Pain as a Symptom in Elderly Depressed Patients

Relationship to Diagnostic Subgroups

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Summary. The presence of pain as a symptom has been studied in a series of 51 depressed elderly inpatients and in a control group of 71 subjects. The frequency of patients with moderate to severe pain was significantly higher in the experimental group (72%) than in the controls (33.8%). Of the various categories diagnosed according to the DSM III° criteria, the highest scores for pain were gained by the subjects suffering from dysthymic disorder and atypical depression, while those obtained by the patients with major depression and adjustment disorder with depressive mood were lower. The difference does not seem to depend on the quantity of anxiety present.

Key words: Pain – Depression – DSM III° – Elderly subjects

Introduction

The existence of an association between chronic pain and depression has been known for some time, and various authors have suggested that some forms of chronic pain could represent a manifestation of a depressive type disturbance (Schaffer et al. 1980; Blummer and Heilbronn 1982; Magni and De Bertolini 1983; Magni et al. 1984). The evidence for this hypothesis derives from three main areas: (a) the presence of pain in depressed subjects; (b) the presence of depression in patients with chronic pain and (c) the effectiveness of tricyclic antidepressants in the treatment of chronic pain (Roy et al. 1984).

More specifically in relation to the first of these, various studies have shown that pain is very common among patients with depressive disturbances (see for review Roy et al. 1984). Percentages range from 13% to 100% of subjects, with most authors reporting values of 50% or more of their populations (Roy et al. 1984).

Of particular interest is the question of whether pain is common to all types of depression or is present only in certain forms. It has in fact been suggested that pain symptoms are more frequent in depressive forms characterized by a high incidence of irritability, tension, and agitation (Lascelles 1966; Lesse 1968) and in neurotic reactive depressions (von Knorring et al. 1983).

However, as Roy et al. (1984) pointed out, many of the studies on pain in depressed subjects are based on an insufficiently rigorous diagnosis of depression.

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The Diagnostic and Statistical Manual of Mental Disorders (DSM III°) (American Psychiatric Association 1980) has in many ways resolved some of the controversies surrounding the diagnosis of affective disorders, and its use may be highly recommended.

The aim of this study was to evaluate the presence of a pain symptomatology in a group of elderly subjects diagnosed as depressed according to the criteria of the DSM III° and in a group of controls. To the best of our knowledge, no comparable studies on elderly subjects are available in the literature; such a study may be particularly interesting as the elderly seem to be particularly prone to somatic and masked manifestations of affective disturbance (Salzman and Shader 1978). We also decided to verify the existence of any differences between the various diagnostic sub groups, affected by different depressive disorders.

Material and Methods

The experimental group was composed of 51 depressed patients consecutively admitted to the Geriatric Hospital, Padua. There were 36 women and 15 men, the mean age being 75.4 years ± (SD) 7.2 and at the time of evaluation the patients were in a depressive phase. The diagnoses formulated on the basis of clinical interview, according to the criteria of the DSM III°, were as follows: dysthymic disorder (DD) 23 cases, atypical depression (AD) 11 cases, major depression (MD) 9 cases, adjustment disorder with depressive mood (ADDM) 8 cases. In none of the AD cases did pain represent the chief complaint. All patients had at least one organic condition as well as the affective disorder.

The control group was composed of 71 subjects, 41 women and 30 men, with a mean age of 75.5 ± 6.5 years, sampled from medical patients admitted to the same hospital. They underwent a clinical interview that did not show the presence of any affective disorder. There were no significant differences between the two groups for age, sex, marital status, social class, level of schooling, and the presence, type, and severity of the organic complaint.

All subjects completed an Italian version of the Symptom Distress Checklist (SCL-90) (Derogatis et al. 1976) devised by the authors (Magni et al. 1983). The SCL-90 is a valid and reliable scale which has been widely used in the evaluation of symptoms of psychological distress. It is composed of 90 items subdivided into various subscales designed to measure: anxiety,

depression, obsessiveness-compulsiveness, paranoid ideation, psychoticism, etc. The score for the subscales is calculated to give an overall score for each of from 0 to 4. A score of less than 1 indicates low distress, between 1 and 2 moderate distress and more than 2 severe distress (Craig and Abeloff 1974).

In this study the pain symptom was defined by the 4 SCL-90 items which evaluate algetic disturbances, i.e.,: item 1 "headaches", item 12 "pains in heart or chest", item 27 "pains in lower back" and item 42 "soreness of your muscles". Scores for these 4 items were processed as described above and the same criteria of severity were ascribed.

Statistical analysis was performed with Student's t-test, the χ^2 test, the Pearson product-moment correlation and analysis of variance, when appropriate.

Results

Pain was present (score higher that 0) in 49 of the 51 depressed patients (96%); the disturbance was moderate (score between 1 and 2) in 34 (66%) and severe (score higher than 2) in 3 (6%). Among the controls, pain was present in 57 subjects (80%); it was moderate in 24 (33.8%) and severe in none. The frequency of subjects with moderate to severe pain was greater in depressed subjects than in controls ($P < 0.001$).

Table 1 shows the mean scores obtained by the various groups on the depression and pain subscales. It can be seen from the Table that, as might be expected, the subjects with MD scored highest on the depression subscale, followed by patients with DD, AD, ADDM and lastly by the controls. Subjects with DD scored highest in the pain subscale, followed by patients with AD, MD, ADDM and controls. Table 2 shows frequencies instead of mean scores. These results

confirmed the findings cited above; the percentage of subjects with DD who scored high for pain was elevated (87%). We also tested for a correlation between scores for depression and those for pain, but no significant correlation was found in either depressed patients ($r = 0.15$; $P > 0.05$) or controls ($r = 0.2$; $P > 0.05$).

Table 3 shows the mean scores obtained by the various groups on the SCL-90 anxiety subscale. As can be seen, the scores of the depressed subjects were significantly higher than those of the controls, but no difference was found between the patients with different types of depression; the four groups in fact obtained comparable scores.

The possibility of a correlation between anxiety and pain was examined: there was a weak but significant correlation in the control group ($r = 0.32$; $P < 0.01$), but not in the group with depression ($r = 0.15$; $P > 0.05$).

Discussion

In our study pain was found to be present in a high percentage of geriatric patients in both depressed and control groups. These percentages were higher than those found in previous research on nongeriatric subjects (Spear 1967; von Knorring 1975; Delaplaine et al. 1978; von Knorring et al. 1983). It should, however, be stressed that all the subjects in our groups had a least one concomitant organic disease, and that the percentage of patients with "significant" pain was much lower, particularly in the controls. When only pain of a certain intensity (score equal to or higher than 1) was considered, a clear difference emerged between the control (33.8%) and the depressed (72%) groups, with a significantly higher presence of pain in the latter subjects. This is in agreement with many previous studies which reported a high incidence of this symptom

Table 1. Scores obtained by the various groups on the depression and pain subscales. Mean scores per person ± SD

	DD ($n = 23$)	AD ($n = 11$)	MD ($n = 9$)	ADDM ($n = 8$)	Controls ($n = 71$)	P
Depression	1.48 ± 0.46	1.26 ± 0.44	1.85 ± 0.42	1.21 ± 0.4	0.98 ± 0.49	*
Pain	1.34 ± 0.64	1.14 ± 0.44	1.03 ± 0.66	0.84 ± 0.5	0.74 ± 0.64	**

P = significance of the F test. * $P < 0.001$; ** $P < 0.01$

Table 2. Number of percentage of subjects with scores of less than 1, between 1 and 2, and more than 2

	Depression						Pain					
	<1		1–2		>2		<1		1–2		>2	
	n	%	n	%	n	%	n	%	n	%	n	%
DD ($n = 23$)	3	13	17	74	3	13	3	13	17	74	3	13
AD ($n = 11$)	3	27	7	63	1	9	3	27	8	73	–	–
MD ($n = 9$)	–	–	5	55	4	44	4	45	5	55	–	–
ADDM ($n = 8$)	3	37.5	5	62.5	–	–	4	50	4	50	–	–
Controls ($n = 71$)	51	72	19	26.7	1	0.15	47	66	24	33.8	–	–

Table 3. Scores obtained by the various groups in the anxiety subscale. Mean scores per person ± SD

	DD ($n = 23$)	AD ($n = 11$)	MD ($n = 9$)	ADDM ($n = 8$)	Controls ($n = 71$)	P
Anxiety	0.65 ± 0.25	0.58 ± 0.30	0.66 ± 0.37	0.57 ± 0.31	0.29 ± 0.24	*

P = significance of the F test; * $P < 0.01$

among depressed patients (Roy et al. 1984). The elderly are particularly at risk from this point of view, as they are more prone to masked depressive forms which are often expressed with somatic symptoms such as pain (Post 1965; Salzman and Shader 1978).

Of the various categories diagnosed according to the DSM III°, the highest scores for pain were gained by the subjects affected by DD and AD, while those obtained by the patients with MD were substantially lower. This is in partial agreement with an earlier study by von Knorring et al. (1983) in nongeriatric subjects. These authors in fact found the greatest incidence of pain in the groups with neurotic reactive depressions. The diagnosis of DD could in some way be comparable to that of neurotic depression, but not to that of reactive depression.

In our study, the patients with AD also scored rather high for pain; this is understandable regarding the higher frequency of masked depressive forms in the elderly.

However, there was no correlation between severity of the depressive symptomatology and the intensity of pain in our population.

While the patients with DD scored higher for pain than those with other depressive forms, this did not seem to be linked to the quantity of anxiety present; the intensity of anxiety was in fact found to be largely comparable in all the depressive subjects, independent of the type of depression involved.

No significant correlation was found between anxiety and pain in the depressed patients; in the control group this correlation was statistically significant, but very weak. This is not easy to explain; it seems however to indicate the presence of a possible link between anxiety and pain; a link often pointed out in the literature (Merskey 1978).

In conclusion, it may be said that the experience of pain is fairly common in the depressed elderly subject, being "significantly" present in nearly ¾ of the patients examined. This percentage is higher than that reported for adult populations. Patients affected by DD and AD seem to be at particularly high risk for pain. We feel that this is probably related to the intrinsic characteristics of the disturbances, and does not depend on the quantity of anxiety present.

Further studies will be necessary to throw more light on these problems and to confirm our findings.

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