

Comorbidity of Substance Abuse

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75 addicts and 100 non-addictive psychiatric male patients (control group), were randomly selected and interviewed repetitively before during & after hospitalization, and only 68 addicts and 88 psychiatric control group fulfilled our inclusive criteria. We performed a semistructured interview and they were diagnosed according to DSM-IV criteria. Serological studies for HIV and HCV were compared between the two groups. Results suggest the correlation between substance abuse and different psychiatric disorders such as anxiety disorders, mood disorders, schizophrenia and other psychotic disorders both as an etiology to, or a result of addiction. It proved also exhibited the significant relation between personality disorders, borderline, antisocial and dependent types and substance abuse. Suicide was found to be as high as among other psychotic patients. Serological tests showed high prevalence of HCV infection among addicts whether injectors or non-injectors. HIV test was negative in all our cases. Education and preventive measures are advised and good psychiatric diagnosis of cases of substance abuse is recommended for better management and better prognosis.

(Egypt.J.Psychiat., 1996, 19: 21-32).

Introduction

Dual diagnosis refers to the occurrence of two separate entities in one person in the area of substance abuse. This means that a substance abuse disorder occurs together with a psychiatric disorder (Slaby 1991).

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Recent epidemiological studies have revealed that comorbidity of psychiatric disorders is far more pervasive than previously suspected (Breslan 1995).

Strakowski et al (1993), determined the prevalence and effects of medical and psychiatric comorbidity on initial outcome in a group of patients experiencing a first episode of psychosis. They found that the most common comorbid diagnosis was substance abuse.

Deykin and co-workers (1992) reported that the prevalence of depressive illness in the chemically dependent adolescent was approximately three times that reported for non referred groups of similar age.

Kokkevi and Stefanis (1995), found a strong association between opiate dependence and depression in 71.5% and also

suicidal attempts in 27.4% They found psychiatric disorders to precede drug dependence in the majority of cases.

DuPont (1995), stated that substance use disorders and anxiety disorders are often combined, undiagnosed and poorly treated.

Oldham et al (1995), studied the patterns of axis I and axis II comorbidity according to DSM-III-R, they found a significant relation between psychoactive substance use disorders and borderline and histrionic personality disorders.

Grilo et al (1995), in a study to assess DSM-III-R, Axis I and Axis II, co-occurrence and comorbidity in adolescence in-patients with substance use disorders (SUD), found that anxiety disorders were diagnosed less frequently in SUD group, on the other hand personality disorders and borderline personality disorder were diagnosed more frequently in SUD group.

Axis II diagnosis has considerable value in assessment, treatment planning and prognosis, finally future research may clarify the relationship between biochemical, genetic and personality factors in addiction (Millman et al 1995).

Perry and Cooper (1985), conducted a study of a large number of borderline and anti-social personality disorder (ASD) patients and found that 92% were drug dependent.

Borderline personality disorder are high risk group of substance abuse showing more depression, poor impulse control, impaired reality testing and anti-social tendencies (Inman et al 1988). Approximately 21-39% of patients with substance abuse and diagnosed concurrently personality disorder, affective illness or psychosis are problematic after demand irregular discharge from hospitals and are seen in emergency room after that (Kosten 1986)

Nace et al (1991), found that 57% of alcohol and drug abusers diagnosed are as personality disorder.

Ross (1995), found antisocial personality disorder to be very high among individuals with an alcohol disorder compared to those without, He found also that alcohol dependents, but not alcohol abusers have more odds of mood and anxiety disorders compared to individuals without an alcohol disorder.

Regeier et al (1990), found substance abuse to be the most prevalent comorbid psychiatric condition with schizophrenia.

Psycho-stimulants include cocaine and dextroamphetamine, cause manic disorder and frank paranoia and depression after cessation of use (Beeder and Millman 1992). Use of stimulants contributes to relapses in schizophrenia (Shaner et al 1993).

Weiss et al (1986), reported that the most common concurrent psychiatric illness with cocaine abuse is affective illness.

Bruce et al (1991) found that the rate of psychiatric disorders among cocaine abusers were 55.7% met current and 73.5% met lifetime criteria for a psychiatric disorders after than a substance use disorder.

Newman et al (1990), studied the extent of polysubstance in admission to specialized eating disorders treatment unit, they found 38.2% of cases had a dual diagnosis of an eating disorder and substance abuse

Suicidal death among addicts is as high as 11 - 20 times that of general population, between 7 - 27% of all death in alcoholic are by suicide (Stienberg 1992).

Numerous recent reports have provided convincing evidence for the association of deleterious myocardial events and

heroin abuse (Lan and Goldschlager 1988).

Schwartzfarb et al (1977), stated that most of the previous studies on heroin addiction were concerned with the acute cardiovascular effects of the drug as acute heart failure with pulmonary oedema and acute non traumatic rhabdomyolysis, on the other hand, Azmey et al (1994), in their study on 110 male heroin addicts in Egypt, found that ischemic ECG changes as well as enzymatic changes were significantly present as a chronic consequences.

Merion et al. (1994), stated that among the non-A, non-B hepatitis, only hepatitis C (HCV) is exclusively of parenteral transmission. They assessed risk factors such as history of major surgery, transfusions and drug addiction, they found that only major surgery was associated with sero-positivity and it was not possible to exclude hemotransfusion during surgery as a risk factor.

Dand et al. (1994), stated that transmission of HCV predominantly occurs parentally, mainly as a result of blood transfusion, exposure to blood, or accidental contact with contaminated medical equipment. They stated also that sexual transmission is recently considered to be an additional potential mode of spread.

In Europe and the USA, HCV antibody positive cases is generally reported to be up to 77% in drug users. HCV infections are known to be common in injectable drug cases (Wood Field et al 1994).

Lima et al. (1994), in a study to determine risk factors for HIV among drug injectors in Rio de Janero, found that homosexual / bisexual male drug injectors may be a bridge group through which HIV is entering drug injecting networks.

Ronald et al. (1994), found that continued drug use may accelerate progres-

sion to AIDS. This study was designed to investigate comorbid psychiatric diagnoses and the serological status of patients with substance abuse in comparison to nonabusive psychiatric patients.

Aim of the work

This study aimed at finding out the relation between substance abuse and different psychiatric as well as physical disorders and clarifying the correlation between pattern of addiction and its hazards, sequel and consequences in our culture.

Subjects and Methods

75 addicts and 100 non-addictive psychiatric male patients (control group), who attended outpatient clinic and were referred to El-Khankaa hospital for mental health and El-Abbasia hospital for mental health and whose average stay in hospital was from 3 weeks to 6 months, in the period from 1992 to 1994, were randomly selected and were examined to fulfill the following inclusive criteria:

- All were male cases with similar socio-economic level.
- Age between 15 and 40 years.
- Duration of illness more than one year.
- Agreed to accept psychiatric examination and to be investigated for Human Immuno-deficiency Virus (HIV) and Hepatitis C Virus (HCV).

Seven addicts and twelve psychiatric patients were excluded as they were not fulfilling the inclusive criteria.

The 68 addicts and 88 psychiatric control group were interviewed repetitively by the psychiatric team before, during and after hospitalization. Diagnosis according to DSM-IV was confirmed. For the group of addicts, the diagnosis of psychiatric disorders was added to the diagnosis of substance related disorder, to find out the duality in diagnosis.

A semi-structured interview was used to assess the substance of abuse, the onset, course and duration of addiction, family history of psychiatric disorders, physical problems, legal problems, reasons for abusing drugs, any previous trial for treatment, relapse, and cause of relapse, history of sexual inclination and practice, including heterosexual and homosexual relations, any changes or difficulty in sexual life, premorbid personality, together with physical and mental state examination.

Blood sample was taken from all addicts and from 35 non addictive control group and serum samples were tested for:

* **Anti HCV antibodies** by AB-BOTT HCV EIA (Enzyme Immuno Essay) second generation Kits using 100 HCV (r DNA) (E. Coli, yeast) antigen coated beads. The presence or absence of anti-HCV was determined by comparing

the absorbency of the specimen to a cut-off value. Samples with absorbency values equal or greater than the cut-off value were considered positive. Samples with absorbency values less than the cut-off value were considered negative.

* **Anti HIV antibodies** were tested for by Enzygnost ANTI-HIV microkit. The presence or absence of anti HIV-Ab was determined by multiplying the mean absorbency of negative control serum by 0.5 to determine the cut-off value. Samples with absorbency above the cut-off value are negative. Samples whose absorbency is equal to or below the cut-off value are positive.

Comparison between the two groups, of addicts and non addictive psychiatric cases, took place regarding the diagnosis on different axes of DSM-IV.

Results

Table (1)
Distribution of Cases of Substance Related Disorders
According to the Abused Substance and in Relation to Age Group

Substance	Teenagers (No.= 12)		Adults (No.= 56)		Z	P
	No	%	No	%		
1- Alcohol	0	0	2	3.571	0.664	> 0.05
2- Amphetamine and Amphetamine like	0	0	3	5.35	0.820	> 0.05
3- Cannabis	0	0	1	1.78	0.466	> 0.05
4- Inhalant	3	25	0	0	3.827	< 0.01
5- Opioid	2	16.66	6	10.71	0.581	> 0.05
6- Sedatives, hypnotic and anxiolytic	1	8.33	2	3.57	3.57	> 0.05
7- Polysubstance	6	50	42	75	1.725	< 0.05
Total	12	100	56	100		

Table (2)
Distribution of Cases of Substance Related Disorders
According to the Method of Intake of Drugs and Other Substances

Substance	Teenagers (No.= 12)		Adults (No.= 56)		Z	P
	No	%	No	%		
1- Ingestion	3	25	4	7.14	1.847	> 0.05
2- Inhalation	3	25	2	3.57	2.581	< 0.01
3- Injection	0	0	7	12.50	1.293	< 0.05
4- Smoking	0	0	1	1.78	0.466	> 0.05
5- More than one method	6	50	42	75	1.725	< 0.05
Total	12	100	56	100		

Table (3)
Distribution of Cases of Substance Related Disorders (S.R.D.) and
Psychiatric Disorders on Axis I of DSM- IV

Substance	Addicts (No.= 68)		Psychiatric patients (No. = 88)		Z	P
	No	%	No	%		
1- Delirium, dementia and amnesic and other cognitive disorders	1	1.47	1	1.13	0.184	>0.05
2- Schizophrenia and other psychotic disorders	17	25	42	47.72	2.903	<0.001
3- Mood disorders	30	44.11	44	50	0.730	>0.05
4- Anxiety disorders	19	27.9	0	0	5.291	<0.001
5- Sexual and gender identity disorder	12	17.64	18	20.45	0.441	>0.05
6- Sleep disorders	20	29.4	28	31.8	0.323	>0.05

Table (4)
Distribution of Cases of Substance Related Disorders (S.R.D.) and Psychiatric
Disorders on Axis I Schizophrenia and Other Psychotic Disorders

	S.R.D (No.= 17)		Psychiatric dis (No.= 42)		Z	P
	No	%	No	%		
1-Schizophreniform dis.	1	5.88	23	54.76	3.408	<0.05
2-Schizo-affective dis.	1	3.57	5	11.90	1.22	>0.05
3-Delusional dis.	2	7.14	12	28.57	2.96	>0.05
4-Brief psychotic dis.	1	5.88	2	4.76	0.177	>0.05
5-Subs. induced psychotic dis.	12	70.59	0	0	6.101	<0.001

Table (5)
Distribution of Cases of (S.R.D.) and Psychiatric Disorders on Axis I Mood Disorders

	S.R.D (No.= 17)		Psychiatric dis (No.= 42)		Z	P
	No	%	No	%		
1-Bipolar disorders	1	3.33	23	52.27	4.415	<0.01
2-Depression dis:						
Major dep. dis	4	13.33	21	47.22	3.071	<0.05
Dysthymic dep.	6	20	0	0	3.095	<0.05
3-Substance induced mood dis.	19	63.33	0	0	6.123	<0.01

Table (6)
Distribution of Cases of S.R.D and Psychiatric Dis. on Axis II of DSM-IV Personality Disorders (P.D.)

	Addicts (No.= 68)		Psychiatric dis (No.= 88)		Z	P
	No	%	No	%		
1- Paranoid P.D.	0	0	12	13.63	3.169	<0.001
2-Schizoid P.D.	2	2.94	19	21.59	3.384	<0.01
3-Schizotypal P.D.	0	0	1	1.13	0.882	>0.05
4-Antisocial P.D.	36	52.94	6	6.81	6.44	<0.001
5-Borderline P.D.	19	27.94	8	9.09	3.086	<0.001
6-Histrionic P.D.	2	2.94	1	1.13	0.814	>0.05
7-Narcissistic P.D.	0	0	2	2.27	1.251	>0.05
8- Avoidant P.D.	3	4.41	3	3.4	0.3230	>0.05
9-Dependent P.D.	4	5.88	1	1.13	1.669	>0.05
10-Obsessive compulsive P.D.	0	0	4	4.54	1.781	>0.05
11-P.D. not otherwise specified	2	2.94	6	6.81	1.089	>0.05
Total	68	100	88	100		

Table (7)
Distribution of Cases of S.R.D and Psychiatric Dis. on Axis III of DSM III Physical Complications

	Addicts (No.= 68)		Psychiatric dis (No.= 88)		Z	P
	No	%	No	%		
1-Ischemic heart dis.	2	2.94	3	3.4	0.165	>0.05
2-Epilepsy	2	2.94	0	0	1.619	<0.05
3-Peripheral neuritis	1	1.47	0	0	1.141	>0.05
4-Peptic ulcer	1	1.47	0	0	1.141	>0.05
5-Splenic abcess	1	1.47	0	0	1.141	>0.05
6-Liver cirrhosis	1	1.47	40	4.54	1.081	>0.05
7-Gastritis	1	1.47	3	3.4	0.760	>0.05

Table (8)
Prevalence of Hepatitis C Virus (HCV) Infection Among Drug Injectors (addicts)

	+ ve for HCV		-ve for HCV		Z	P
	No	%	No	%		
1-Addicts (injectors) No = 23	15	65.2	8	34.8	1.201	>0.05
2-Addicts (non injectors) No = 45	15	33.3	30	66.7		
Total	30	44.12	38	55.88		

Table (9)
Prevalence of Hepatitis C Virus (HCV) Infection Among Drug Injectors (addicts) and Control Group

	+ ve for HCV		-ve for HCV		Z	P
	No	%	No	%		
1-Addicts (injectors) No = 23	15	65.22	8	34.78	3.472	<0.001
Control No = 35	7	20	28	80		
2-Addicts (non injectors) No = 45	15	33.33	30	66.67	1.325	<0.05
Control No = 35	7	20	28	80		
3- All addicts No = 68	30	44.12	38	55.88	2.416	<0.001
Control No = 35	7	20	28	80		

Discussion

In our study we found that among our group of substance abusers 17.65% were teenagers. 25% of these teenagers were found abusing inhalants mainly glue (table1) statistically the difference was found significant when compared to method of intake in adult group. On the other hand 75% of adult group were found to be polysubstance dependent, the difference was found to be statistically significant (table1). These results showed that the majority of addicts in our culture were found to be polysubstance dependent (table 2) this could explain why polysubstance dependency was found to be much more prevailing among adults. Polysubstance dependence means, behavior during the same 12 month period in which the person was repeatedly using at least three groups of

substances (not including caffeine and nicotine), and no single substance predominated. (DSM-IV, 1994).

Among the adult group 12.5% were found to be only injecting drugs, 75% using more than one method. On the other hand 50% of teenagers were using more than one method and non of them was injecting drugs.

Coming to axis 1 diagnosis, we didn't find significant difference between both groups of substance abuse (S.A.) and psychiatric disorders (P.D.), in general (table 3). Such results prove the prevalence of psychiatric disorders almost to the same extent like among psychiatric patients, a result that came in accordance with that of Breslau (1995), who found

that comorbidity of psychiatric disorders is more prevailing among addicts than was previously suspected. However, only anxiety disorders were found to be significantly higher among our addictive sample i.e. 27.9% of cases and non of control. A result that came in accordance with that of DuPont (1995), who stated that substance use disorders and anxiety disorders are often comorbid and sometimes undiagnosed, but still this finding is not evident as the control group was selected to be patients who attended psychiatric hospitalization for psychotic disorders.

On Axis I, we didn't find significant difference between both groups, regarding clusters of diagnoses i.e. delirium, dementia, amnesic and other cognitive disorders, schizophrenia and other psychotic disorders, sexual and gender identity disorders as well as sleep disorders (table 3) Such disorders were found to be prevailing among both groups with difference significance only in the subgroups of diseases, such finding throw light on the onset of psychiatric illnesses and its sequences and relation to substance abuse (whether or not substance induced), that is whether psychiatric disorder is a cause or a result of abusing drugs.

So, among the group of addicts, we found the diagnosis of substance induced psychotic disorder and substance induced mood disorder to be significantly much more prevailing (table 4 & 5), although schizophrenia and other psychotic disorders were found in 25% of our cases of S.A. substance induced psychotic disorder was found in 70.59% of this group with onset during intoxication in majority of cases. This means that 29.41% of these psychotic addictive cases were originally psychotic i.e. psychosis developed before addiction. Such results came in accordance with that of Kokevi and Stef-

anis (1995), who found psychiatric disorders to precede drug dependence, also Regegier et al (1995) who found psychiatric disorders to precede drug dependence. It came in accordance also with the results of Regegier et al (1990) who found S.A. to be the most prevalent comorbid psychiatric condition with schizophrenia. On the other hand, in the majority of these cases, the psychotic process was found to be induced by abusing drugs.

Similar results were found regarding mood disorders (tab. 5), which were prevailing almost equally in both groups of addicts and psychiatric cases, a result that prove the comorbidity of S.A. and mood disorders. Such results came in accordance with that of Kokkovi A. and Stefanis. (1995), Ross (1995) and also Weiss et al (1986).

The difference between this diagnosis on axis I was evident regarding the sub-diagnostic groups. We found the majority of cases of mood disorders among addicts were substance induced with the onset mainly during withdrawal in 63.33% of cases, this indicates that 36.66% of addicts with mood disorders had their illness before the onset of abusing drug. Such result throw light on the fact that among the important factors for abusing drugs in our Egyptian culture is depression, especially the undiagnosed. Abusing drugs could be considered in these cases as one method or a trial for self treatment.

Regarding sexual and gender identity disorders as well as sleep disorders. We found no statistical significant difference, and found sleep disorders to be mainly with onset during withdrawal in 86.76% of cases of S.A. (table 1).

In our sample, suicidal attempts were reported in 29.4% of addicts and in 31.8% of psychiatric patients. As we know that most of control group was diagnosed schizophrenia and depression we

can consider the percent of addicts who tried suicide high or at least as high as among other psychotic patients. Such finding came in accordance with that of Kokkevi & Stefanis (1995), who found suicidal attempts in 27.4% of opiate dependent.

Going to axis II, we can observe the difference between the two groups regarding personality disorders (table 6). Although paranoid and schizoid types were found to be significantly much more prevailing among sample of psychiatric patients, result which was expected in such patients with mental disorders, yet different types of personality disorders were found to be significantly prevailing among group of addicts. These include anti-social, borderline and dependent types of personalities.

This personality should be considered in the patho-etiology as well as in the treatment of cases of substance abuse. It can explain also the difficulty of treatment, high rate of relapse and bad prognosis in case of substance abuse. Our results came in accordance with that of Oldham et al (1995), who studied the patterns of axis I and axis II comorbidity according to DSM-III-R and found a significant relation between psychoactive substance use disorders and borderline personality disorder. It came in accordance also with the results of Grilo et al (1995), in their study to assess DSM-III-R, axis I and axis II co-occurrence and co-morbidity in adolescents in-patients with substance use disorder, who found that personality disorders especially borderline were diagnosed more frequently in the substance use disorder group.

In our study, we found that antisocial and borderline personality disorders were present in 80.88% of our group of substance abuse. Such result throw light on how should we plan for prevention as well as treatment and rehabilitation of ad-

dicts considering their personality disorders and how should we look on their addiction as a symptom of something else that deserves a serious attention in dealing with such problem.

Our results came also in accordance with that of Perry & Cooper (1985), who conducted a study of a large number of borderline and anti-social personality disorder patients and found that 92% were drug dependent. It came in accordance also with the similar results of Inman et al (1988), Kosten (1986), Nace et al (1991) and Ross (1995).

Coming to axis III, in our study we didn't find special physical disease that was significantly co-morbid with substance abuse except for epileptic fits that was related to withdrawal symptoms of sedatives and hypnotic (table 7).

All our addicts were HIV negative including those who inject drugs as well as control group. Such results came different compared to that of Johnson et al (1994), who found 14.8% of addicts injecting drugs were HIV positive, 34% of which recorded sharing needles with multiple partners and 46% recorded having multiple sexual partners.

Our result came different also with that of Mastro et al (1994) in Bangkok, who found one third of opiate users who inject drugs infected with HIV.

Of course we cannot guarantee that those addicts in our study will continue HIV negative as continued drug use may accelerate progression to AIDS. (Ronald et al 1994). It is evident also that risky behavior of addicts like homosexual bisexual relations may be a bridge through which HIV is entering drug injecting networks (Lima et al 1994). So education of addicts against HIV infection should be considered among groups at risk like substance abuse and HCV infection (table 8).

Such result was found different when compared to that of Merino et al (1994), who found that among risk factors for HCV transmission (major surgery, transfusion and drug addiction), surgery was associated with seropositivity, but it was not possible to exclude hemotransfusion during surgery as a risk factor. However, in our sample we found HCV to be prevailing among both groups of addicts: those who inject drugs and those who do not, without statistical significant difference. We can explain this by the possibility of catching it through sharing infected needles in case of addicts who inject drugs and through any minor operation or even simple maneuver like shaving but anyhow, it indicates the low resistance of such group that predispose addicts to such harmful disease (Dand et al 1994). We can explain such result also by the fact that multiple sexual exposure was reported by all our injectors (100%) and good percent of non injectors 80% of those who found to be HCV positive. This result came in accordance with that of Dand et al (1994), who discussed sexual transmission to be an additional potential mode of spread, and also Garcia et al (1994), who found that HCV infection is transmitted through heterosexual and homosexual contact.

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La Comorbidité des remèdes abusé

Cette étude déclare que chez les adonnés il ya une augmentation signifante concernant les maladies psychiatric en general, les trouble de personnalité spécialement, et aussi les maladies d'immunités en comparent des autres maladies psychiatrics.

الاضطرابات المصاحبة لسوء استخدام العقاقير والمواد الأخرى

قام الباحثون بإجراء مقابلة طب نفسية شبة مقننة لعينة من المدمنين تبلغ خمسة وسبعين فرداً بالمقارنة بمائة مريضاً نفسياً غير مدمن لتشخيصهم حسب الدليل الاحصائي لتشخيص الأمراض العقلية الأمريكى - الطبعة الرابعة (١٩٩٤) . كما أجريت لهم الفحوصات العملية المصلية المرتبطة بأمراض نقص المناعة المكتسبة والالتهاب الكبدى الفيروسى (س). وقد أظهرت النتائج وجود علاقة إرتباط بين وجود تشخيص سوء استخدام المواد لدى المدمنين وبين الاضطرابات الطب نفسية الأخرى مثل القلق - اضطرابات المزاج والفصام والذهانات الأخرى. كما أوضحت النتائج إنتشار اضطرابات الشخصية البينية وعند المجتمع والاعتمادية بين المدمنين . أما الفحوصات العملية فقد أشارت إلى وجود معدل إنتشار عال لمؤشرات الالتهاب الكبدى الوبائى الفيروسى (س) وخطو العينات من مؤشرات مرض فقدان المناعة المكتسبة. وتناقش الدراسة النتائج والدلالات وتقديم التوصيات بشأن برامج علاج وتأهيل المدمنين ونشر الوعى الصحى النفسى.