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Psychotic disorders versus other psychiatric diagnoses in consultation-liaison psychiatry: 10 years of a single-center experience

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Introduction. The clinical management of patients with psychotic disorders (PDs) can be particularly complex if it takes place in the context of consultation-liaison psychiatry (CLP) services within a general hospital. However, there are few studies specifically investigating the acute treatment procedures for these patients in CLP settings.

Objectives. To examine the characteristics of a sample of inpatients with a primary PD referred to a CLP service over a 10-year period and to compare the clinical features of this subgroup with patients with other diagnoses (ODs).

Materials and methods. Observational and descriptive study over a 10-year period (2005-2014) assessing prospectively adult inpatients admitted to non-psychiatric units of the University Clinical Hospital of Barcelona who were consecutively referred to our CLP service. We performed a *post-hoc* analysis to compare the clinical features between the subgroup of patients with PDs and the rest of patients who meet the criteria for ODs.

Results. We requested 393 consultations for patients who either already had the diagnosis of a primary PD and 9,415 for patients with ODs. Our results showed that patients with PDs were younger than the patients with ODs, had a higher prevalence of somatic illnesses related with an unhealthy lifestyle (such as infectious, endocrine, or metabolic diseases), less frequency of cancer, and a need to receive a more intensive psychiatric care.

Conclusions. Inpatients with PDs referred to CLP have different clinical features compared with those who met the criteria for ODs. They are a highly complex group with specific psychiatric care needs.

Keywords: Comorbidity, Consultation-liaison Psychiatry, General Hospital, Psychotic Disorder, Referral, Schizophrenia

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Trastornos psicóticos versus otros diagnósticos psiquiátricos en psiquiatría de enlace e interconsulta: estudio unicéntrico durante un periodo de 10 años

Introducción. El manejo clínico de los pacientes con trastornos psicóticos (TPs) es particularmente complejo si se lleva a cabo en el contexto de los servicios de psiquiatría de enlace e interconsulta (PEI) de un hospital general. Sin embargo, disponemos de pocos estudios que hayan investigado de forma específica los procedimientos asistenciales de tratamiento agudo para estos pacientes en entornos PEI.

Objetivos. Examinar las características de una muestra de pacientes hospitalizados que presentan un TPs primario, que son remitidos a un servicio de PEI durante un período de 10 años y comparar las características clínicas de este subgrupo con respecto a los pacientes con otros diagnósticos (OD).

Material y métodos. Estudio observacional y descriptivo llevado a cabo durante un período de 10 años (2005-2014), evaluando prospectivamente pacientes adultos ingresados en unidades no psiquiátricas del Hospital Clínico Universitario de Barcelona, que fueron remitidos de forma consecutiva a nuestro servicio de PEI. Realizamos un análisis *post-hoc* para comparar las características clínicas entre el subgrupo de pacientes con TPs y el resto de pacientes que cumplían los criterios para OD.

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Resultados. Se recibieron 393 interconsultas referentes a pacientes que presentaban un diagnóstico de TPs primario y 9.415 derivaciones de pacientes con OD. Nuestros resultados mostraron que los pacientes con TPs eran más jóvenes que los pacientes con OD, tenían una mayor prevalencia de enfermedades somáticas relacionadas con un estilo de vida poco saludable (como enfermedades infecciosas, endocrinas o metabólicas), una menor frecuencia de cáncer y una necesidad de recibir asistencia psiquiátrica de forma más intensiva.

Conclusiones. Los pacientes hospitalizados con TPs que son remitidos a los servicios de PEI tienen diferentes características clínicas en comparación con aquellos que cumplen con los criterios para OD. Se trata de un grupo complejo, con necesidades específicas en cuanto a la atención psiquiátrica.

Palabras Clave: Comorbilidad, Psiquiatría de Enlace e Interconsulta, Hospital General, Trastorno Psicótico, Derivación, Esquizofrenia

INTRODUCTION

Background

Somatic and psychiatric illnesses often coexist in hospital inpatients and approximately 30% of individuals with medical conditions have mental health comorbidity. This is a major risk factor for impaired somatic treatment outcomes, longer length of stay, and increased rehospitalization[1]. Patients with schizophrenia and other primary psychotic disorders (PDs) are known to have a higher prevalence of a range of acute and chronic medical illnesses. This increased morbidity might be a result of factors related to the mental disorder and its treatment, but may also result from the unsatisfactory organization of health services, from the attitudes of medical doctors, and the social stigma ascribed to these patients[2]. Some studies have reported that psychotic patients have a higher burden of comorbidity that is associated with a worse outcome in the follow-up of mortality in general hospitals compared with hospital controls[3]. Consultant psychiatrists are experts at providing care for patients with comorbid psychiatric and general medical illness and have to be well equipped and use their expertise to help manage the care of these complex patients, collaborating with medical and surgical colleagues[4,5]. Although the clinical management of patients with PDs can be particularly complex and challenging if it takes place in the context of consultation-liaison psychiatry (CLP) services within a general hospital, there are few studies specifically investigating the acute treatment procedures for these patients in CLP settings.

Objectives

The aims of this study were to examine the characteristics of a sample of inpatients with a primary PD (schizophrenia, schizoaffective disorder, delusional disorder, or other PD like brief psychotic disorder) referred to a CLP service over a 10-year period (2005–2014) and to compare the clinical features of this subgroup with patients with other diagnoses (ODs) visited by our team. According to classification systems, major depressive disorders or bipolar disorders with psychotic symptoms were not considered as primary psychotic disorders and were included within the subgroup of ODs.

MATERIALS AND METHODS

Study design and participants

This is an observational and descriptive study. Data were collected prospectively over a 10-year period (from January 1, 2005 to December 31, 2014). We used a nonprobability sampling method assessing adult inpatients admitted to non-psychiatric units of the University Clinical Hospital of Barcelona who were consecutively referred to our CLP service. The study protocol was approved by the Ethical Committee Board of the hospital.

Setting

Our hospital is located in the northeast of Spain and is an 819-bed tertiary care general hospital that attends to the health of 540,000 inhabitants. Our CLP unit is a general service that provides care for adult inpatients and the staff is composed of two psychiatrists, one psychologist, and one nurse specialist in psychiatry. Every year, three post-graduate year-2 or year-3 psychiatry residents spend a rotation of 4 months in the unit.

Data sources and variables

All of the patients admitted to the hospital for more than 24 hours and who were referred to our CLP service during the study period were assessed using a computerized database. We only analyzed one referral for each patient, excluding the duplicate referrals processed during the same admission. Follow-up visits were scheduled according to clinical criteria and psychiatric care needs of each patient. We collected the following clinical variables according to the European Consultation/Liaison Workgroup proposals for standardized data collection[6]:

- Sociodemographic variables and clinical characteristics of the sample: age, gender, personal psychiatric history, current psychosocial stressors (including social difficulties, unemployment, financial strains and/or legal problems), and somatic diagnoses at admission according to the International Classification of Diseases, 10th revision (ICD-10)[7].
- Features of the referrals: date, sources of the consultations according to medical specialties, and primary reasons for referral.
- Intervention and outcome: psychiatric diagnostic after a standard non-structured psychiatric interview, following the DSM-IV-TR criteria[8], psychopharmacological intervention, number of visits, destination at discharge, and length of hospital stay.

The main data sources were the patients, when their general medical condition allowed the psychiatric interview. We also obtained complementary data through the anamnesis of the referring physician, nursing daily reports, hospital medical history, and family members and/or caregivers.

Statistical methods

We performed a descriptive analysis, including the sociodemographic variables and clinical characteristics of the sample, the features of the referrals, and the psychiatric interventions and outcome. The description of age and length of hospital stay was carried out by obtaining mean scores and their standard deviations. The rest of the variables were analyzed by total numbers and proportions. To compare the clinical features between the subgroup of patients with PDs and the rest of patients visited by our team who meet the criteria for ODs, we performed a *post-hoc* analysis. We used the Z-test for independent proportions to compare categorical variables. A Mann–Whitney U test for independent samples was used as a non-parametric test to compare the means after testing the non-normal distribution of the two quantitative variables (age and length of hospital stay) with the Kolmogorov–Smirnov test. Bonferroni corrections were used to adjust confidence intervals and significance values at a level of $p<0.05$. All statistical procedures were carried out using *IBM SPSS Statistics* 23 (IBM Corp., Armonk, NY, USA).

RESULTS

General characteristics of the sample

During the study period, 9,808 psychiatric consultations were requested. Our research group published the general clinical characteristics of this sample in a previous paper[9]. We had an average of 980.8 requests per year (ranging from 891 to 1,070). The number of referrals per year remained constant and did not demonstrate statistically significant changes over the 10-year period. In total, 393 of these consultations (4%) concerned patients who either already had the diagnosis of a primary PD (representing 87% of the total) or received the diagnosis by the CLP team (representing 13% of the total). Within this subgroup of patients, 177 met the DSM-IV-TR criteria for schizophrenia, 106 for schizoaffective disorder, 69 for delusional disorder, and 41 for other PDs. The most prevalent psychiatric diagnoses in the subgroup of patients with ODs were: alcohol-related disorders (17.6%), adjustment disorders (16%), delirium (15.9%), mood disorders (9.3% including major depressive disorders, bipolar disorders and dysthymic disorders), dementia (6.2%), and anxiety disorders (5.9%).

Patients with PDs versus patients with other psychiatric diagnoses: comparative analysis

Sociodemographic variables and clinical characteristics

The patients with PDs referred to our CLP service were significantly younger (51.5±16.5 years) than the subgroup presenting ODs (55.5±17.5 years) ($p<0.001$). The comparative analysis showed that there were also significant differences between the two subgroups in gender distribution (61.2% men in the PD subgroup vs. 55.9% in the subgroup of patients with ODs, $p<0.05$). Patients with a PD were more prone to present current psychosocial stressors (45.8% vs. 30.8%). Finally, 90.7% of the patients with a PD had previous psychiatric contacts and/or a prior psychiatric diagnosis and 22% had a history of suicide attempts. These proportions were significantly lower ($p<0.05$) in the subgroup of patients with OD (65.5% and 11.6%, respectively). It is important to note that history of alcohol and substance-related disorders was significantly more common in the subgroup of patients with ODs than in the subgroup of patients with PDs (29.5% vs. 5.1%).

With respect to the main ICD-10 provisional somatic diagnosis at admission, the subgroup of patients with a PD presented a significantly higher ($p<0.05$) prevalence of infectious diseases (13.9% vs. 9.3%), endocrine/nutritional/metabolic diseases (3.6% vs. 1.2%), and external causes of morbidity (20% vs. 11.6%), including suicidal attempts, deliberate self-harm, injuries, and poisoning. In contrast, patients with ODs presented a significantly higher ($p<0.05$) prevalence of neoplasms (14.6% vs. 6.9%) and a higher prevalence of diseases of the digestive system (17.8% vs. 8.6%). This last difference is mainly explained by the gap

presented between both subgroups in the percentage of patients affected by liver cirrhosis (10.3% of the patients with ODs vs. 1.4% of the patients with PDs). The rest of the somatic diagnoses categories had a similar prevalence between the two subgroups.

Referral features

Table 1 shows the referral sources according to specialty departments and the main reasons for consultation to our CLP service of the two subgroups.

Psychiatric intervention and outcome

With respect to the need for psychiatric care, there were differences between the two analyzed subgroups. During hospitalization, 18.3% of the patients with PDs were given only one consultation and 53.2% were visited 2–3 times. The rest of the patients (28.5%) required a more extensive follow-up by our CLP service. In contrast, 35.9% of the patients with ODs only required one visit by our team, 42.5% were visited 2–3 times, and the rest of the patients (21.6%) required four or more visits. All these comparison of proportions were statistically significant ($p<0.05$). Table 2 shows the comparative analysis of the psychopharmacological interventions and intended destination at discharge recommended by our CLP team. Finally, during the 10-year period, the mean length of hospital stays in medical or surgical units of patients with PDs referred to our CLP service (17.4±11.9 days) was significantly shorter ($p < 0.001$) than the subgroup presenting ODs (23.9±17.3 days). Moreover, the length of hospital stays of each of the two subgroups was significantly longer ($p<0.001$) than that of all the general admissions to the University Clinical Hospital of Barcelona (6.8±11.2 days) during the same period.

DISCUSSION

This is the first study to systematically investigate the procedures for acute treatment of patients with PDs by a general hospital CLP setting. Our results show that these patients are younger than the patients with other psychiatric diagnoses, they are referred to CLP more frequently due to infectious, endocrine, or metabolic diseases and less by cancer and they also need to be treated in a more intensive way with respect to psychiatric care. Several prior investigations have described the characteristics of CLP services over periods of one or more years[9-17]. Nevertheless, these studies were not designed to obtain specific data about the clinical features and psychiatric management of patients with PDs in the general hospital and, therefore, it has been difficult to standardize the interventions that are carried out in this subgroup of patients.

Rate of psychiatric consultation for patients with PDs

In our sample, only 4% of all patients for whom psychiatric consultation was requested had a diagnosis of a primary PD. The studies published in previous years by different CLP hospital units found rates of psychiatric consultation for patients with PDs in the range of 1% to 19%[10-17]. This wide variability of prevalences may be explained by the heterogeneities of CLP services and hospital settings and by the use of different psychiatric diagnostic classification systems. However, if we analyze only the most robust investigations with the largest samples and/or with a multicenter design, such as that performed by Gala et al. (1999), Huyse et al. (2001), or Diefenbacher and Strain (2002)[15-17], the rates of consultation to CLP for patients with a PD reduce to 4.4–5.6%, which is more similar to the results obtained by our group.

Clinical features of patients with PDs in the general hospital

Patients with PDs referred to our CLP service were usually middle-aged men and were significantly younger than patients with ODs. These findings may be explained by the fact that life expectancy of people with PDs is shorter compared with the general population and they usually suffer from comorbid physical diseases in earlier stages of life, with a higher mortality rate[18,19]. The majority of patients in our sample with a PD had previous psychiatric history and a prior diagnosis of psychosis. Approximately half of the patients presented current psychosocial stressors and one quarter had a history of suicide attempts. These sociodemographic characteristics are similar to individuals with psychotic illnesses that are usually attended in the vast majority of CLP clinical settings. It is rare for a medical patient to have the first psychotic episode in the general hospital and, as in our research; CLP services usually treat patients with a prior history of a chronic PD[4]. In accordance with our findings, there are large amounts of evidence suggesting that psychosocial stressors are very common in patients with psychosis[20]. Several investigations have also shown that rates of suicidal behavior and lifetime history of suicide attempts are high across a broad spectrum of patients with PDs[21,22].

The main underlying somatic diagnoses at admission of patients with PDs, compared with patients with ODs, were infections, endocrine/nutritional/metabolic diseases, or external causes of morbidity. An extensive literature focused on comorbid physical diseases in the schizophrenia spectrum and other PDs is available and it is well known that the prev-

Table 1 Sources and primary reasons for referral of patients with psychotic disorders (PDs) and patients with other psychiatric diagnoses (ODs)

Source (Specialty)	Psychotic Disorders (PDs)		Other Diagnoses (ODs)		*Post hoc*
	n	%	n	%	
Hepatology	21	5.3	1,308	13.9	ODs>PDs *
General medicine	69	17.5	1,130	12	PDs>ODs *
Neurology	56	14.2	1,139	12.1	NS
Haemato-Oncology	18	4.5	875	9.3	ODs>PDs *
Surgery	28	7.2	772	8.2	NS
Cardiology	20	5	763	8.1	ODs>PDs *
Infectious diseases	40	10.3	603	6.4	PDs>ODs *
Trauma and orthopedics	37	9.5	527	5.6	PDs>ODs *
Respiratory medicine	19	4.7	508	5.4	NS
Gastroenterology	12	3.1	377	4	NS
Urology and nephrology	11	2.8	377	4	NS
Intensive care unit	22	5.6	226	2.4	PDs>ODs *
Neurosurgery	5	1.4	207	2.2	NS
Others **	35	8.9	603	6.4	NS
Total	**393**	**100%**	**9,415**	**100%**	
Reason	**Psychotic Disorders (PDs)**		**Other Diagnoses (ODs)**		*Post hoc*
	n	%	n	%	
Depression	15	3.8	2,071	22	ODs>PDs *
Substance abuse	17	4.4	1,892	20.1	ODs>PDs *
Clinical protocols	11	2.8	1,149	12.2	ODs>PDs *
Confusion	32	8.1	989	10.5	NS
Anxiety	5	1.3	998	10.6	ODs>PDs *
Psychiatric history/medication	229	58.3	744	7.9	PDs>ODs *
Behavior management/agitation	30	7.5	715	7.6	NS
Suicidal risk/attempt assessment	38	9.7	339	3.6	PDs>ODs *
Others	16	4.1	518	5.5	NS
Total	**393**	**100%**	**9,415**	**100%**	

NS indicates a non-significant statistical difference with p>0.05

* Indicates a significant statistical difference with p<0.05

** Includes otorhinolaryngology, endocrinology, dermatology, obstetrics and gynecology

Table 2 Psychopharmacological intervention and intended destination at discharge recommended by the consultant psychiatrist, of patients with psychotic disorders (PDs) and patients with other psychiatric diagnoses (ODs)

Primary psychopharmacological intervention	Psychotic Disorders (PDs)		Other Diagnoses (ODs)		*Post hoc*
	n	%	n	%	
Benzodiazepines	4	1.1	904	9.6	ODs>PDs *
Selective Serotonin Reuptake Inhibitors	0	0	1,497	15.9	ODs>PDs *
Serotonin–Norepinephrine Reuptake Inhibitors	0	0	311	3.3	NS
Other antidepressants	1	0.3	819	8.7	ODs>PDs *
First Generation Antipsychotics	77	19.6	593	6.3	PDs>ODs *
Second Generation Antipsychotics	297	75.5	2,147	22.8	PDs>ODs *
Chlormethiazole	3	0.8	847	9	ODs>PDs *
Others **	6	1.5	508	5.4	NS
No Treatment	5	1.2	1,789	19	ODs>PDs *
Total	**393**	**100%**	**9,415**	**100%**	
Intended destination at discharge	**Psychotic Disorders (PDs)**		**Other Diagnoses (ODs)**		***Post hoc***
	n	**%**	**n**	**%**	
General practitioner	31	7.9	2,966	31.5	ODs>PDs *
Community psychiatric services	254	64.5	2,400	25.5	PDs>ODs *
Community addiction treatment services	18	4.7	2,109	22.4	ODs>PDs *
Psychiatric inpatient unit	77	19.6	198	2.1	PDs>ODs *
Not necessary	1	0.3	1,243	13.2	ODs>PDs *
Others ***	12	3	499	5.3	NS
Total	**393**	**100%**	**9,415**	**100%**	

NS indicates a non-significant statistical difference with p>0.05

* Indicates a significant statistical difference with p<0.05

** Includes mood-stabilizers, methadone and other opiates

*** Includes psychogeriatric units and other hospitals

alence of cardiometabolic risk factors in individuals with psychotic illnesses is much higher than that observed in the general population[23,24]. They are more vulnerable to a wide range of cardiovascular, endocrine, and metabolic complications and other environmentally influenced conditions like infectious diseases. In part, these risk factors are attributable to a limited access to physical health care and to an unhealthy lifestyle, including poor diet, smoking, obesity, and sedentary behavior. Over recent years it has become apparent that antipsychotic agents can also have a negative impact on some of the modifiable risk factors, contributing to the development of a metabolic syndrome. Part of this negative metabolic impact can be explained by the liability of some antipsychotics to induce significant weight gain, the risk of diabetes, and worsening lipid profile[3,25-28].

By contrast, patients with ODs referred to our CLP service presented a significantly higher prevalence of neoplasms and diseases of the digestive system, which are the main cause of the higher rate of liver cirrhosis, than patients with PDs. Although there are many interrelated and complex factors that may influence these findings, we hypothesized that aging is the most probable explanation to both phenomena. In our sample, the patients with ODs were significantly older than the patients with PDs and there is strong

evidence indicating that aging leads to an inevitable time-dependent decline in physiological organ function and is a major risk factor for cancer development[29]. Aging is also associated with the severity and poor prognosis of various liver diseases and it has been shown to increase vulnerability to acute liver injury and the susceptibility of the fibrotic response[30]. Another complementary explanation to the higher rates of liver cirrhosis in patients with ODs is that a history of alcohol and substance-related disorders was more frequent within this subgroup.

In this study, some usual reasons for referral to CLP such as depression, anxiety, or substance abuse were more frequent in non-psychotic patients. With respect to patients with PDs, nearly 60% were referred by medical and surgical colleagues to our CLP service because of their psychiatric state and/or medication review. This finding supports the idea that general practitioners usually need a specialized psychiatric collaboration to manage both the pharmacological and non-pharmacological care of these complex patients[5]. The suicidal risk assessment was another frequent reason for psychiatric consultation for patients with PDs. As described in Table 2, during the 10-year study period, our CLP team assessed a total of 377 patients hospitalized by a medically serious suicide attempt and 38 (10.1%) were patients with a PD. This finding is consistent with the data of Alberdi et al. (2011), who performed a cross-sectional study to determine the variables associated with suicide attempts in a sample of 361 inpatients who required attention from a CLP service between 1997 and 2007 in a general hospital[31]. Although the most frequent psychiatric diagnoses within this sample of suicide attempters were mood disorders (29.5%) and personality disorders (24.2%), closer to our results and practical experience, this research group found a similar prevalence of patients with a PD (12.3%). Nevertheless, due to the design of our study, we cannot compare the rest of the diagnostic prevalences because the psychiatric disorders usually associated with suicide attempts were included in a single-diagnostic subgroup (patients with ODs).

Psychiatric management of patients with PDs in the general hospital

With respect to psychiatric intervention, treatment procedure, and outcome, the results of our investigation also reflect the complexity of the clinical approach of medically ill psychotic patients in the general hospital[4,5]. On the one hand, they required a more extensive follow-up than patients with ODs and up to 80% needed two or more psychiatric visits. Obviously, the prescription of antipsychotics was the most used psychopharmacological approach for these patients compared with other drugs such as antidepressants or anxiolytics. On the other hand, 20% of patients with PDs whom the consultant psychiatrist visited were finally transferred to the psychiatric inpatient unit and 65% were discharged with a recommendation for further assistance in outpatient psychiatric services. This last finding is consistent with the only available investigation that specifies the post-discharge management of these patients. It was published in 2015 by De Giorgio et al., based on the analysis of 1098 psychiatric consultations that were carried out over one year. In this sample, 63.6% of patients with a PD needed to continue with outpatient psychiatric care after discharge[17].

Another interesting finding of our study, beyond the influence of the psychiatric comorbidity on the duration of hospitalization, was that patients with PDs had a shorter length of hospital stay in medical or surgical units than patients with ODs. We believe there are two factors that can explain this finding. First, as mentioned above, one in five patients with a PD visited by CLP needed psychiatric admission, which could mean a shortening of the length of hospital stay in somatic units compared with patients with ODs. Second, the patients with PDs had higher rates of acute medical conditions related to an unhealthy lifestyle, which can be halted and reversed by treatment and, on the contrary, they presented lower rates of chronic degenerative diseases like neoplasms or liver cirrhosis, which are usually associated with complex interventions and prolonged hospitalizations.

Limitations

The primary limitation of single-center studies is their potentially limited external validity. In this study, we have described a single convenience cohort and it is difficult to comment on hospital factors (e.g., healthcare system, hospital type, service population, and the level of non-CLP staff training) that might influence the generalizability of the results. A second limitation is the well-known methodological limitations of *post-hoc* analysis. Due to the observational design of our study, we can generate hypotheses but we cannot identify causal or predictive factors or establish associations between the different variables. Third, we have not used any structured clinical interview for making the psychiatric diagnoses and we have only taken into account the main diagnoses, without analyzing psychiatric comorbidities. We have divided the sample into two subgroups (patients with PDs vs. patients with ODs) but we have not made head-to-head comparisons between the different psychiatric diagnoses. Finally, we have only gathered general features of the sample and to do a more rigorous approach quantitative biological markers should be taken into account.

CONCLUSIONS

The results of the present investigation suggest that inpatients with PDs referred to CLP have different clinical fea-

tures compared with those who met the criteria for ODs. In our sample, we found the following main differences between both subgroups:

- Patients with PDs more frequently exhibit infectious, nutritional, and metabolic diseases as well more external causes of morbidity than patients with ODs, which are closely related with an unhealthy lifestyle and serious suicide attempts, respectively.

- Besides psychiatric state assessment and/or medication review, the evaluation of medically serious suicide attempts within patients with PDs was an important reason for consultation to our CLP unit. Moreover, these patients had a higher prevalence of previous suicide attempts than the subgroup of patients with ODs.

- Generally, the patients with PDs referred to our unit required more specific interventions and more intensive psychiatric care than patients with ODs.

In global terms, the results of the present investigation are congruent with the available data regarding physical comorbidity in patients with schizophrenia and other PDs within the general population. Although little is known about the clinical approach of medically ill psychotic patients in general hospital settings, our findings suggest that they are a highly complex group with specific psychiatric care needs. CLP implementation is important to ensure the adequate diagnosis and treatment of medically ill patients with psychiatric comorbidities, especially for those who suffer a severe mental illness like PDs. Studies like ours are useful to describe the CLP activity that takes place in general hospitals but, in the future, significantly more research is needed. We emphasize the importance of multicenter studies with a systematic data collection that will allow the standardization of CLP procedures and interventions.

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