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Accuracy of Referring Psychiatric Diagnosis

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Abstract:

Background: The author examined the accuracy of the initial psychiatric diagnosis of primary medical providers requesting psychiatric consultation in a medical inpatient setting in a university hospital.

Methods: A retrospective review of 217 consecutive psychiatric consultations was conducted in which the initial diagnostic impression of primary medical providers was compared with the final psychiatric diagnosis.

Results: The accuracy of psychiatric diagnosis was the highest for cognitive disorders 60%, followed by depression 50% and anxiety disorders 46%, whereas the accuracy of diagnosing psychosis was 0%.

Conclusion: Thus, the accuracy of initial diagnoses made by primary medical providers is quite variable. Factors affecting these results are discussed.

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Introduction

The prevalence and seriousness of psychiatric disorders in the general medical setting are well established [1, 2]. It is estimated that between 26.5 and 60% of general medical inpatients suffer psychiatric comorbidity [3-5], and psychiatric comorbidity has been associated with poorer outcomes [6].

There is evidence that despite the broad awareness of the scope of this problem, psychiatric disorders continue to be underdiagnosed and misdiagnosed in the general medical inpatient setting [6].

Studies have examined the accuracy of emergency department physicians' assessment of delirium in the elderly [7-9], the misdiagnosis of delirium in the general medical setting [10-13], and the detection rate of depression in the general hospital and critical care unit [14, 15].

Dilts et al. examined the accuracy of all initial referring diagnoses in patients who were subsequently evaluated by a consulting psychiatrist in the general inpatient setting. They found that the initial diagnoses of a cognitive or substance use disorder by primary medical providers are likely to be accurate, whereas an initial diagnosis of a depressive disorder seems to be inaccurate in approximately half of the cases [6].

Methods

This study was conducted at King Khaled University Hospital in Riyadh. The psychiatric consultation-liaison (CL) service in this center receives requests from different medical and surgical departments. All patients in this consultation-liaison service are examined by board-certified consultant psychiatrists who conduct full psychiatric assessment to determine the diagnosis and make recommendations for treatment. The author performed a retrospective review of all consultation requests throughout a six-month period. The accuracy of the initial diagnostic impression made by the treating teams was calculated and compared with the final psychiatric diagnosis made by the consulting psychiatrist.

Reasons for referrals were classified into 10 categories: (1) depression, (2) behavioral problems, (3) cognitive disorder, (4) anxiety, (5) psychosis, (6) patients who are known to have psychiatric problems or on psychotropic medications and need to be reassessed, (7) uncooperative patients, (8) substance abuse or dependency, (9) suicidal ideation and/or suicidal behavior, and (10) others.

Because most referrals were not for a specific DSM-IV diagnosis, but rather for a general diagnostic category such as "depression" or "psychosis", an initial diagnosis of "depression" was validated if the final diagnosis included major depression, depressive disorder not otherwise specified, or depression secondary to a general medical condition, or the effects of substance use. The same applies for psychosis.

Similarly, an initial diagnosis of a substance use disorder was considered validated if any substance use disorder was found to be the primary diagnosis on the final assessment. Referrals for behavioral problems, uncooperation, or for suicidal behavior were classified in the final diagnosis according to their outcomes. Some patients received multiple final diagnoses. In such cases, the first primary diagnosis was used.

Results

The CL psychiatry service saw 249 patients during the study interval. Among these patients, 32 patients were excluded: 24 patients were known to have a psychiatric diagnosis already and 8 patients had incomplete profiles. Thus, the number of included patients was 217 patients.

Depression was the most frequent reasons in both referral and final psychiatric diagnoses. It accounted for 38% of the referrals and 20% of the psychiatric diagnoses (Table 1).

Table 1. Final psychiatric diagnosis confirmed by CL psychiatrists

Diagnosis	Number	%
Depression	45	20
BAD	11	5
Psychosis	4	1.8
Substance abuse	6	2.8
Adjustment disorder	16	7
Anxiety disorder	25	11
Cognitive disorder	21	10
Personality disorder	37	17
No diagnosis	25	11
Others	26	12

Table 2. Accuracy of diagnosis

Initial impression Number	Final psychiatric diagnosis		Final diagnosis of remaining patients
	Number	%	
Depression 82	41	50	Anxiety disorder (N=7); adjustment disorder (N=10); BAD (N=2); cognitive disorder (N=2); personality disorder (N=16); others (N=4);
Behavioral problems 35			Depression (N=2); BAD (N=4); psychosis (N=2); substance abuse (N=2); anxiety disorder (N=2); cognitive disorder (N=10); Personality disorder (N=6); no diagnosis (N=4); others (N=3)
Cognitive disorder 10	6	60	Psychosis (N=2); BAD (N=1); others (N=1);
Anxiety 24	11	46	Personality disorder (N=9); adjustment disorder (N=3); others (N=1)
Psychosis 5	0	0	Personality disorder (N=1); cognitive disorder (N=2); BAD (N=1); no diagnosis (N=1)
Non cooperation 6			Depression (N=1); adjustment disorder (N=1); personality disorder (N=2); no diagnosis (N=1); others (N=1)
Suicidal behavior 7			BAD (N=1); substance abuse (N=2); personality disorder (N=2); no diagnosis (N=1); others (N=1)
Substance abuse 3	1	33	Personality disorder (N=1); BAD (N=1)
Others 45			Depression (N=1); BAD (N=1); substance abuse (N=1); adjustment disorder (N=2); anxiety disorder (N=5); cognitive disorder (N=1); personality disorder (N=1); no diagnosis (N=18); others (N=15)

The accuracy of psychiatric diagnosis was the highest for cognitive disorders (60%), followed by depression (50%) and anxiety disorders (46%) (Table 2). Although constituting only a small number of referrals, the accuracy of diagnosing psychosis was 0%.

Personality disorder was the final diagnosis in about 20% of the referrals for depression and 38% of the anxiety referrals. Twenty-nine percent of the referrals for behavioral problems were diagnosed with cognitive disorders. Eleven percent of the patients were cleared of psychiatric conditions, and their representation was the highest (40%) in the referrals for “others” reasons.

Discussion

In this study, depression represented a larger percentage of referrals than the final psychiatric diagnosis. This can be explained by the similarity in clinical presentation, especially to non-psychiatric staff between depression and some psychiatric disorders like anxiety and adjustment disorders, since this group of disorders represents 20% of the referrals for depression. The accuracy of diagnosing depression in this study is similar to the findings of Dilts et al. [6]. The disparity between reasons for referrals and final psychiatric diagnoses was also evident in cognitive disorders, where the percentage of the final diagnosis was more than twofold that of the reason for referral. The majority of patients with cognitive disorders were referred for behavioral problems. However, the accuracy of diagnosing these disorders was the highest in this study, confirming that the detection of these disorders is poor [2, 16], but once detected by the treating teams, the likelihood of accurate diagnosis is high. Since delirium is a well-known predictor of mortality, increased length of stay, and increased cost, this failure to accurately detect the prevalence of cognitive disorders has significant implications for patient care [6]. In addition to delays in treating covert general medical problems, poor diagnosis can result in the initiation of inappropriate therapy. On the other hand, Dilts et al. reported 100% accuracy of cognitive disorder in their retrospective study [6].

Given the number of substance-related cases in this study, it is difficult to come up with a conclusion about the accuracy of diagnosing these disorders, although it has been reported to be high [6].

Anxiety disorders constituted 11% of both of the reasons for referrals and the final psychiatric diagnoses. Interestingly, the accuracy of diagnosing those patients was only 46% and the remaining patients were diagnosed to have personality, adjustment, and "other" disorders. It should be noted that the accuracy of diagnosing psychosis as nil could reflect the misuse of this label by some physicians for any patient they would refer to CL psychiatry service. Furthermore, the same thing may apply for suicidality as a reason for referral, since seven patients were referred as suicidal and none of them proved to be suicidal.

It is worth noting that personality disorders were perceived as depression in one fifth of depression referrals and in one third of anxiety referrals. This could reflect the nature of such cases in the way they may present, in addition to comorbidities they could have, which could mislead non-psychiatrists to some extent.

These findings represent a single practice setting, and thus results may not be the same for other centers. Moreover, the retrospective nature of the study may have undermined the researchers' ability to determine what referring providers thought was the initial diagnosis. Also, the final psychiatric diagnosis was not validated by a structured clinical interview.

The accuracy of diagnosis and the ability of detecting psychiatric disorders are important factors in general hospital settings and could have direct implications on patient care, outcome, length of hospital stay, and cost. Thus, future studies should attempt to investigate the accuracy of specific DSM-IV referring diagnoses, and to validate consultation diagnosis by psychiatrists in the general medical setting, with emphasis on the impact of accuracy on cost and outcome.

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