Psychiatria Danubina, 2013; Vol. 25, Suppl. 2, pp 105–108 *Conference paper*

COMPARISON OF HOSPITALIZED DEPRESSED PATIENTS RELATIVES ADMITTED THROUGH THE EMERGENCY DEPARTMENT OR CONSULTATIONS

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SUMMARY

Background: *A previous study showed an overuse of psychiatric emergencies by physicians. Now we study whether patients hospitalized through emergencies have more pejorative specifications than patients admitted through consultations.*

Method: *All patients with Major depressive disorder admitted in our department through emergencies (N=146) or consultations (N=2172) between January 1, 2010 and December 31, 2012 were included in an open study. They completed the Beck Depression Inventory (BDI), analogical visual scales about stress levels (in professional, social, family, married life), life events scale over the past year and the past month and the Olson Family Adaptation and Cohesion Scale.*

Results: *The depression (t=1.438; p=0.90) and stress level in the previous month (t=1.704; p=0.90) was similar in both samples. Patients admitted through emergencies are characterized by lower levels of marital stress (t=2.590; p=0.01), higher levels of cohesion (t=-2.988, p=0.003), higher adaptability of the current couple (t=-2.975, p=0.003) as well as the adaptability of the family of the origin (t=-2.504, p=0.012).*

Conclusions: *If both samples are comparable in terms of stress or severity of depression, patients admitted through emergencies have relatives who are more supportive and more adaptable! How can we explain why they did not consult before? We propose the hypothesis that physicians and families would be exceeded or overloaded with symptoms they thought they could contain, forcing them at this point to request an urgent care of the pathology. On the contrary patients with environments which are less cohesive and adaptable would be redirected earlier to specialised consultation.*

Key words: *major depressive disorder – hospitalization – emergency – consultation - family stress level - family cohesion - family adaptability*

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INTRODUCTION

In a previous study (Zdanowicz et al. 1996), we found that the person who sends the patients we meet in the emergency room (E. R.) is primarily the general practitioner (62% of patients). For 14% of patients, it is the family and for another 13%, it is the patient himself. Only 2% of patients are sent by a specialist. This article points out an overuse of the E.R. by general practitioners. In fact, two thirds of patients present no immediate danger or risk factors justifying to be sent to the E. R. In one third of cases we encounter patients who bypass the filter of primary care. Those patients present a broad variation of mood disorders with varying characteristics. Some of these patients are admitted in our department. In this paper, we want to know if differences can be found between patients hospitalized through the E.R. and those hospitalized through the consultations. Are there clinical and/or family and/or socio-demographic characteristics influencing the way patients are admitted into hospital.

METHODS AND POPULATION

University Hospital Centre of Mont-Godinne is the only university hospital covering a broad geographical area. There are two ways of being admitted into the psychosomatic department. Most of the time, outpatients are admitted after a consultation. In fewer cases, outpatients are admitted via the E.R. The sample in this study consists of all patients hospitalized in our department between January 2010 and December 2012. To be included patients must have a major depressive disorder objectified by a clinician after a line inter-judge has been established. The severity of the depression was assessed by the Beck Depression Inventory. Patients also filled several other assessments: a visual analoguel scale measuring stress in professional, family, social and couple life; a scale on life events (past year and past month); and Olson's FACES III. All collected data and socio-demographic parameters are computed into the patient file. The sample consists of two groups: Patients hospitalized through the E.R. (n=146) and those admitted following consultations (n=2172). Statistics were conducted with parametric methods, including type I and type II errors. No post-hoc test was conducted. Mean comparison were made using a student t test. Pearson's independence test was performed on ordinal variables. When needed a logistic regression was performed.

RESULTS

Stress level and severity of depression

The BDI results show a mean result of 29.00+/-13.605 for E.R. patients and 29.41+/-13.310 for others. The severity of depression is statistically similar in both groups (t=1.438; p=0.90). The same goes for the stress level during the previous month (t=1.704; p=0.90).

Socio-demographic factors

- *Age:* the mean age for patients hospitalized through consultations is 45.105+/-12.4072 and 40.913+/-13.3433 for E.R. patients. Statistical analysis shows a significant difference.
- *Sex:* the sex ratio of E.R. Patients (H/F=1.38) is not significantly different from consultation patients' sex ratio (H/F=1.37) (chi-carré=0.451; p=0.798).
- *Family setting:* the number of brothers and sisters (t=-4.971; p=0.000) as well as the number of parents who are still alive (t=-3.310; p=0.001) are significantly different. However, no statistical difference was found concerning the number of children (t=-0.793; p=0.429) or the number of patients living with their partner (t=-1.526; p=0.127).
- *Socio-professional status:* differences between professional statuses were also investigated. Statistical differences were found between consultation patients and E.R. Patients (Chi-Carré: 30, 192; p=0.000). In the emergency room, the main status encountered is joblessness, then employment. For consultation patients the main status is employment then joblessness. The following statuses come in the same order in both groups: the unemployed, persons who are on a sick-leave and finally the retired.

Family Adaptation And Cohesion Scale de Olson

Compared to consultation patients, E.R. patients have a higher mean score in current couple cohesion and adaptability. The means are significantly different (Table 1). No significant difference was found concerning the ideal couple. E.R. patients also have a signifycantly higher adaptability score in the birth family. However, no test confirmed a significant statistical difference between the groups concerning the birth family's cohesion. The same goes for adaptability and cohesion levels in nuclear and ideal family.

Logistic regression model

A logistic regression on parameters with significant differences allowed us to predict how likely it is for a patient to go to the E.R. (Table 2). Analysis showed that having more siblings and parents correlates with high probability to go to the E.R. A weaker correlation was found between going to the E.R. and professional status, birth family's adaptability and current couple's cohesion. However, stress in the present couple and age did not predict going to the E.R.

Table 2. Logistic regression model predicting the probility to go to the E.R. Having more siblings and parents still alive correlates with high probability to go to the E.R. A lower probability was found concerning the professional status, birth family's adaptability and current couple's cohesion. Stress in present couple and age did not predict going to the E.R

	p	OR	CI 95%
Siblings	0.000	1.741	1.359 – 2.231
Parents	0.001	1.651	1.216 – 2.240
Prof. status	0.034	1.113	1.008 – 1.229
BF adaptability	0.012	1.023	1.005 – 1.041
CC adaptability	0.003	1.019	1.006 – 1.033
CC cohesion	0.003	1.016	1.003 – 1.026
Marital stress	0.010	0.994	0.989 – 0.998
Age	0.000	0.973	0.962 – 0.985

p<0.05 is statistically significant; OR = Odd Ratio, CC= current couple, BF= Birth family, CC= current couple

Table 1. Comparison between severity of depression and results obtained with FACES III and analogical visual scale measuring the marital stress. Patients admitted through E. R. have a better cohesion and adaptability within actual couple and a better adaptability within the family of the origin. Marital stress is lower for these patients. No statistical difference was found concerning severity of depression

	E. R. patients		Consultation patients		t	p
	Mean	Δ	Mean	Δ		
Beck Depressive Inventory						
BDI score	*29.00*	*13.605*	*29.41*	*13.310*	*NS*	
Analogical Visual Scale						
Marital stress	*60.91*	*32.109*	*66.90*	*29.121*	*2.590*	*0.010*
Family adaptability and cohesion scale (FACES III)						
CC cohesion	*30.73*	*15.550*	*26.27*	*17.650*	*-2.988*	*0.003*
CC adaptability	*25.36*	*12.925*	*21.76*	*14.246*	*-2.975*	*0.003*
IC cohesion	40.77	10.023	39.80	12.793	NS	
IC adaptability	35.29	9.534	34.18	11.641	NS	
BF cohesion	27.42	11.043	26.83	11.349	NS	
BF adaptability	*21.93*	*9.113*	*20.35*	*8.433*	*-2.504*	*0.012*
NF cohesion	27.54	15.637	25.92	16.301	NS	
NF adaptability	21.51	12.944	19.45	12.458	NS	
IF cohesion	40.77	10.023	39.80	12.793	NS	
IF adaptability	29.64	8.478	28.63	9.906	NS	

p<0.05 is statistically significant; NS= non significant; CC=current couple; IC=ideal couple; BF=family of the origin; NF=nuclear family; IF=ideal family

DISCUSSION

The severity of depression and the stress level are significantly similar in both populations. The fact that E.R. patients have varied levels of depression must be taken into account, as well as the fact that two thirds of these patients show no risk factors (Zdanowicz et al. 1996). Whatever the way a patient is admitted, his BDI score reveals moderate to severe depression. This finding is consistent with a study (Georges et al. 2002) showing that the severity of symptoms is significantly linked to the decision to admit a patient, contrarily to other factors. In our study, the fact that depression scores are alike in both samples means that physicians do not admit a patient more easily when they come via the E.R. and that the severity of the pathology is considered. Also, severity of depression and stress level do not seem to influence the way a patient comes -or is sent- to us. The present study showed that E.R. patients are younger, have a larger family (more siblings and parents) and more often have no job. Our results are consistent with Bruffaerts et al (Bruffaerts et al. 2004) who pointed out a greater tendency to go to the E.R. when young, unemployed and living with a family. A hypothesis (Bruffaerts et al. 2004, Verhaak 1995) is that unemployed patients seek help addressing easier-to-access institutions. The fact that consultation patients more often have a job is consistent with this hypothesis, considering that going to a specialist physician demands a more complex and organised initiative. Having a large family (siblings and parents) and being joblessness both strongly predict going to the E.R., while age does not. Current couple's adaptability as well as birth family and current couple's cohesion, predict going to the E.R. with a weaker correlation. The present study showed that not only having a large family but also having high relatives' adaptability and cohesion influence how a patient will seek help. E.R. patients present with a better cohesion and adaptability in their couple and a better adaptability in their birth family. This means that E.R. patients seem to have a better-working couple relationship. The result is quite surprising when we know that couple fights (Whisman et al. 1999, 2009, 2012) and family conflicts (Campbel & Thomas 1986, Stark et al. 2012, Widmer & Reuben 1991) badly impact the development, course and severity of depression. We could then rationally expect E.R. patients to have more fights with their partners and very little support from their families. How can we explain the current study's findings? Our hypothesis is that patients facing less adaptability and cohesion feel less satisfaction and have to be more self-reliant; therefore, they do not feel supported and they tend to seek help sooner and outside their social network. Consultation patients experiencing higher stress levels in their relationship can account for the lack of couple adaptability when facing a new situation or a difficult event (such as depression). On the contrary, E.R. patients probably find more comfort, well-being and resources in their relationship. Having their needs provided and experiencing a stronger connection with their partner, those patients are less likely to seek help outside the relationship. It has been shown that major depressive disorder impacts badly on the couple relationship (Whisman et al. 2009) and draws much energy from the social surroundings (Coyne et al. 1987, DiBenedetti et al. 2012). Our hypothesis is that relatives can suffice in containing and adapting to the person's sufferings, but there may be at a moment a break point between the patient and his relatives. Whether family or couple can no longer provide cohesion and adaptablity because they are submerged with his suffering, unable to help him as they have always been able to do, or the patient can no longer find solutions to his unhappiness as he has always been able to do within his adadptable and cohesive entourage, the the patient comes preferentially to the E.R. because the break point is seen as a catastrophic event and causes distress. Experiencing a break in relationships that were always adaptable and cohesive is perceived as an emergency situation.

One limitation to this study is that, to this point, we have not investigated whether E.R. patients had ever consulted a psychiatrist in the past. This needs to be examined in a future study. However, we can imagine that even if they were in treatment, their presence in the E.R. indicates that they feel unable to reschedule or wait for their next consultation; unlike outpatients who are still able to delay treatment without experiencing a variation in their pathology.

CONCLUSION

We studied whether patients hospitalized through emergencies have pejorative specifications than patients admitted through consultations. The depression and stress level in the previous month was similar in both samples. Patients admitted through emergencies have relatives who are more supportive and more adaptable. We propose the hypothesis that physicians and families could be exceeded or overloaded with symptoms which they thought they could contain. Forcing them at this point to aim an urgent care of the pathology. On the contrary patients with environments which are less cohesive and adaptable would be redirected earlier to a specialised consultation.

Acknowledgements: None.

Conflict of interest: None to declare.

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