Personality in frozen shoulder

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Fleming, A., Dodman, S., Beer, T. C., and Crown, S. (1976). *Annals of the Rheumatic Diseases*, 35, 456-457. **Personality in frozen shoulder.** Fifty-six patients with frozen shoulder have had their personality profiles investigated by means of the Middlesex Hospital Questionnaire. Females showed significantly increased somatic anxiety compared with controls. It is suggested that this may be important both to aetiology and treatment. Males and females should be assessed separately in future studies of frozen shoulder.

The importance of psychological factors in the aetiology of some locomotor disorders has recently been re-emphasized (Wolkind, 1974; Wolkind and Forrest, 1972; Crown, Crown, and Fleming, 1975). Previous authors have commented on the likely association of personality disorders with the so-called frozen shoulder (Lorenz and Musser, 1952; Coventry, 1953; Oesterreicher and van Dam, 1964). This is difficult to quantify, but there remains an anecdotal impression shared by many clinicians that the condition occurs often in a typical personality type—'frozen' shoulder in a 'frozen' personality.

We have used the Middlesex Hospital Questionnaire (MHQ) to test the hypothesis that there is a premorbid personality which may predispose to the development of frozen shoulder.

Patients and methods

There is general disagreement about the criteria for the diagnosis of frozen shoulder. Patients were included in this study if they had generalized shoulder pain, including night pain at some stage, with painful restriction of movement in all directions. Those in whom trauma or other forms of arthritis (e.g. rheumatoid arthritis, osteoarthritis, calcific deposits) could be the cause of pain were excluded.

Patients were recruited, as far as possible consecutively, from referrals to the physiotherapy departments associated with the Middlesex Hospital, Northwick Park Hospital, Northampton Hospital, and Kettering Hospital. The sample comprised 56 patients including 16 males and 40 females. Mean age was 58.4 years (males 56.1, females 59.3), with a range from 31 to 78 years. As all the patients were considered bad enough to warrant physiotherapy treatment, there is therefore a bias towards severity in this group. Chronic pain itself may alter personality, therefore patients were excluded if their symptoms had been present for longer than 6 months. Mean duration of symptoms was 4.2 months.

Personality was studied by means of the MHQ (Crown and Crisp, 1966, 1970; Crown, 1974), a simple, self-administered assessment of psychoneurosis. Total score measures general neuroticism; there are also six subscales which include free-floating anxiety, phobic anxiety, obsessiveness, somatic anxiety, depression, and hysterical traits.

At the physiotherapy department the patient was asked to complete the MHQ, having been told that it might provide information to help subsequent sufferers. The attending doctor was at no stage aware of the contents. After analysis the results were compared with a normal control group, obtained from a general practice, aged 40 to 65 years (Crisp and Priest, 1971).

Results

The findings are summarized in the Table. Female patients differed from the normal in showing more evidence of somatic anxiety ($P < 0.01$). It was also notable that the scores on 10 out of 12 subscales showed increased neuroticism in the frozen shoulder group. This is significant ($P = 0.05$) when assessed by the Sign Test (Siegel, 1956).

Discussion

Codman (1934) felt that the personality changes seen in shoulder pain syndromes were a result of pain rather than a cause of the condition. We feel we have excluded this possibility in our study, since by assessing our patients early (4.2 months from onset) any abnormal traits identified were more likely to be part of the premorbid personality. It is unlikely that these would have changed in a short time.

Somatic anxiety is a measure of the increased tendency of patients to focus anxiety symptoms to bodily structures and functions. We have shown this in female patients with frozen shoulder, and interpret this as a premorbid characteristic. Others

Table Comparison of frozen shoulder patients with general practice group

	FFA	OBS	DEP	PHO	SOM	HYS
<i>Males</i>						
Frozen shoulder patients	4.1	8.6	4.1	2.5	4.4	4.5
General practice	2.8	6.8	3.2	2.8	4.3	2.9
Difference	1.3	1.8	0.9	-0.3	0.1	1.6
SE	±1.0	±1.0	±0.8	±0.8	±1.0	±0.8
<i>Females</i>						
Frozen shoulder patients	5.9	7.4	5.4	4.8	7.4	3.1
General practice	5.4	7.4	4.4	4.7	5.7	2.9
Difference	0.5	0.0	1.0	0.1	1.7*	0.2
SE	±0.6	±0.6	±0.5	±0.5	±0.6	±0.5

FFA = free-floating anxiety; OBS = obsessiveness; DEP = depression; PHO = phobic anxiety; SOM = somatic anxiety; HYS: hysterical traits.
* P < 0.01.

have also noted psychosocial abnormalities. Lorenz and Musser (1952) described a personality that was 'tense, insecure, dependent, restless, and vulnerable', and a precipitating factor of the shoulder condition was frequently 'an increase in responsibility beyond the patient's emotional limitations'. A typical periarticular personality was considered necessary by Coventry (1953) for the perpetuation of shoulder pain; this type he described as 'passive, apathetic, muscularly tense, hyperirritable, hyperemotional, and poorly tolerant of pain'. A study by Oesterreicher and van Dam (1964) showed that the occurrence of this condition was influenced by psychological factors and disturbed adaptation, especially in women.

Although only one subscale was significantly different from normal (i.e. somatic anxiety in females) the trend in all but two subscales in both sexes showed increased neuroticism in the frozen shoulder group (Table). This suggests there may be a general personality difference from the normal in patients who develop frozen shoulder.

The sex difference in subscale scores underlines the importance of analysing males and females separately in studies of frozen shoulder, a phenomenon which has been discussed in relation to other locomotor disorders (Crown and others, 1975). Our findings confirm that certain measurably abnormal personality traits are present in women with frozen shoulder. It may be that rapid, easy, psychometric testing early in the course of the disease, for example with the MHQ, will identify causative factors which can be modified by simple psychotropic drugs or psychotherapy. A controlled trial of this in such patients may be of value. It remains to be seen if these personality types have a worse outcome, as measured by time, to resolution of the frozen shoulder. We hope to report on this in due course.

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