Group Psychotherapy Could Improve Depression in Cirrhotic Patients on the Liver Transplant Waiting List

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ABSTRACT

Background. It is well-known that there is a high incidence of depression in patients on the liver transplant (LT) waiting list. However, there have been few studies of psychological intervention on these patients.

Objectives. To determine symptoms of depression in patients on the LT waiting list and the impact of group psychotherapy.

Methods. Study population: patients on the LT waiting list who received group psychotherapy (n = 15). Control group: patients who did not receive psychotherapy (n = 10). Measurement instrument: Beck's depression test, which was provided before psychotherapy was initiated and after it was completed (after 6 months). The control group was given the questionnaire at the same 2 points in time as the study group. The psychotherapeutic method consisted of discussing patients' feelings, which dealt with several matters related to transplantation. Different coping strategies were considered.

Results. More than half of those surveyed initially had depressive symptoms. When the second survey was administered to the study population, all the patients improved in their psychopathological assessment. When the survey was administered to the control group, a worse psychopathological assessment was obtained in all cases.

Conclusions. Our data suggest an improvement in depressive symptoms in patients on the LT waiting list after receiving group psychotherapy.

IT is essential to carry out a good psychosocial assessment and identify the risk factors in the patient who is a candidate for a transplant to reduce the risk of the loss of the transplanted organ in the future [1]. The available data regarding the patients on the liver transplant (LT) waiting list show that between 15% and 50% develop some kind of psychopathological disorder [2], with anxious and/or depressive-type alterations being the most common and affecting approximately one-third of the patients [3–5]. This percentage could be higher, as shown in the study previously carried out in our local area, where nearly half of those surveyed were affected [4]. It has been seen that these symptoms are usually more prevalent in patients on the LT waiting list than in patients on the kidney transplant waiting list [3]. Previous studies on patients on the kidney transplant waiting list have shown how psychological intervention can improve both depressive symptoms [6] and the quality of life of the patients [7,8]; group psychotherapy is a method of treatment that can help integrate disease-coping strategies [9]. On the other hand, the preliminary studies about the benefits of group psychotherapy in our local area show that there is a good level of acceptance among patients on the LT waiting list [10]. Our objectives were to determine the depressive symptoms in patients on the LT waiting list and

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0041-1345/18
https://doi.org/10.1016/j.transproceed.2018.02.206

to assess the impact of group psychotherapy in these symptoms.

METHOD

Study Population

Fifteen patients on the LT waiting list who accepted receiving group psychotherapy were selected. A control group of 10 patients did not receive psychotherapy. In both groups, patient selection was carried out randomly using the list of patients waiting for a LT.

Group Psychotherapy

All the patients from the study population signed an informed consent form to participate in the psychotherapy. It was directed by a psychologist and a social worker with a Master's Certificate in Psychotherapy. The psychotherapeutic method consisted partly of having a discussion about patients' emotions and feelings. The role of the therapists was to facilitate the expression of emotions and to give meaning to them [10]. Different coping strategies were dealt with including having a fighting spirit, helplessness, anxious worry, fatalism, and denial. The development of each one of these sessions, with a duration of 2.5 hours, was carried out at fortnightly periods for 6 months, with a total of 12 sessions.

Instrument of Measurement

Beck's depression test was used as the instrument of measurement. It consists of 4 responses graded from 0–3, in such a way that the highest score reflects the most negative state. The scoring of the

Table 1. Demographic and Clinical Features of the Study Population and the Control Group

Study Population

	Age	Sex	MELD	Child	Body Mass Index	Original Diagnosis: Liver Transplant Indication	Complications	Liver Transplant Before Therapy Was Completed	Attending <50% of the Sessions
1	53	Male	10	B	26	Chronic alcoholic liver disease	Ascites	-	-
2	54	Male	11	B	24	Chronic alcoholic liver disease	Esophageal varices	-	-
3	50	Female	5	B	26	Cirrhosis-hepatitis C virus disease	Ascites	-	-
4	54	Male	7	A	20	Hepatocarcinoma	-	-	-
5	60	Male	12	B	31	Chronic alcoholic liver disease	Ascites + Encephalopathy	-	-
6	54	Male	6	A	27	Hepatocarcinoma	-	-	-
7	63	Male	13	B	23	Chronic alcoholic liver disease	Esophageal varices + Ascites	-	-
8	53	Female	8	A	24	Hepatocarcinoma	-	x	-
9	58	Male	15	B	31	Chronic alcoholic liver disease	Encephalopathy	x	-
10	61	Male	12	B	28	Chronic alcoholic liver disease	Ascites + Encephalopathy	x	-
11	62	Male	22	C	32	Chronic alcoholic liver disease	Ascites + Encephalopathy	-	x
12	49	Male	10	A	24	Hepatocarcinoma	-	-	x
13	55	Male	4	A	22	Hepatocarcinoma	-	-	x
14	57	Male	7	A	26	Hepatocarcinoma	-	-	x
15	63	Male	11	A	25	Hepatocarcinoma	-	-	x

Control Group

	Age	Sex	MELD	Child	Body Mass Index	Original Diagnosis: Liver Transplant Indication	Complications	Liver Transplant Before Complete the Second Questionnaire	Not Complete the Second Questionnaire due to Medical Problems
A	64	Male	13	B	25	Chronic alcoholic liver disease	Esophageal varices + Ascites		
B	58	Male	9	B	24	Cirrhosis-hepatitis C virus disease	Ascites		
C	50	Male	10	A	24	Hepatocarcinoma	-		
D	55	Male	8	A	26	Hepatocarcinoma	-		
E	43	Male	6	A	23	Hepatocarcinoma	-		
F	54	Female	12	B	26	Chronic alcoholic liver disease	Esophageal varices + Ascites	x	
G	58	Male	14	B	32	Chronic alcoholic liver disease	Ascites + Encephalopathy	x	
H	47	Male	11	A	24	Hepatocarcinoma	-	x	
I	64	Female	18	B	28	Chronic alcoholic liver disease	Ascites + Encephalopathy		x
J	59	Male	21	C	31	Chronic alcoholic liver disease	Ascites + Encephalopathy		x

Abbreviation: MELD, Model for End-Stage Liver Disease.

questionnaire is classified into: grade 0 (a score of 0–10), highs and lows within normality; grade 1 (11–16), slight emotional disorder; grade 2 (17–20), intermittent states of depression; grade 3 (21–30), moderate depression; grade 4 (31–40, severe depression; and grade 5 (>40), extreme depression. The study population was given a questionnaire before starting group psychotherapy and after it was finished. The control group was administered with the same questionnaire at the same 2 points in time as the study group.

Exclusion Criteria

Those patients who received a transplant were excluded, as were, within the study population, those patients who did not attend more than 6 group psychotherapy sessions.

RESULTS

Study Completion

Of the 15 patients selected from the study population (Table 1), 3 patients were given a transplant before the psychotherapy had finished, and 5 patients were excluded for not having attended more than 50% of the sessions (3 of these patients attended 2 sessions and 2 attended 3 sessions). Therefore, the study was completed on 7 patients. Of the 5 patients who were excluded for not attending more than half of the sessions, 4 were patients who had hepatocarcinoma (HCC). Of the 10 patients from the control group (Table 1), 3 patients were given a transplant, and 2

Table 2. Study Population Depressive Symptoms

Depressive Symptoms—Types (i)/Initial Questionnaire

	Sadness	Pessimism	Failure	Anhedonia	Guilt	Punishment	Disappointment	Self-Blame	Suicidal Thoughts	Crying	Irritability
1	x		x	x	**x**	**x**	x	**x**		x	x
2	x			x			x		x	x	x
3	x	x		x				x			**x**
4	x						x			x	x
5	x	**x**				x		**x**		x	x
6	x		**x**	x			x			**x**	x
7		x		x	x		x			x	x

Depressive Symptoms—Types (ii)/Initial Questionnaire

	Social Isolation	Lack of Decisiveness	Worse Image	Difficulty at Work	Difficulty With Sleep	Tiredness	Lack of Appetite	Weight Loss	Worry About Physical Problems	Loss of Interest in Sex	Grade
1		**x**	x	x	**x**	**x**	x	x	**x**	**x**	3
2	x	x	x	x		x		**x**	x	x	2
3	x			x	x	x			x		1
4	**x**	x			x	x	x	x	x	x	1
5		**x**	x	**x**	x	**x**			x		2
6	x		**x**	x	x	x	x		**x**	x	2
7	**x**	**x**	x	x	**x**	x		x	**x**		2

Depressive Symptoms—Types (i)/Second Questionnaire

	Sadness	Pessimism	Failure	Anhedonia	Guilt	Punishment	Disappointment	Self-Blame	Suicidal Thoughts	Crying	Irritability
1	x										
2				x							
3											x
4											
5		x									
6			x								
7										x	

Depressive Symptoms—Types (ii)/Second Questionnaire

	Social Isolation	Lack of Decisiveness	Worse Image	Difficult Job	Difficulty With Sleep	Tiredness	Lack of Appetite	Weight Loss	Worry About Physical Problems	Loss of Interest in Sex	Grade
1				**x**		x		x			0
2		x		x						x	0
3				x	x	x				x	0
4	x				x	x			x		0
5					x						0
6					x	x					0
7				x		x		x			0

x indicates whether the patient has had any of these symptoms (score 1), in bold if the symptom is given a score of 2 or 3.

patients were unable to complete the second questionnaire due to medical problems (n = 5).

Study Population

Six of the 7 patients were men, and the mean age of those surveyed was 55 ± 4.4 years. The indication of LT was due to chronic alcoholic liver disease in 4 patients (all were Child-Pugh class B), 2 patients had HCC (both were Child A), and 1 patient had chronic hepatitis C virus liver disease (Child B). Initially, 5 patients had depression-related symptoms (Table 2). Regarding the etiology of the hepatopathy in terms of mood, 3 of the patients with alcoholic hepatopathy were patients who had intermittent states of depression, and the other patient was the one who presented with moderate depression (corresponding to patients 1, 2, 5, and 7 of Table 2). When the second questionnaire was administered after the psychotherapy was completed, all the patients improved their score compared to their initial assessment.

Control Group

The 5 patients who did not receive therapy were men, with a mean age of 54 years. Three patients had liver disease due to HCC (all were Child A), 1 patient due to an alcoholic cause, and the other patient due to the hepatitis C virus (both were Child B). Three patients initially presented with intermittent states of depression (Table 3). When the questionnaire was administered after 6 months, all respondents had a worse psychopathological score (Table 3).

DISCUSSION

Patients on the LT waiting list can have depressive symptoms, at a rate that usually ranges between 30%-50% [3–5]. In the initial assessment of the study population, it was seen how this rate reached a level of more than 70% of the respondents, which suggests that these patients need psychological help. Moreover, our results show that all patients having at least a slight emotional disorder, a finding which is in line with other studies [5]. Our study has shown

Table 3. Control Group Depressive Symptoms

Depressive Symptom–Types (i)/Initial Questionnaire

	Sadness	Pessimism	Failure	Anhedonia	Guilt	Punishment	Disappointment	Self-Blame	Suicidal Thoughts	Crying	Irritability
A	x	x	x	x	x		x	x			x
B	x	x		x						x	**x**
C	x		x	x	**x**		x	x	x	x	
D	**x**		x		**x**	x					**x**
E	x						x				

Depressive Symptoms–Types (ii)/Initial Questionnaire

	Social Isolation	Lack of Decisiveness	Worse Image	Difficulty With Work	Difficulty With Sleep	Tiredness	Lack of Appetite	Weight Loss	Worry About Physical Problems	Loss of Interest in Sex	Grade
A	x	x		**x**	x	x	x	x	x	x	2
B		x	**x**	x	x	**x**		**x**		**x**	2
C	x	x	x	x	x	x			x	x	2
D		x		x	x	x				x	1
E		x		**x**	**x**	**x**	x			x	1

Depressive Symptoms–Types (i)/Second Questionnaire

	Sadness	Pessimism	Failure	Anhedonia	Guilt	Punishment	Disappointment	Self-Blame	Suicidal Thoughts	Crying	Irritability
A	x	x	x	x	x		x	x		x	x
B	x	x		x						x	**x**
C	x	x	x	x	**x**	x	x	x		x	
D	**x**	x	**x**		**x**	x				x	**x**
E	x	x					**x**			**x**	

Depressive Symptoms–Types (ii)/Second Questionnaire

	Social Isolation	Lack of Decisiveness	Worse Image	Difficulty With Work	Difficulty With Sleep	Tiredness	Lack of Appetite	Weight Loss	Worry About Physical Problems	Loss of Interest in Sex	Grade
A	**x**	x		**x**	x	**x**	**x**	x	**x**	**x**	3
B		x	**x**	**x**	**x**	**x**	x	**x**	x	**x**	3
C	x	x	x	x	**x**	**x**			x	**x**	3
D		x		x	x	x			x	x	2
E		x		**x**	**x**	**x**	x		x	x	2

x indicates whether the patient has had any problem with this symptom (score 1), in bold if the symptom is given a score of 2 or 3.

that after 6 months of group psychotherapy, the patients improve in most of the types of depressive symptoms. In the initial clinical assessment of the study population, more than 70% were classified as Child-Pugh B, compared to 40% in the control group. These are patients with a greater clinical deterioration and who can present with more psychopathological symptoms [3]. It has also been seen that there is a clear improvement in symptoms related to social matters, in the opposite way to patients who did not receive psychotherapy, thus supporting the benefit of group psychotherapy for social-type symptoms. We know that social and family support affects the well-being of a person in any situation [11]. Limited or inadequate social and/or family support contributes to the development of psychosomatic symptoms, and mental health can be affected or could become worse if the patient already has an underlying disorder [12]. Parts of our coping strategies include social resources. It is without doubt that social support is one the most important coping resources for dealing with disease in general, and with chronic disease in particular [13], and this fact would also support the need for group psychotherapy in these patients. During the development of group psychotherapy, other coping strategies can be observed in the patients that should be addressed [9], as was observed in our group, such as adopting a fighting spirit and coping with anxious worry, fatalism. and denial. Rodrigue et al [7] and Chang et al [8] have described an improvement in the quality of life when individual psychological intervention programs are carried out both on patients on the waiting list for a kidney transplant and transplanted patients, respectively. In fact, benefits have been reported from both individual and group psychotherapy used on recipients of kidney transplants in terms of depressive symptoms [6]. At the end of the 1990s, the first study about the implementing group psychotherapy in a transplant unit was published. This Canadian study showed its benefits when coping with emotional problems both before and after transplantation [14]. In spite of this, Baines et al showed that individual psychotherapy seems to be more effective than group psychotherapy [6]. In the present study, we have been unable to compare both kinds of therapies, although these preliminary results are encouraging. It is important to take into account that almost one-third of our patients were excluded from the study population for not attending most of the sessions, mostly corresponding to patients with HCC. In the initial stages of the sessions, these patients showed a certain amount of resistance to showing their emotions [10], and they could not benefit from this treatment. It would also be useful to monitor patients after the transplant to observe the development of depressive symptoms, given that it is well-known that the transplant itself has a beneficial effect on the quality of life of the patients [15,16]. To conclude, our data suggest that there is an improvement in depressive symptoms in patients on the LT waiting list after receiving group psychotherapy, which could be very considerable in patients with alcoholic hepatopathy. It would be interesting, assuming that these results were confirmed in a larger number of patients, to be able to implement group psychotherapy in the largest number of LT units possible.

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