more than half were not depersonalized (84 per cent. of the males and 56 per cent. of the females).

There did not appear to be any correlation between depersonalization and exaggeration. Of the seven male patients who were assessed as exaggerating, none was depersonalized. Of the fourteen women patients who were assessed as exaggerating six were depersonalized and eight were not.

#### *Response to Treatment*

Treatment was always directed towards the total psychiatric picture. The headache itself was treated with aspirin or codeine and if necessary additional barbiturate sedation. All forms of physical treatment including electroconvulsive therapy and modified insulin were used. Tranquillizing, anti-depressant and sedative drugs were also used. All patients received psychotherapy and routine occupational therapy. Psychotherapy was never directed specifically against the headache but towards the total psychiatric picture.

Response to treatment was considered successful only if the patient said that the headaches had "completely gone" or were "no trouble at all now". Anything less was taken as failure. This assessment, of course, applied only to the headache and not the overall psychiatric condition. Eight out of a total of nineteen (42 per cent.) male patients were rated as having responded and twenty out of a total of thirty-four (59 per cent.) female patients were rated as having responded. These results do not show a sex difference significant at the one in ten level.

The response to treatment of the headache followed the course of the underlying psychiatric condition in every case. It ran parallel with the depressive psychosis. Patients suffering from schizophrenia or schizo-affective psychosis showed an improvement in the headache which paralleled the change in the psychopathology. It did not appear to follow the so-called social improvement. It was noticeable that at a certain level of improvement the headaches disappeared in the course of a day or two thus suggesting that some kind of threshold was involved. Relapse or recurrence of any psychosis was always accompanied by a return of the headache.

Patients suffering from personality disorders had usually been admitted following some crisis which had produced disabling symptoms. If the crisis could be dealt with then the headache paralleled the other symptoms and again disappeared in a day or two, again suggesting that one was dealing with a threshold phenomenon.

The ultimate prognosis in all cases depended on whether the underlying psychosis or environmental crisis was amenable to treatment.

#### CONCLUSIONS

In this series the apparent preponderance of female patients is but a fair sample of the total admissions. It is not suggested that a psychiatric clinic necessarily admits a random sample of the population from the viewpoint of the sex ratio.

There is no evidence that previous trauma to the head is a determinant of "psychiatric headache". The family history does not appear to be significant, nor the presence or absence of depersonalization.

The female patients suffering from headache show a preponderance of patients assessed as suffering from an insecure personality disorder, either alone or in combination with a psychosis. Such patients are likely to attribute the headache to "nerves" and this finding may have some dubious diagnostic value.

It is concluded that "psychiatric headache" by which is meant that headache associated with personality disorders or a functional psychosis or combinations thereof, tends always to be the same syndrome irrespective of diagnostic category or personality structure.

The syndrome is a bilateral, constant, frontal pressure. It is often the first symptom of a psychiatric illness. So-called "bizarre" terms are rarely used in its description. The prognosis of the headache depends on that of the associated or underlying psychiatric disorder.

It is tentatively suggested that "psychiatric headache" is a pre-formed mechanism triggered by various stresses, which is more likely to be possessed by patients suffering from insecure personality disorders than patients with other personality structures, irrespective of whether there is or is not an associated psychosis.

#### SUMMARY

All patients suffering from psychogenic headache, alone or with other symptoms, who were admitted as in-patients over a two-year period to the Psychiatric Unit of the University of Manchester were studied. Patients with migraine or organic brain disease were excluded.

The group comprised nineteen male and thirty-four female patients. The patients suffering from headache were compared with all the other patients, 69 males and 117 females, admitted to the Unit over the same period with the exclusion of patients with organic brain disease. Amongst the female patients the headache group contained a significantly higher proportion of patients classified as suffering, alone or in combination with a psychosis, from an insecure personality disorder (which corresponds to the anankastic or sensitive obsessional personality disorder.)

Within the headache group the pattern of headache was strikingly constant amongst the various diagnostic and personality groups. The pattern was that of a constant bilateral frontal pressure. It is tentatively postulated that "psychiatric headache" is perhaps a pre-formed mechanism which can be triggered by many stresses.

This study suggests that female sufferers from an insecure personality disorder are more likely to possess this mechanism than those possessing other personality structures. They are also more likely to consider the headache as being caused by "nerves".

It was found that the prognosis of the headache was that of the underlying psychiatric condition.

#### ACKNOWLEDGMENTS

I am indebted to Professor A. M. Boyd of Manchester University for permission to interview patients under his care. My thanks are also due to Professor E. W. Anderson for helpful encouragement and permission to publish; and to Dr. J. Hoenig for stimulating criticism and advice throughout the study.

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