International Journal of Research
Available at https://edupediapublications.org/journals
e-ISSN: 2348-6848
p-ISSN: 2348-795X
Volume 05 Issue 15
May 2018

Holistic Diagnostic Approach: Medical Co-morbidities in Patients with Psychiatric Disorders

Shehla Hina & Dr. Muhammad Iqbal Afridi
[1]5th year MBBS student at Sindh Medical College, Jinnah Sindh Medical University, Karachi
Address: G-177 Block-2, PECHS, Karachi.
Email ID: shelley444u@gmail.com;
Mobile number: 03312111780
[2]Professor and Head, Department of Psychiatry and Behavioral Sciences, Jinnah Postgraduate Medical Centre (JPMC) Karachi

UNDERTAKING:

The whole manuscript is reviewed and approved by all investigators and there is not any conflict of interest between us. This whole study or any part of manuscript is never sent for any publication. Our study also includes three table and we are going to bear the cost of its publication if any. This study has been ethically approved by the Pakistan ethical committee and Institutional Review Board (I.R.B).

IMPORTANCE OF ARTICLE:

Our study focuses on the diagnosis of underlying medical co-morbidities by a holistic diagnostic approach in psychiatric patients. It can help physicians and patients recognize common medical co-morbidities in such patients to implement a better diagnostic and treatment plan and reduce the incidence of missed/inadequate diagnosis in our society.

The International Journal of Research (IJR) is well-known for its high standard and authenticity, which attracts people involved in all lines of medical profession to submit their research articles to it. Furthermore, publication in a recognized journal is both a source of honor, dignity and produces positive results in professional future.

WORD COUNT:

ABSTRACT: 236 words including Mesh words.

MAIN ARTICLE: 2597 Words

UNDERTAKING:

I, SHEHLA HINA, and my below mentioned colleague are submitting our original research titled "Holistic Diagnostic Approach: Medical Co-morbidities in Patients with Psychiatric Disorders" to the International Journal of Research for publication.

We agree that upon acceptance by

International Journal of Research, all copyright ownership for the article is transferred to the journal. We, the co-authors of this article, have contributed significantly to and share in the responsibility for above. The stipulate shows that the material submitted to this journal is new, original and has not been submitted to another publication for concurrent consideration.

The editors of International Journal of Research have the right to suggest changes, hold or reject from publication at any stage. The editor also holds the right to retract any article on account of ethical misconduct after the printing of any article.

We also attest that any human and /or animal studies undertaken as part of the research from which this manuscript was derived are in compliance with regulation of our institution and with generally accepted guidelines governing such work.

We further attest that we have herein disclosed any and all financial or other relationships which could be construed as a conflict of interest and that all sources of financial support for this study have been disclosed and are indicated in the acknowledgement.

Yours' sincerely,
SHEHLA HINA and the co-author.

ABSTRACT:

Objective: *To study incidence and nature of medical co-morbidities in mentally ill patients presenting to the psychiatric clinic in Karachi by adopting a holistic approach for diagnosis* ***Method****: This is an observational and cross sectional study conducted at a psychiatric clinic in Karachi, Pakistan. All consecutive patients who satisfied the inclusion and exclusion criteria were assessed with clinical and laboratory investigations for one or more diseases after presenting to the clinic. The diagnostic criteria used were based on ICD-10 guidelines. Consultation from specialized fields was also taken as per requirement. The data was collected on Microsoft Excel 2007.* ***Results****: Out of 5126 patients presenting to the clinic, 4231 (82. 5%) psychiatric patients were found to have a concurrent medical disease alongside their mental illness. Hypertension, obesity, menopausal disorder and epilepsy were the most common medical co-morbidities found in such patients. Hypertension is particularly higher in patients with depression, phobia and OCD. Incidence of self injury was found in 1 in every 10 individuals with conversion disorder.* ***Conclusion****: Majority of mentally ill patients*

presenting in psychiatry clinic have a co-morbid medical disease. Special attention should be paid to detect hypertension and obesity, the two most common co-morbidities found in psychiatric patients in both genders. One should be aware of common medical diseases in psychiatry to implement a better diagnostic and treatment plan for patients.

MesH words: Holistic diagnosis; ICD-10; Co-morbidity; psychiatric patients; liaison psychiatry

Introduction:

The burden of mental illness is growing rapidly in Pakistan along with rest of the world.[1] A sound mind is a sign of healthy body whereas if mind is not working properly, it impacts the whole body and its function significantly. Mental health problems cause people to experience a baffling array of emotional, cognitive and behavioral disorders that deteriorates their physical health, resulting in cardiovascular, endocrine, respiratory and other systemic complications, while patient remains unaware of undergoing maladies. [2] Various studies have shown that many physical diseases present with fundamental psychological and mental health issues which complicate and contribute to the primary disease and retard the process of healing.[3] [4] In the same way, many psychiatric problems also have underlying physical problems which develop either as their original cause or as by-product of the psychological condition.[5-8] For instance, studies have shown that during long term psychological stress, body immunity and resistance to diseases is reduced significantly and can manifest signs of severe physical problems in body.[9] Frequent marginalization of mentally ill people from general medicine has led to massive problems in provision of healthcare to the people. There's growing literature that supports the integration of psychiatric and medical disciplines of health care system to counter the difficulties in patient care.[10] [11]

Holistic medicine, frequently named as Integrative medicine, is gaining importance worldwide because of its wider therapeutic benefits. American Holistic Medicine Association, founded in 1978, (later known as, Academy of Integrative Health and Medicine AIHM) defined "Holistic Medicine" as the science of healing that addresses the body, mind, and spirit of a person and incorporates the conventional and alternative therapies to prevent and cure the disease and most importantly, achieve optimal health.

In this study, 4231 (82. 5%) of the mentally ill individuals who came to the clinic were found to have a medical co-morbidity alongside their mental illness. Co-morbid illness, whether mental or physical, if not properly diagnosed and treated, can complicate the management of the primary disease, resulting in mortality of the patient. [12]

Development of physical debilities in psychiatric patients can be attributed to poor lifestyle, side effects to psychotropic drugs, stigma related to mental diseases, disparate provision of medical facilities to the patients especially in under developed areas, as well as separation of mental patients from rest of the health care system.[13] A high rate of mortality and morbidity in psychiatric patients, as compared to the general population, indicate that mentally ill patients are more vulnerable to physical illness. [14] -[17] A complex inter-relation is present between human mind and body which, if disturbed, leads to development of co-morbidity.

In view of the above facts, this study was conducted. The aim and objective of this study is to emphasize the extent of underlying, associated or additional co-morbidities present in psychiatric patients in the clinical setting. It also evaluates the psychiatric patients for organic or non organic illnesses underlying their known condition which may or may not contribute to their symptoms. All the essential procedures were adopted during medical assessment of patients to reach a precise diagnosis. In other words, a complete holistic approach was adopted in each case to give a comprehensive result.

Material and methods:

This observational and cross-sectional study was conducted at a reputable private psychiatric clinic of Karachi. 5126 consecutive patients of either sex presented in the clinical setting over a period of 6 years, from 1st January 2011 to 1st December 2016. All consecutive patients were evaluated for any existing medical co-morbidity alongside their mental illness. The patients who satisfied the inclusion and exclusion criteria were involved as a sample in this study and selection bias was avoided. Inclusion criteria for study contain all the child and adult consecutive patients of both genders between the age of 2 to 82 years who were diagnosed with a medical disease after thorough evaluation at the clinic. The patients who were assessed but were clear of any medical disease were excluded from the study.

A Performa was designed on Microsoft Office Excel 2007 to collect and document the psychiatric and clinical data of each patient. It contains two sections; one section includes bio data containing name (as optional), gender, age and ethnicity of the patient, while the other section documented the history, modes of assessment, laboratory tests, follow ups and psychiatric and medical diagnosis of the patient. Approval from Pakistan ethical committee and Institutional Review Board (I.R.B) was obtained to conduct this research. Informed consent from patients and patient advocates/sitters was taken at the time of presentation to the clinic after explaining the purpose of the study. The diagnosis of psychiatric illness was made by use of ICD-10 classification by our consultant psychiatrist.

The methods of assessments of medical co-morbidities include thorough clinical examination, individuals past medical history, physical examination, mental status examination, blood pressure, body mass index and weight. In some cases, chest X-ray, echocardiography, electroencephalography or brain imagining was carried out as suggested by the consultants to reach a conclusive diagnosis. Samples for routine laboratory investigations were sent whenever further evaluation was required. They included blood tests such as random blood sugars, complete blood count, liver function test, lipid profile and thyroid function test. All the diagnoses of co-morbid medical diseases were confirmed by consultants from general medicine or endocrinology. Appropriate statistical methods were used to analyze the results.

Results:

In this study, 2834 (67%) individuals were males and 1397 (33%) individuals were females out of 4231 individuals that were included in the study. They were between the age of 2 to 82 years with mean $\pm$SD = 31.74 $\pm$ 13.5.

This study shows that the most common medical co-morbidity found in psychiatric patients is hypertension affecting 652 (15.4%) out of 4321 patients with co-morbid illness. Hypertension is followed by obesity which affects 583 (13.8%) patients, while menopausal disorder, epilepsy and chronic sinusitis is found in 320 (7.6%), 291 (6. 9%) and 288 (6.8%) patients with co-morbidity respectively. Other medical co-morbidities, like diabetes mellitus is found in 254 (6%) patients, vitamin D deficiency is noted in 196 (4.6%) patients and self-harm is seen in 114 (2.7%) patients **(TABLE I).**

The data is also analyzed for common medical co-morbidities found in specific psychiatric disorders. The results of this study indicate that hypertension is particularly higher in patients with depression, phobia and OCD than in other psychiatric disorders. Similarly, obesity, epilepsy, menopausal disorder, chronic sinusitis, diabetes mellitus, Vitamin D deficiency and deliberate self harm are also prevalent in such patients **(TABLE II).**

Our data shows that hypertension is affecting 13.7% patients with depression, 12.4% patients with phobia, 10.5% patients with obsessive compulsive disorder and 2.2% patients with conversion and dissociative disorder. Incidence of self injury is found in 1 in every 10 individuals with conversion and dissociative disorder. Out of 104 patients of self injury, more than half (62.3%) individuals suffer from conversion and dissociative disorder. It is followed by phobic disorder

(17.5%), depression (8.8%), and obsessive compulsive disorder (2.6%). **(TABLE III)**

Discussion

As medical co-morbidities are highly prevalent in patients with psychiatric disorders world-wide, a lot of work has been done on it in different populations.

A study conducted on a sample of 100 patients in Mangalore, India shows that 49% of psychiatric in-patients had medical co-morbidities [18], while on the other hand our study shows that 82.5% patients who came to the psychiatric clinic had one or more medical co-morbidity associated with their main complaint. Our study includes a larger population of patients and gives a good outlook of the condition of psychiatric patients.

The results of this study indicate a high prevalence of co-morbidity among the patients with psychiatric diseases. The most frequent medical co-morbidity found in psychiatric patients (classified according to ICD-10 guidelines) is hypertension, followed by obesity, menopausal disorder, epilepsy, chronic sinusitis, diabetes mellitus, vitamin D deficiency and deliberate self harm. Nearly one in every 7 patients presenting at psychiatric clinic suffer from hypertension. This adds support to the early detection and management of hypertension in psychiatric patients. [19]

The presence of medical co-morbidity in psychiatric patients may be due to low physical therapeutic opportunities among psychiatric patients in healthcare system. [20] Other studies have shown that preventive medical care and screening among psychiatric patients is often lower in quality and lesser utilized as compared to the individuals with no comparable mental disorder [21-23]. This calls for more attention paid to the monitoring of physical health in psychiatric patients.

One study conducted at University of Virginia shows that women in menopausal transition are at high-risk for depressive disorders and should be screened to detect the problem in early stages. [24] This finding is further proved by our study which shows that a large number of menopausal patients (62.3%) are suffering from depression. It recognizes the importance of routine screening followed by careful assessment for depression in menopausal women.

In our study we found that 1 in every 10 individuals with conversion and dissociative disorder shows signs of deliberate self harm, therefore, we suggest that deliberate self harm is a prominent risk factor in conversion and dissociative disorder.

A study conducted at Emory University School of Medicine, Atlanta shows that mentally ill patients are 50% more likely to be overweight due to their unhealthy lifestyle and lassitude [25], in contrast to our study which shows that obesity is prevalent among 13.8% of psychiatric patients, being most common in depression.

In our study, 261 epilepsy patients presented to clinic that were evaluated thoroughly for this disease. 57% of epilepsy patients were found to have depression, 20% are diagnosed with phobic disorder, and 18% had some degree of mental retardation. These results provide additional support for the previous studies which emphasize the need for better recognition and diagnosis of mental disorders in epileptic patients.[26 27]

This observational and cross-sectional study has certain limitations. The study is carried out over a period of 6 years on the patients who presented to the setting to seek help. It does not represent the general population of psychiatric patients. However, these findings might still be helpful in diagnosing such patients with medical co-morbidities. The procedure of assessment of medical co-morbidity was cost-limited and hence bias is possible. The connections between side-effects of medication and medical co-morbidity were not assessed during this study. A better methodology is required to draw more definite findings.

Conclusion

Majority of the patients presenting in psychiatric clinic (82. 5%) have one or more medical co-morbidity alongside their mental illness. A holistic approach that encompasses the physical and mental aspects of

patient health should be adopted for timely diagnosis and cost-effective therapeutic results. Special attention should be paid to hypertension, obesity, menopausal disorder and epilepsy, the most common co-morbidities found in psychiatric patients for early detection and assessment. It should be noted that hypertension is particularly higher in patients with depression, phobia and OCD than other psychiatric disorders.

This investigation is one of few studies that have recorded the frequency of medical co-morbidities in specific psychiatric diseases. It will help to recognize the medical co-morbidities commonly found in specific psychiatric disorders, overcome the incidence of inadequate/missed diagnosis and implement a better diagnostic and treatment program for psychiatric patients in the future by allowing a more appropriate selection of medicines with lesser side effect profile and drug-drug interaction and improve the prognosis, time of follow ups and other non pharmacological management techniques. Understanding the role played by these co-morbid diseases in the pathogenesis of mental illness is a crucial aspect of medical science and should be studied in more detail to provide better clinical outcomes.

TABLE I

Medical Comorbidities in Patients

ICD-10 Classification	MEDICAL COMORBIDITIES	No. of diagnosis	Frequency
I10	Essential Hypertension	652	15.4%
E66	Obesity	583	13.8%
N95.1	Menopausal disorder	320	7.6%
G40	Epilepsy	291	6.9%
J32	Sinusitis Chronic	288	6.8%
E11	Diaetes Mellitus	254	6.0%
E55.9	Vitamin-D Deficiency	196	4.6%
X69	Deliberate Self Harm by Chemicals or Unspecified Substances	114	2.7%
D50	Anemia	88	2.1%
E05.90	Hyperthyroidism	73	1.7%
G43	Migraine	68	1.6%
G21	Secondary Parkinsonism	67	1.6%
N39.0	Urinary Tract Infection	59	1.4%
N46	Male Infertility	58	1.4%
N97	Female Infertility	57	1.3%
I26	Pulmonary Embolism	54	1.3%
S02	Head Injury	52	1.2%
R45.851	Suicidal tendency	47	1.1%
J45.901	Asthma	40	0.9%
J22	Acute Respiratory Tract Infection - Lower	38	0.9%
B18	Viral Hepatitis - Chronic	37	0.9%

R63.6	Underweight	34	0.8%
E03.9	Hypothyroidism	27	0.6%
I25	Chronic Ischemic Heart Disease	25	0.6%
H81.09	Meniere's disease	23	0.5%
J34.2	Deviated Nasal Septum (DNS)	21	0.5%
	Other Less Frequent Co-morbidities	665	15.7%

Total no. medical diagnosis	4231
Total no. patients with comorbidity	4231

TABLE II

MEDICAL CO-MORBIDITIES IN SPECIFIC PSYCHIATRIC DISORDERS

	Common Medical Co-morbidities Found in Psychiatric Disorders							
Psychiatric Disorders	Hyper-tension (HTN)	Obesity	Epilepsy	Meno-pause	Sinusitis Chronic	Diabetes Mellitus	Vit-D Deficiency	Deliberate Self Harm
Depression	365	236	149	209	169	144	75	10
OCD	159	117	8	53	52	52	47	3
Agoraphobia	93	62	20	23	41	26	17	20
Conversion Disorder	8	40	18	14	22	2	15	71
Other psychiatric disorders	27	128	7	21	4	30	42	10

TABLE III

% FREQUENCY OF MEDICAL CO-MORBIDITIES IN SPECIFIC PSYCHIATRIC DISORDERS

Frequency of Medical Co-morbidities in Psychiatric Disorders

Psychiatric Disorders	Hyper-tension %	Obesity %	Epilepsy %	Meno-pause %	Sinusitis Chronic %	Diabetes Mellitus %	Vit D3 Deficiency %	Deliberate Self Harm %
Depression	13.7%	8.9%	5.6%	7.8%	6.3%	5.4%	2.8%	0.4%
OCD	10.5%	7.8%	0.5%	3.5%	3.4%	3.4%	3.1%	0.2%
Agoraphobia	12.4%	8.3%	2.7%	3.1%	5.5%	3.5%	2.3%	2.7%
Conversion Disorder	2.2%	11.0%	5.0%	3.9%	6.1%	0.6%	4.1%	19.6%

Funding:

This research did not receive any grant from funding agencies in the public, commercial, or not-for-profit sections.

Acknowledgement:

I'd like to acknowledge and thank Dr. Rida from Psychiatry Department for giving reviews on this paper.

References

[1]. Mumford D, Minhas F, Akhtar I, Akhter S, Mubbashar M. Stress and psychiatric disorder in urban Rawalpindi. Br. J. Psychiatry. 2000;177(06):557-562.

[2]. Lawrence D, Holman CDJ, Jablonski AV. Preventable physical illness in people with mental illness. Perth: the University of Western Australia. 2001

[3]. Matcham F, Rayner L, Steer S, Hotopf M. The prevalence of depression in rheumatoid arthritis: a systematic review and meta-analysis. J. Rheumatol. 2013;52(12):2136-2148.

[4]. Webb R. Suicide Risk in Primary Care Patients With Major Physical Diseases. Archives of general Psychiatry. 2012;69(3):256.

[5]. Sartorius N. Physical illness in people with mental disorders. World Psychiatry. 2007;6(1):3-4.

[6]. Maj M. Physical health care in persons with severe mental illness: a public health and ethical priority. World Psychiatry. 2009;8(1):1-2.

[7]. De Hert M, Correll C, Bobes J, Cetkovich-Bakmas M, Cohen D, Asai I et al. Physical illness in patients with severe mental disorders. I. Prevalence, impact of medications and disparities in health care. World Psychiatry. 2011;10(1):52-77.

[8]. McFarlene AC. The long-term costs of traumatic stress: intertwined physical and psychological consequences. World Psychiatry. 2010;9(1):3-10.

[9]. Salleh MR. Life Event, Stress and Illness. MJMS. 2008;15(4):9-18.

[10]. The Lancet. No mental health without physical health. The Lancet. 2011;377(9766):611.

[11]. Shefer G, Cross S, Howard L, Murray J, Thornicroft G, Henderson C. Improving the diagnosis of physical illness in patients with mental illness who present in Emergency Departments: Consensus study. J. Psychosom. Res. 2015;78(4):346-351.

[12]. Lawrence David, Hancock Kirsten J, Kisely Stephen. The gap in life expectancy from preventable physical illness in psychiatric patients in Western Australia: retrospective analysis of population based registers. BMJ. 2013;346:f2539

[13]. Lawrence D, Kisely S. Review: Inequalities in healthcare provision for people with severe mental illness. J. Psychopharmacol. 2010;24(4_suppl):61-68.

[14]. Tidemalm D, Waern M, Stefansson C-G, Elofsson S, Runeson B. Excess mortality in persons with severe mental disorder in Sweden: a cohort study of 12 103 individuals with and without contact with psychiatric services. Clinical Practice and Epidemiology in Mental Health : CP & EMH. 2008;4:23.

[15]. Roshanaei-Moghaddam B, Katon W. Premature mortality from general medical illnesses among persons with bipolar disorder: A Review. Psychiatr. Serv. 2009;60(2).

[16]. Russ TC, Stamatakis E, Hamer M, Starr JM, Kivimäki M, Batty GD. Association between psychological distress and mortality: individual participant pooled analysis of 10 prospective cohort studies. BMJ. 2012 Jul 31.345:e4933.

[17]. Javed Latoo, Minal Mistry and Francis J Dunne. Physical morbidity and mortality in people with mental illness. Br. J. Med. Pract. 2013; 6(3): A621

[18]. Mathai P, Rao P, Rebello P, Safeekh A, Manuel C. Medical comorbidity in in-patients with psychiatric *disorder*. Muller J. Med. Sci. Res. 2013;4(1):12

[19]. Chaturvedi SK, Michael A. Hypertension in psychiatric Patients. Indian J. Psychiatry. 1986;28(1):55-57.

[20]. Compton M, Daumit G, Druss B. Cigarette smoking and overweight/obesity among individuals with serious mental illnesses: A preventive perspective. Harv. Rev. Psychiatry. 2006;14(4):212-222.

[21]. Lord O, Malone D, Mitchell A. Receipt of preventive medical care and medical screening for patients with mental illness: a comparative analysis. Gen. Hosp. Psychiatry. 2010;32(5):519-543.

[22]. Xiong GL, Iosif A-M, Bermudes RA, McCarron RM, Hales RE. Preventive medical services use among community mental health patients with severe mental illness:The influence of gender and insurance coverage. Prim. Care Companion J. Clin. Psychiatry. 2010;12(5):PCC.09m00927. doi:10.4088/PCC.09m00927gre.

[23]. Mitchell A, Malone D, Doebbeling C. Quality of medical care for people with and without comorbid mental illness and substance misuse: systematic review of comparative studies. Br. J. Psychiatry. 2009;194(06):491-499.

[24]. Clayton AH, Ninan PT. Depression or Menopause? Presentation and Management of Major Depressive Disorder in Perimenopausal and Postmenopausal Women. Prim. Care Companion J. Clin. Psychiatry. 2010;12(1):PCC.08r00747. doi:10.4088/PCC.08r00747blu.

[25]. Compton M, Daumit G, Druss B. Cigarette Smoking and Overweight/Obesity Among Individuals with Serious Mental Illnesses: A Preventive Perspective. Harv. Rev. Psychiatry. 2006;14(4):212-222.

[26]. Devinsky O. Psychiatric comorbidity in patients with epilepsy: implications for diagnosis and treatment. Epilepsy Behav. 2003;4:2-10.

[27]. Swinkels W, Kuyk J, Dyck R, Spinhoven P. Psychiatric comorbidity in epilepsy. Epilepsy Behav. 2005;7(1):37-50.