Diagnosis of Dementia in a Patient with Psychotic Disorder: Life Span Perspective (Case Study)

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Background

Psychosis is a generic psychiatric term for a mental state often described on involving a “loss of contact with reality”.

The term psychotic has been used to characterize many unusual behaviours, although in its strictest sense it usually involves delusions (irrational beliefs) and/or hallucinations (sensory experiences in the absence of external events). There are many causes for psychosis which can be traditionally classified as “organic” or “functional”. Organic conditions are primarily medical or pathophysiological. Whereas, functional conditions are primarily psychiatric or psychological, DSM-IV-TR classifies psychosis as due to general medical conditions and substance induced psychosis.

There are many functional causes for psychotic disorder. The first step in getting proper treatment is a correct diagnosis of the psychotic disorder. It is rather a complex task as the symptoms of schizophrenia, major depression and bipolar affect disorders resemble each other (www.moodswing.org). Bipolar disorder is one of the many brain diseases that shares symptoms with Schizophrenia. Both of them are two major mental illnesses. Schizophrenia is primarily a thinking disorder, whereas bipolar disorder is primarily a mood disorder. Both conditions can cause the person to lose touch with reality.

However, there is a clear distinction between these two disorders. Individuals with bipolar disorder, even those that display psychotic symptoms as a feature of their

illness, never meet the full diagnostic criteria for Schizophrenia. This observation indirectly suggest that differential diagnosis is very difficult as some of the symptoms of Schizophrenia are shared by individuals with bipolar disorder, especially who display psychotic symptoms. Like in case of most serious illnesses, it is important to get diagnosis and treatment as quickly as possible. But the complexity in diagnosis may lead to lot of delay in obtaining treatment, which in turn may lead to further or additional problems.

An individual with bipolar disorder is not always in either a manic or a depressive phase. The individual may have long periods during which they seem to be virtually free from symptoms; they do not exhibit disordered thinking, delusions, voices or other symptoms that characterize Schizophrenia. Any psychotic symptoms associated with bipolar disorder should occur within the context of mania or depression. However there is growing evidence that individuals with bipolar affective disorder have cognitive impairments. Nearly 75% of asymptomatic patients scored more than one standard deviation below healthy comparison subjects on at least four cognitive measures, suggesting widespread, but relatively mild, neuropsychological dysfunction in bipolar disorder (Glahn and associates, 2007; Richard, 2008). They tend to have attentional, executive and declarative or long-term memory impairments (Qurashi and Frangou, 2002). Although the cognitive impairment of the individuals with bipolar disorder are typically less pronounced than those found in other psychiatric (e.g. Schizophrenia) or neurological (e.g. Alzheimer's dementia) illnesses, reduced neuropsychological ability appears to significantly affect bipolar patients' psychosocial functioning (Glahn). Even in case of patients with Schizophrenia cognitive impairment prevents them from attaining

optimal psychological functioning and acts as a neurocognitive "rate-limiting" factor (Green, 1996). Although the magnitude of neuropsychological impairment in bipolar disorder is typically less than that reported in Schizophrenia, the strength of the association between cognitive functioning and functional outcome measure is comparable between the groups. (Green, 1996; Martinez-Aran and associates, 2004)

Thus shared psychotic features, cognitive impairment and functional outcome between bipolar disorder and Schizophrenia make the diagnosis of psychotic disorder highly complicated. The diagnosis of bipolar disorder can be made on the basis of the symptoms specified in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR). Mental Status Examination (MSE) is useful to diagnose bipolar disorder.

The problem of diagnosis will be more pronounced especially in the case of Late Onset Schizophrenia. There has been no agreement on the definition of late onset. Some studies chose 40 years of age as the cutoff, whereas others defined the onset as onset after 45, 60 and 65 years of age. (Dilip, Jane and Jackuelyn, 2000)

It is often difficult to determine the age of onset of Schizophrenia, especially in older subjects, as they might have forgotten the events in their life. The presence of premorbid paranoid or schizoid personality traits may further confuse the issue, and older patients with psychotic symptoms may be thought to have organic mental syndromes, mood disorders or simple sensory deficits (Dilip, Jane and Jackuelyn, 2000). The earlier versions of the Diagnostic and Statistical Manuals (DSMs) did not have an upper age limit for the diagnosis of Schizophrenia. The DSM-III stipulated that the onset of symptoms for Schizophrenia had to be before age 45, whereas the DSM-III-R allowed an

onset of Schizophrenic symptoms after age 45, and the term LOS is used for these individuals.

Late-onset Schizophrenia is often characterized by bizarre delusions, which have a predominantly persecutory flavour. Auditory hallucinations are the second most prominent psychotic symptom. Systematized delusions of physical or mental influence are seen in many cases. Grandiose, erotic, or somatic delusions may occur in some cases. Schneiderian first-rank symptoms, such as thought broadcasting or two voices arguing with each other, are less common but are not rare. Depressive symptoms are reported by a number of these patients. In contrast, looseness of association and inappropriateness of affect are less common than in younger Schizophrenic patients (Dilip, Jane and Jackuelyn, 2000)

In order to diagnose LOS, the patient should meet the DSM-III-R (Dilip, Jane and Jackuelyn, 2000) criteria for Schizophrenia (including duration of at least 6 months), with the additional requirement that the onset of symptoms (including the prodrome) be at or after age 45. The DSM-III-R criteria for LOS adequately describe (a) its similarity with EOS and (b) its differences from delusional and mood disorders. Whether it is EOS before the age of 45 or LOS after the age of 45, diagnosis of Schizophrenia during middle age is very difficult. Two important conditions in the differential diagnosis of Schizophrenia, during middle age (other than the “organic mental syndromes”) are mood disorders with psychotic features and delusional disorder. These diagnoses are more likely to have onset during middle age or old age than during early adulthood. Mood disorders with psychotic features may present for the first time after age 45, and they can

be confused with LOS. A diagnosis of Schizophrenia is made when the total duration of all mood symptoms has been brief relative to that of the primary psychotic symptoms.

The LOS has to be differentiated from EOS also. Like in case of EOS, there is an insidious deterioration of personal and social adjustment. When compared to EOS subjects, patients with LOS were more likely to have been married, to have held a job, and to have had better adjustment during adolescence and early adulthood (cited in Dilip, Jane and Jackuelyn, 2000). Caution is required in determining the age of onset of Schizophrenia strictly on the basis of a first psychiatric hospitalization for psychosis, as some patients might have had the prodromal symptoms for time prior to the first hospitalization. In patients with suspected LOS, it is necessary to establish an absence of prodromal symptoms before age 45 to exclude the diagnosis of EOS.

A review of the literature (Dilip, Jane and Jackuelyn, 2000) on the course of Schizophrenia in general suggests that a majority of patients undergo remission or are left with mild symptoms over the long term. The more positive, dramatic symptoms of Schizophrenia seem to lessen in severity with the passage of time. In a recent study (cited in Dilip, Jane and Jackuelyn, 2000), it was observed that in older schizophrenic patients, negative symptoms were prevalent, moderately severe, and quite stable over time.

One the basis of the review of the related literature on medical cormorbidity in Schizophrenia, Jeste and colleagues (1996) suggest that schizophrenic patients may receive less than adequate health care. Substance abuse is more common in patients with schizophrenia than in the general population and may exacerbate psychiatric symptoms in these patients. Although generalized cognitive impairments is associated with schizophrenia, the main contributors to dementia in older patients are more likely to be

comorbid neurological and other physical disorders, substance abuse, and medication side effects. Management of comorbidity in schizophrenia is a must for better functional outcomes.

Several findings suggest that some patients with depressive or bipolar disorder may be at increased risk of developing dementia. The rate of a diagnosis of dementia on readmission was significantly related to the number of prior affective episodes leading to admission (Kessing & Andersen, 2004). On average, the rate of dementia tended to increase 13% with every episode leading to admission for patients with depressive disorder and 6% with every episode leading to admission for patients with bipolar disorder, when adjusted for differences in age and sex.

Although often confused, dementia and schizophrenia are two distinct illnesses, with different causes and symptoms. Both conditions may be associated with cognitive deficits (impairments in thinking, memory, and other brain functions), but such problems in Schizophrenia are typically less severe (Jenny W).

Dementia is caused by multiple cognitive problems that arise as a direct physiological result of an illness or substance. According to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), the incidence of dementia from Alzheimer's disease increases with age, especially after the age 75. The Non-Alzheimer's dementia can arise from a variety of diseases and conditions, including head trauma, Parkinson's disease, and Huntingot's disease. Neuroleptics (antipsychotic medications) are used in both Schizophrenia and dementia. In the case of Schizophrenia, the antipsychotic medications can help ease paranoia, voices and other symptoms. For

individuals with dementia, antipsychotics might be used to calm aggression or delirium (Jenny W).

In the light of the findings based on the reviews of medical comorbidity in Schizophrenia and risk of developing dementia in mood disorder, it can be understood that, there is a need for looking into the symptoms of dementia in patients with psychotic disorders. So that it is possible to treat that condition also. There are reversible and non-reversible conditions for development of dementia.

Alcoholic dementia is often an overlooked type of memory dysfunction. It is estimated that about 8 percent of people in the US over age 65 may have an alcohol abuse problem. It is believed that the aging liver cannot process alcohol as effectively as the liver of a younger person. It may be tricky to diagnose dementia if someone has had a long history of problems of functioning and thinking due to alcohol intoxication. Alcohol abuse is also associated with nutritional problems-especially lack of thiamine. Symptoms of low thiamine are called Wernicke's encephalopathy. It was further noticed that risk of dementia increased with increasing alcohol consumption only in those individuals carrying the apolipoprotein e4 allele (Sergio Stagnaro, 2004). Dementia, particularly alcoholic dementia need to be differentiated from delirium.

Getting an accurate diagnosis can be complicated, and even elusive, when substance use is involved. The effects of substance use can masquerade as other mental health issues and psychiatric disorders. One of the major difficulties in obtaining an accurate diagnosis among the individuals with substance abuse is that substance users often have a very complicated history of symptoms and stressors. Individuals who have used substances over a long period of time may have symptoms directly related to

substance use and another disorder simultaneously. To further complicate the issue, many psychiatric conditions have symptoms similar to those found in substance use disorders (Elements Behavioural Health, February 2010).

The symptoms of psychiatric conditions can be 'mimicked' by substance-related conditions. Substance-induced cognitive disorders can appear to be amnesia, dementia or delirium. For the benefit of effective treatment, there is a need to find out the primary cause for these cognitive disorders in the patients.

The present study deals with a case who developed psychiatric problems around the age of 35 years; he was known case of chronic alcoholism. Presence of symptoms of dementia were noticed in him; he experienced delirium several times. He was suffering from chronic liver disease. The nature and course of development of psychiatric illness was traced in him for about 13 years. The aim was to verify some of the findings of the previous researches discussed above in this section.

In the study an attempt has been made to provide some explanations to certain behavioural symptoms of the study on the basis of the patient's life experiences as well as certain basic assumptions of some of the schools of psychology about the nature and functioning of personality.

Research Questions: The case study aimed at answering the following important research questions:

1. What were the Psycho-social stressors responsible for the emergence of Psychotic symptoms in the subject?
2. What was the impact of improved life situations on the subject?

3. What was the nature of inter-personal relationship between the subject and his spouse?
4. What were the challenges for diagnosis of psychiatric illness and dementia in the subject?
5. What was the clinical picture of the patient during the age from 35-45 years?
6. What symptoms of Bipolar affective disorder schizophrenia were noticed in the subject? What is the appropriate diagnosis of his psychotic disorder?
7. What was the course of development of dementia in the subject?
8. Which of the specific symptoms of dementia were exhibited by the subject?
9. What are the possible risk factors for dementia in the subject?
10. What is the category of dementia in the subject?
11. What were/are the chronic health problems present in the subject?
12. What was the course of pharmacological treatment provided to the patient at different stages of illness and what was their outcome?

Methods

Design of the study

It was a case study of qualitative nature. It used both retrospective and prospective approaches for collecting the data. The sources of the data were medical/psychological reports maintained by the care taker since the time of his remarriage about 13 years back. The data was also collected from certain informants like the primary care taker, some of the other family members and from the subject himself. Informal interviews were conducted several times for gathering the data. The data collected was in the form of

detailed narratives given by the informants. Many times it served the purpose of catharsis in them The investigator is a close associate of the patient's family and she has observed the life activities events of them from the closer circle. This enabled her to collect the data in a reliable manner. In a way the study can be considered as a part of her professional experience with the case. The data obtained from the medical/psychological reports as well as the narratives of the informants were systematically analyzed in order to find out answers for the research questions set in the study. The main objective was to understand the nature and causes of dementia in a patient with psychotic disorder. Thus the investigation can be considered as a diagnostic study. The major technique adopted for the diagnosis is the observation in the natural setting. Like in qualitative studies, the investigation did not attempt to verify any hypotheses.

Participants: The subject of the study was a very intelligent and highly educated man hailing from an upper middle class family. He was in a highly lucrative job till the age of 35 years. It seems certain psychotic disorders run in the family. It seems his elder brother had delusional disorder and also schizotypical personality disorder. Elder sister also developed psychotic disorder in post menopause period. Both of them were also highly educated. But it is not possible to understand the true nature of their problem due to absence of adequate data. His father had many characteristics of narcistic personality disorder. His mother and two young sisters were free from any such disorder. None of the family members suffered from dementia. From the age of 43 years, he was hospitalized several times and was attending OPDs of Psychiatry and General Medicine on regular basis. However, he was never institutionalized and was always with the family members. Because of the continuous professional help and management of the symptoms through

drugs he was never considered as a ‘psychiatrically ill person’ from the community members. They attribute his behavioural problems to chronic alcoholism. Only the concerned professions and the care taker know about the problem. At the time of study, he was separated from his wife and son. He was remarried at the age of 43 years of age. His second wife is his sole caretaker. He was economically dependent on her throughout, but was able to manage several things on his own till the age of about 48 years of age. He was a good companion to her for about two years. He used to exhibit lot of care and concern to her. He was supportive and helpful to her family members despite their negative and indifferent attitude towards him. From the age of 45 years onwards personality deterioration started gradually and later on he became dependent on her more or less totally. The same state is continued since the last five years.

Analysis of the Data

The reports medical/psychological reports as well as the narratives given by the informants were systematically analyzed in order to find out the answers for the research questions set in the study. The data were analyzed on the basis of the current knowledge in the relevant fields. The symptoms of different types of psychotic disorders and dementia discussed in literature were considered while analysing the data [Barlow/Durand, 1999; Jennifer H. Barnett and Paul C. Fletcher, 2008; Peter Garrard, 2008; Andrew J. Larner, 2008; John Bowler, 2008; Stephen Sofeff, & Lynne Alison Mclnnes, 2009; Nuner P.V., Farlenza O.V., & Gattaz W.F., 2007; Lebert F., Lys H., Haem E., & Pasquier F.; Abi V. Rayner, James G. O’Brien, & Ben Schoenbachler, 2006]. Since it is a qualitative study results and discussion of the findings are embedded with each other. They form the part of the following section.

Results

The results in the form of descriptions are discussed with reference to the research questions of the study.

Psycho-social stressors responsible for the emergence of Psychotic symptoms in the subject

The subject was a very intelligent and talented student. He was an athlete. He was a rebel as a college student. The subject was found to be quite helpful to his family members and had to shoulder the responsibility of them at an early age of about 22 years soon after his graduation. This is because his father ceased to become economically productive and his elder brother and sisters were not able to take the responsibility. He started his business in a small way and reached to his peak around the age of 30 years. He earned money in millions. He never saved nor spent money on his personal needs but had utilized for the sake of his family members and some of his friends. In fact he did not value money and spent it liberally. He continued his education through distance mode. He would have gone into very good job. However had to stick onto his business as it was difficult to get employment those days due to severe employment problem. He established his own company and became an employer in his own right. He was very kind hearted and liberal with his employees. He had a few close friends and enjoyed their company. Basically he was a value-oriented and principled person. But lack of assertive skills was one of his greatest limitation. So many of his employees and other associates took undue advantage of his nature and exploited him.

He was very hard working and skilled in his occupation. But poor management of money led to financial crisis. He was also highly apprehensive and tensed in a system where bribe, corruption and manipulation were very common. Being a principled man he developed a deep sense of guilt by being a part of that system. Manipulations done by him as a part of business increased his anxiety and insecure feelings. He became obsessed with the idea of being caught by law. He was very much scared of legal system and police department. He developed psychosomatic problems, insomnia, ideation of persecution etc. He had lost trust in his family members. He became addicted to taking debts on higher rates of interest in order to relieve his tension and anxiety. It further aggravated his financial problems. He lost control over the situation. By using the power of attorney started selling family property for throw away prices. The family members became annoyed with him because of this tendency. Family support was withdrawn for his business dealings. He was not able to pay custom duties; interest to money lenders. This disturbed his interpersonal relationship with his family members. Marrying a woman who was not considered to fit to the family status and even to him created further drift. He married her out of sheer compassion. His fear of being caught by customs increased day-by-day. He strongly believed his family members had conspiracy against him and attempted to hand over him to customs. He developed strong negative feelings towards family members. At times he behaved in a violent manner with them. He started feeling as if his personality has been totally changed. At this juncture he sought professional help. The Psychiatrist prescribed him Thioridazine, an antipsychotic drug. The patient has recorded in one of his unpublished writings that the Psychiatrist diagnosed him as paranoid schizophrenic. But there is no proof for that. He continued to consume the same

drug regularly for several years without any monitoring or supervision. The motivating factors were to get sound sleep and clarity in thinking. At one point he had chosen to close down the business in order to clear his debts.

The patient has been a chronic alcoholic and a multi drug abuser mainly benzodiazepines and nicotine during that period. He was taking 360 ml of hard liquor every day. Thus it was beyond moderate level.

Later on he started doing many other jobs (self employment) one after the other. He was not successful in any of them. Gradually he became unemployed and was not able to lead a life in a decent manner. This resulted in serious marital adjustment problems. His first marriage ended within four years. He was 40 years old at that time. He had a son of about three years at that time. Nest three years was a most difficult period in his life. He did not have a proper shelter and even food. He literately starved many days and became quite malnourished. He lost lot of weight, he started appearing very old. He worried about his son and even developed a deep sense of guilt for being unable to take care of him. All these indicate his depressed state of mood. His friends also ditched him and the siblings were not ready to extend any help to him. Despite the problems, he engaged himself in reading books of different subjects regularly. He was also writing some articles. He did not publish any of them. The articles reflected his insecure feelings in life, his wishful thinking, hostility towards legal systems etc. He had a great command over literary skills, ideas used to be loaded with irony, sarcasm, witty etc. He had an acid tongue as well as pen!. He was a great fan of Edward D. Bono and influenced and inspired by many of his thoughts. He has quoted D. Bono’s ideas in his writings. Bono’s book on Conflict Resolution became his bible.

Along with ideation of persecution he developed certain grand ideas also more or less during this time. He did not experience any manic symptoms during that time. In fact he was in a depressed state of mood. Thus he developed a mood incongruent delusion. It continued throughout his life. This mood incongruent delusion along with intact cognitive capabilities, lack of productive life all suggest the beginning of schizophrenia are even a true episode of schizophrenia in the subject of the study. This became his strength in a way! He developed interest in restarting the life. He developed reformatory ideas. He started planning certain projects like establishment of commune village, arbitration and conciliation centers nation wide. They became his life goals. This is similar to the concept of 'Fictional Finalism' as described by Adler.

Impact of changed life situations on the patient

The subject was introduced to a woman around the age of 43 years, in connection with some project. He started corresponding with her. He sent sum of the articles written by him, project proposals, his old photo and even a brief biography of himself. She was very much impressed by him. After a while they met each other. The woman was very much shocked to see him in person. He appeared very much old for his age. Within a week their meeting he proposed her for the marriage. It led to lot of conflict in her. She came to know about his financial position. But she liked his frankness. He also narrated his life experience in honest manner. She found they were reliable from his other family members. So they decided to marry. She had accepted him unconditionally. The subject became very happy from the instance of marriage. He had cut off from his parents and siblings and became a member of his wife's family. All the while his second wife was

living with her mother and some of the siblings. He had lot of adjustment problems with his wife's family members also.

The patient was exposed to all the possible life experiences. No opportunity was denied to him to lead a normal life. In pact, except on specific situations, the care taker treated him as a normal person only. The emotional bond was very strong between them. The wife put as much effort as possible to involve him in social events and recreational activities like watching TV, going to selected movies and certain cultural programs, occasional tours/picnics/excursions. But he does not seem to have enjoyed such activities. Providing rich life experiences in addition to regular medical/psychological interventions enabled him to lead a dignified life. The patient does not have any insight into his problems. He feels he is quite alright.

The life situations were conducive enough to satisfy his physiological and affective needs through the unconditional love provided by his wife. In sight of her best effort his social status is very low, he has remained totally dependent on his wife for leading life. In a way he has identified with the wife. Her social status and accomplishments in her profession helped him indirectly to satisfy his ego. His self esteem enhanced through a defense mechanism like indirect compensation. He considers her as a source of support for achieving his life missions (delusions)! He had strong achievement motivation to achieve his goals. In the beginning he used to express feelings of insecurity whenever she was interacting closely with her family members. Over the years, he has developed strong faith in her. This has reduced his insecure feeling.

The Nature of Interpersonal Relationship between the Subject and his Wife

There used to be some friction between the wife and him because of the above mentioned behaviours. The wife's siblings and mother separated from her and started living in different houses. The couple was isolated in a way. She was deprived of emotional and moral support from them. She had to accept the entire responsibility of managing life situations alone. In addition to that the subject had drastically reduced libido. Since the time of marriage his lack of interest in sex was a cause of concern in their marital relationship. She felt the lack of emotional warmth in his interaction with her. Like most of the women of modern era she had her own financial as well as social status. Her main need was emotional satisfaction and intimacy. Soon she realized there is a void in the relationship. She tried her level best to establish a warm relationship. But there was no reciprocity from the other side. This led to a deep sense of isolation in her. In fact she married at that age in order to overcome the feeling of loneliness. The subject never gave importance to intimacy and physical relationship in married life. He thought psychological relationship is more important than the physical relationship, but was not able to express intimacy in relationship. This frustrated his wife. She thought he doesn't love her. His behavioural problems and lack of support from the family members discouraged her to go for a child. The medical personnel tried to motivate her, but were not successful in their effort to convince her to become a mother. She developed a sort of complex in her because of the failure in leading a satisfactory married life. She became depressed quite often and had to seek professional help quite often for the same. She became more prone to psycho somatic disorders. This further became a burden for financial demand. Thus she was exposed to continuous and prolonged stress and strain.

But her strong maternal instinct came as a boon in their relationship. There was a transformation in the relationship. Whole heartedly she accepted the role of a care taker of him. This transformation reduced the friction between there and the emotional bond became quite strong.

Eventually his emotional problems, alcoholism and some health problems became quite serious. Professional help was sought regularly. The treatment was mainly focused on mood elevation and alcoholic de-addiction. His ability; to speak, write, organizing certain events independently all disguised his cognitive impairments (judgment/logical thinking/ meticulous planning) which are visible only through close observation. He was treated with antidepressants and anxiolytes for about two year after marriage. There was as strong recommendation by the psychiatrists to place him in rehabilitation centre at least for 6 months to one year. Both of them were not ready to part with each other. However the wife experienced lot of intra psychic conflicts.

Clinical picture of the Subject during the age from 43-49 years

The subject was very sensitive to criticism, highly irritable, commanding, tries to control others; but at the same time he was caring, considerate, had respect for elders; he was helpful to those who are in trouble. His social circle was very limited. The members of that group were not on par with his education and ability levels or interest. He was happy in their company, as the accepted his as his boss. This was boosting his ego. He used to take drinks with them, was trying to help them out of the way by providing financial assistance, lending his own vehicle etc. in one way he was very much influenced by them. He did not have assertive skills. He could not resist peer pressure. Lack of assertion, lead to exploitation by others quite often. Whenever his wife tries to

caution him about their exploitative nature, he used to get irritated, very much annoyed and in some cases became violent and assaulted her. He used to justify his stand that seemed to be quite illogical. He wanted to be in the company of physically strong men, police constable etc, so that they can protect him at the time of danger. Though he is moderately well built man, he wishes to be physically quite strong. His intention is to protect himself. He wanted to own a pistol for his won security.

He used to anticipate some danger from police or other people. He could never explain the reasons properly. He was very alert, vigilant, and proactive in preventing anticipated danger. As there is no evidence for any danger it may be inferred that he was suffering from delusion of persecution. The ideas of establishing a peace university, old age homes, and institution for arbitration in all the districts of the country were coexisting along with persecutory ideas. The theme of delusion appeared to be independent of emotional states of the subject. He used to have both persecutory and reformatory ideas more or less in the same time. The subject used to get irritated whenever there was no support for achievement of his life goals.

He has no motivation whatsoever to quit alcohol and drugs and smoking. There is evidence of personality and behavioral deterioration. He has not been in any regular remunerative jobs for about 17-18 years. He exhibited the following symptoms most frequently.

- Severe depression, crying
- agitation irritability,
- suicidal thoughts,
- highly sensitive to criticism,

- fighting with family members, verbally abusing former business associates over phone;
- Preoccupation with ideas of large amount of money, property matters;
- Seeking grants from international organizations for his mega unrealistic projects through continued correspondences.
- The objective of the project was arbitration and conciliation. This has not been shaken even a bit over the years.
- Collecting newspaper reports about issues relating to court functioning and keeps on sending a compilation of them to different agencies seeking grants.
- Alert to such news in TVs also.
- Hostility towards legal profession, lawyers and courts; use of legal knowledge against authority and intimidating people who seem to have violated law.
- Identification with people from low socio economic status; highly critical about salaried class of people.

There was considerable deterioration in his self-care and personal hygiene for about eight years, leading to fungal infections often. At the age of 46 years he became very violent almost suddenly. He used a sharp garden equipment with threats of homicide of his wife. He started throwing the objects, abusing family members shouting on the phone and physically assaulting his wife on a few occasions. By the end of 1999 he has become frankly psychotic. With great difficulty an injection was given to him with the help of a nurse in his house. His wife and other family members were shocked by this incidence. This can be considered as another episode of schizophrenia in the subject. Professional help was sought at this juncture under sedation. He was prescribed

Naltrexone (narcotic antagonists), Lithium (mood stabilizers) and Chlorpromazine + other combination (typical antipsychotic). This led to some improvement in him. His self-care and personal hygiene improved. His irritability/agitation were also under control. No more violent behaviour was exhibited by him. But all the other symptoms remained more or less same. The patient was on same group of treatment till the age of 50 years.

Challenges for Diagnosis of Psychosis in the Subject

Lack of insight into his problems has made him indifferent towards them. He shows some voluntariness in meeting the doctors, only for solving his sleep disturbance problem or severe physical discomfort or perceived depression. Always poses challenge to the care taker, whenever they have to consult the medical professionals. The wife has keen interest, concern perseverance in taking care of him, and strong determination to overcome the challenges. Otherwise it would have been extremely difficult to help him. Due to 'invisibility' of his behvioural symptoms, the patient's family and community members expected him to lead an 'independent life', 'productive life' or 'useful' life. However the nature of illness did not permit him to lead the life according to social expectation.

His over-ambitious nature became a laughing stuff among the members of the family. But his wife thought, he is quite capable of achieving them. So started extending full support to him. Encouraged him to pursue them. Started investing money beyond her limit towards his unrealistic projects, finally got into debts herself. She never realized that he had both delusion of grandeur and delusion of persecution. He was an extra-ordinarily intelligent and well read man. So she was very much carried away by his ideas and efforts to realize his ideas. She thought he was a genuine person, so his ideas were also

genuine. He had care and concern towards her siblings. She was very happy about this. Till the age of 45, there was no need for hospitalization except for deaddiction.

The care-taker had to consult different medical professionals in different stages of the development of illness. There was no regular follow up by the same set of professionals due to various practical difficulties. This is also one of the important reasons coming in the way of proper diagnoses of the psychotic disorder in the patient. This led to lot of variation in the medical treatment also. Substance abuse was considered as a major problem, initial attempts of treatment were focused on that only.

Symptoms of Bipolar Affective Disorder and Schizophrenia in the patient

On the basis of the clinical picture, the symptoms were analyzed and summarized in Table 1 and 2. It is evident from them that the patient suffers from schizophrenia, predominantly with negative symptoms. The patient also suffers from depression quite often.

Table 1: Symptoms of Bipolar Affective Disorder Demonstrated by the Patient

Depressed episode	Presence of Symptoms
Poor to no eye contact	Yes
clothes may be unkempt, unclean, holed	Yes
Poor grooming, lack of shaving, lack of washing	Yes
Dirty finger nails, not cut properly	Yes
Depressed affect	Yes
Move slowly and very little	Yes
Psychomotor retardation	Yes
Talks in monotone voice	Often

Hypomanic Episode	Presence of Symptoms
Busy, active and involved	No
High energy level and always on the go	No
Always planning and doing things	Often, with reference to theme of delusion
Others notice their energy level and mood changes	Mood changes are obvious

Manic episode	Presence of Symptoms
Hyperactive and might be Hyper vigilant	No
Restless, energized and active	Restless
Talks and acts fast	No
Attire reflects mania	No
Clothes might have been put on in haste and are disorganized	No
Garments are often too bright	No
Stand out in a crowd because their dress frequently attracts attention	No
Grandiosity	Yes
Diminished need for sleep	No
Excessive talking of pressed speech	No
Racing thoughts or flight of ideas	No
Clear evidence as distractability	No
Increased level of goal focused activity at home at work	Yes, with reference to delusional theme
Increased level of sexual activity	Lack of libido as a common phenomenon
Excessive pleasurable activities, often with painful consequences	Not all
The mood disturbance is sufficient to cause impairment at work or danger to the patient of others	Yes

Table 2: Symptoms of Schizophrenia Demonstrated by the Subject

Negative Symptoms Of Schizophrenia	
Avolition: inability to initiate and persists in activities	Yes, Major symptom since 10 years
Alogia: relative absence of speech	No
Anhedonia: lack of pleasure experienced	Yes, Major symptom since 10 years; quite obvious.
Affective flattening	Yes, Doesn't reveal expressions; claims to be detached; doesn't care attitude is obvious.

Positive Symptoms of Schizophrenia	
Delusion of persecution	Yes
Delusion of grandeur	Yes
Expression of a much stronger sense of purpose and meaning in life and less depression	Yes, However reduced in strength and frequency after the age of 52 years
Hallucination – auditory hallucination	Rarely. Either immediately before or during the onset of delirium. Presents a confusing picture about this symptom. It happens early morning or mid night in a transition from sleeping to wakeful state. He narrates about a situation which is not happening. May involve visual hallucination also during that time. The patient seems to lack insight about it.

Dementia in the patient

The details regarding the nature of dementia in the patients are summarized in the Tables 3 to 8.

Table 3: Specific symptoms of Dementia Exhibited by the subject

The mood is not the result of, substance abuse or an medical condition	Not clear
Impaired concentration accompanying depression	Yes, but not necessarily with depression
General behavioural alteration in the form of loss of interest (abouilia)	Yes
Personal neglect	Yes
Unusual obsessional trait (such as collecting or purposely organizing objects	No
Problem with memory retrieval temporally graded with memories from the distant past apparently much clearer than those of more recent event)	Yes
A clear history of a progressive inability to learn new information	Yes
Uncharacteristic repetitiveness in conversation	Yes
A recent change in reliability of the information provided	Yes, for the last 5-6 years
Topographical confusion in novel environments (e.g. while on holiday (fear of being lost)	Yes, certainly
Non-fluent speech output, characterized by hesitancy and / or phonological and grammatical irregularities	No
Progressive fluent aphasia accompanied by clear evidence of single word comprehension difficulties	No
Progression in an imperceptly slow manner	Yes
Clinical examination ruled out the underlying causes mainly responsible for early onset dementia	Not all the tests done; Whatever tests conducted reveal negative results.

Table 4: Possible Risk Factors for Dementia in the Subject

Presence and Apolipoprotein – which increase the risk of AD, especially with alcohol	Not clear from the investigations/reports
Hypertension and hypercholesterolaemia	No
Low level of education	No
Low verbal ability	No
Engaging in fewer physical and recreational activities	Yes
Vitamin supplement -Combined use of vitamin E&C	No
Smoking	Yes
Alcohol in moderate amounts	No, beyond that level for more than 10 years daily. In moderate level for the last 10 years frequently and later on occasionally.
Head injury with loss of consciousness	No
Parkinson's disease	
Tend to have stooped posture	Noticed sometimes
Slow body movement (bradykinesia)	Yes, particularly walking in slow.
Tremors	Yes, in the hands
Very soft monotone	No
Jerking in walking	No
Weight loss is sometimes evident, because of inadequate food intake due to forgetfulness, apathy lack of initiative	Severe weight loss around the age of 40 years; literally starved due to lack of income, later on due to apathy.
Lack of attention to appearance and personal hygiene	Yes (needs constant remainders)
Extra pyramidal signs	Present; sometimes become severe
Neuropsychological testing was conducted twice with a gap of four months. The psychologist's impression on the basis of the first assessment suggest the presence of patchy distribution of mild to moderate impairment of frontal, parietal and temporal lobe functions indicative of dementia. The clinical psychologist's impression on the basis of the second assessment is a dementing illness-alcoholic dementia with significant damage to the frontal, right temporal and right parietal lobes.	Reveal mild to moderate impairment.
Structural	Cerebral atropy
Functional testing	Not done

Blood tests Vitamin B12, thyroid function and syphilis serology	Negative
Neurogenetic testing	Not done

Table 5: Increasing prevalence of Psychiatric symptoms in the subject

Misidentification syndromes- delusional condition in which places are incorrectly identified	Yes (confusion with the place & house) occurs especially soon after awaking in day time or during night
Belief that someone else is staying in the house (phantom boarder sigh)	Sometimes thinks close relatives are present in the house, especially during night time or after awaking in day time. Demonstrated during transition from sleeping to wakeful state.
Visual hallucinations	Absent. Sometimes noticed during delirium.
Shadowing (a tendency to follow the spouse or care taker around the home)	Wants to make sure where the spouse or any other caretaker is. Does not want to more away from spouse or any other caretaker in an unfamiliar place.
Sunlowning (increased confusion, agitation, disorientation at the end of the day)	Often
Complete reversal of sleep wake cycle with day time somnolence and nocturnal wake fullness	Yes, It is a major problem. This disturbs the patient and he craves for sedatives.
Getting up and dressed during night	Rarely, when unable to get sleep.
ADL gradually become more restricted, progressing from instrumental to basic activities forgetting important events and losing objects.	Yes, quite obvious.
Interest in non-routine activities narrows	Yes
Social isolation/withdrawal	Yes, major symptom for the last 6-7 years. Express the dislike in social activities / gathering.
Aphasia (difficulty with language)	Rarely; Difficulty is noticed in language learnt later in life.
Apraxia (impaired motor functioning)	Yes, moderate level most of the time and severe sometimes.
Agnosia (failure to recognize objects)	Sometimes during delirum.
Difficulty with activities such as planning	Yes, major symptom
Organizing, sequencing or abstracting information	Severe impairment; refuse to accept any responsibility involving
Deterioration in social and occupational functioning	Yes, Major symptom; refuse to undertake any useful activity
Totally dependent style of life	Yes, No insight about it. Feels comfortable with this style of living.
Typically more sudden onset dementia	No,very gradual.
On set before the age of 45 years	Yes. Early onset.

Table 6: Possibility of vascular dementia in the subject

a) CT and MRI indicate multiple infractions	Yes
b) Abnormalities in walking	No
c) Weakness in the limbs	Yes
d) Onset sudden	No
e) Cardiovascular disease	No

Table 7: Possibility of substance-induced persisting dementia in the subject

a) Memory impairment	Yes
b) Cognitive disturbances	
(i) Aphasia	Not prominent
(ii) Apraxia	Yes
(iii) Agnosia	Rarely (during delirium state)
(iv) Executive functioning such as planning, organizing, sequencing and abstracting	Yes, major symptom

Table 8: Characteristics of dementias present in the subject

Characteristic	Dementia of the Alzheimer's type	Characteristic	Subcortical dementias	Presence of the characteristics in the patient
Language	Aphasia	No	No aphasia	Yes
Memory	Both recall and recognition are impaired	No	Impaired recall; normal or less impaired recognition	Yes
Visuospatial skills	Impaired	Yes	Impaired	Yes
Mood	Less severe depression and anxiety	No	More severe depression and anxiety	Often
Motor speed	Normal	No	Slowed	Yes
Coordination	Normal until late in the previous	No	Impaired	Yes

Course of pharmacological treatment and their outcome

From the age of 50 years onwards many problems appeared in the subject. He was subjected to various other investigations and medicines. The details of the same are summarized in the Table 9.

Table 9: Course of pharmacological treatment provided to the patient at the different stages and their outcome

Stages	Symptoms	Diagnosis	Treatment and Outcome
Stage I (49-51 years)	Short-term memory deficits were noticeable. He used to misplace the things, not alert and attentive, used to forget whereabouts for 1-2 hours, inability to recognize day and night at times, repeatedly narrating the same events several times without realizing it was already discussed, time disorientation, etc. These problems were noticeable around the age of 49 years. Severe memory disturbances were there, tremors of both the hands also became obvious.	He was referred to a Senior Consultant Neurologist by the psychiatrist. He was subjected to digital EEG and brain mapping. They were normal.	Treatment: Vinpocetine (cerebral activators), L-Carnitine. The patient was continuing lithium and chlorpromazine. There was some improvement in his condition. Problem: There was no regular follow-up due to non-cooperation of the patient.
Stage II (52 years)	Chest discomfort and pricking sensation for the last few days. Talking irrelevantly and making gestures. Appeared to be restless and was talking less than usual.	Initially hospitalized under neurologist and assisted by a psychiatrist. C.T. scan of the brain was done to rule out any intracerebral pathology for DELIRIUM. CT scan revealed mild atrophy. The study showed old cortical infarcts in the left temporal and right parietal lobe. There was diffuse prominence of sulci, cisterns and ventricular systems. These were interpreted as age related changes. LFTs were deranged. All the other investigations were normal. Patient's delirium gradually cleared, but patient exhibited significant memory deficit even after that.	Treatment: Keeping in mind the CEREBRAL ATROPY, lithium was substituted by Divalproate (Anticonvulsant and mood stabilizer). Naltima (Naltrexone) as an anti-craving agent. Lorazepam was considered as a substitute for BDZ. Recommendation: Memory evaluation was recommended for ruling out any early signs of DEMENTIA. The patient demonstrated very poor memory in the psychiatrist's clinic. He was unable to solve simple arithmetic problems.

Stages	Symptoms	Diagnosis	Treatment and Outcome
Stage II (a) After 10 days he was re-hospitalized	Appeared to be confused about space and time; was talking as if he was visualizing something in front of him. Exhibited symptoms like irrelevant talk, inability to remember recent events, lack of control over bladder and bowel movement, sleep disturbance and reduction in appetite.	Alcohol withdrawal syndrome.	Treatment: Patient's delirium was gradually remitted with treatment. However, recent memory deficits persisted. Problem: The patient started presenting serious behavioural problems particularly with reference to personal care and hygiene. He became adamant and non-cooperative. Any attempt to change his behavior by the caretaker was actively resisted, irritability used to become pronounced. His verbal and physical attack on the caretaker was a nightmare to her. So she was inhibited to persuade him. She had to struggle on her own as all the family members kept him at a distance due to their stigma towards his behavioural problems. Day-by-day his functioning was deteriorated in almost all the aspects of life.
Stage III (52 years)	Sleep disturbance, Deliberate attempt to BDZ tapering resulted in violent behavior – verbal and physical threat towards significant others and caretaker. Alleged, that those people are attempted to kill him by stopping sleeping pills. Wife was severely attacked physically.		Hospitalization was recommended in NIMHANS; Need for de-addiction was also suggested. Wife was not willing due to other prior commitments. Olanzapine (Atypical antipsychotic) was prescribed. Reduction in agitation and aggression was noticed. He was regularly monitored on outpatient basis.

Stages	Symptoms	Diagnosis	Treatment and Outcome
Stage IV (53 years)	Negligence of personal hygiene since two months; hospitalized for this purpose; Lack in taking responsibility of any kind and lack of expression of emotions.	Deranged LFTs and low platelet counts; USG abdomen revealed hepatosplenomegaly. Neurological Assessment: C.T. Brain (Plain) results were similar as noticed earlier. The study showed old lacunar infarcts in both temporoparietal lobes ventricular system, sulci, cisterns and fissures were prominent. Neuropsychological assessment was done by a clinical psychologist. There was a patchy distribution of mild to moderate impairment of frontal, parietal and temporal lobe functions. All indicated Dementia. However, diagnosis of alcohol related cognitive deficits was made the psychiatrist. It was decided to repeat the neuropsychological assessment after 4-6 months after patient remaining abstinent from alcohol. Cognitive enhancers were not prescribed at that time.	Olanzapine 20 mg 0-0-1 were prescribed. Tab. Thiamine propyl disulfide was supplemented.
Stage VII (54.6 years)		A comprehensive neuropsychological evaluation and a psychodiagnostic evaluation were done. Caretaker was interviewed for studying the history of the patient. Dementia with significant impairment of the frontal lobe, right temporal lobe and right parietal lobe functioning. Paranoid thinking was revealed. A Schizophrenic form of psychosis of the paranoid type was diagnosed.	Donepezil – cerebral enhancer was prescribed in addition to Olanzapine. He was asked to continue them for about six months initially. Alcohol and other addiction management were recommended.

Stages	Symptoms	Diagnosis	Treatment and Outcome
Stage VIII (54.9 years)	Hospitalized due to confusion and disorientation.	MRI revealed prominence of cerebral sulci and ventricular system. Impression was – cerebral atrophy; old aschemic Lesion in bilateral peritrigonal white matter, hepatic encephalopathy.	Trihexyphenidyl, Hydrochloride, was also prescribed in addition to the drugs regularly taken.
Stage IX (Re-hospitalization within a week)	Abdominal pain, loss of consciousness.	He was under the care of a Gastro-enterologist. Chronic liver disease with portal hypertension; Early Hepatic Encephalopathy.	Treated for hyperammonemia. Metadoxine and Vitamin B with Zinc capsules were prescribed. Donepezil and Olanzapine were continued. Non-BDZ for sleep problems was also prescribed. The treatment for hyperammonemia brought lot of improvement in the cognitive functioning of the subject. Problems persisted: No improvement in personal care and hygiene. Talking was restricted to daily needs; scared to drive vehicle with the fear of accident; became almost home bound; increased dependency on caregiver for routine and day to day activities; flattening of the emotions; reluctant and non-cooperative in visiting hospitals for follow up. Resistance to move outside the house was noticed. Akathesia and Parkinsonian type of symptoms were developed. Denial of any physical problem; Indifference towards the changes occurred in his life style and quality of life. Least bothered about the day to day evens; reduced concern for others; outright reject of any responsibilities or even simple chores, Most of the time confined to bed or a chair.

Stages	Symptoms	Diagnosis	Treatment and Outcome
Stage X (55 years)	CT scan of the brain with contrast confirmed the earlier findings.	A series of blood tests were conducted to rule out the reversible causes of memory problem. All the tests were either negative or the values observed were within the range for normal population. A diagnosis of RESIDUAL SCHIZOPHRENIA was made provisionally.	Quetiapine (100 mg-0-300 mg) was prescribed. (Started with 50 mg in the night and gradually increased to 400 mg). Donepezil (10 mg) continued in the night. Psychosocial Rehabilitation and Vocational rehabilitation were recommended in half-way homes. Slight improvement in personal care and hygiene; started discussing about issues in TV and newspaper, talking about his family members; moving in and around the house, driving car within a radius of half-to-one kilometer. Some improvement was noticed in emotional expression. But not very successful in treating the symptoms. The patient started talking about his mega projects which are unrealistic once again.
Stage XI (56 years)			Amisulpride was prescribed along with other drugs.
Stage XII (56.3 years)	Hospitalized predominantly for extra pyramidal symptoms.		The dosage of Amisulpride was increased to 600 mg per day (200-0-400 mg); Donepezil 5 mg (1-0-1); Quetipine 20 mg (1-0-1). The combination is working better in the patient. His negative symptoms are reduced very much. Talks about his projects once in a while; extra pyramidal symptoms are under control; social interaction with his peers started once again. He started conversing and discussing certain matters with his wife. However “idea density” is very low.

Major Findings and Conclusion

The findings of the study in general, is in agreement with the findings of the previous investigations, that are discussed in the background sections of this article. The study clearly indicates the complexity of differential diagnosis of psychotic disorder as well as dementia in the subject. The analysis of the data reveals that the psychotic disorder of the patient was not classified under the category of Schizophrenia readily. There was a definite delay in the proper diagnosis. It was further classified as paranoid type of Schizophrenia as he meets the criteria of DSM-IV (American Psychiatric Association, 1994). Though the symptoms of schizophrenia were obvious around the age of 45 years, there was a definite prodromal phase in the patient. So in his case it can be diagnosed as early onset schizophrenia. (Belitsky and McGlashan, 1993) In one of the few studies, that have followed people with Schizophrenia into late life, researchers tracked 52 people over a 40-year period (Winokur, Pfoul and Tsuang, 1987). In the present investigation, the case was followed by the investigator directly for about 13 years and the history of development was traced backwards for about 7-8 years. Thus the data was collected for about a period of 20 years. The data thus obtained was thoroughly analysed and discussed in light of the theory and research findings. It was noticed the investigator that a life-span perspective may at least partly reveal the development of Schizophrenia.

Gene environment interaction as a causative factor for psychotic disorder can be noticed in the subject of the study also. This supports the view that environmental factors

also play a substantial role for the genesis of Schizophrenia (Heston, 1966; Kety et al., 1971; Rosenthal et al., 1971) and atleast some of the familial risk is non-genetic (Wahlberg and associates, 1997).

There are multiple psychosocial strengths in the life of the subject. Their reactions and interactions are circular in nature. The failure in business may be due to some decline in cognitive functions, especially in the area of executive functions. There was an obvious social/occupational dysfunction in the subject. The clinical features discussed in the study clearly support the existence of an 'at-risk mental state' or prodromal states in the subject. He meets some of the Melbourne criteria for the psychosis prodrome (Yung and associates, 2003). There is a strong support for the presence of trait and state risk factors in him. Later on he turned out to be a true psychotic. Within a period of about 15 years he experienced three episodes of acute psychotic stage. In the subject a fairly stable cognitive impairment was evident. This supports the finding that a fairly stable impairment can be noticed in long-term outpatients and a major decline in elderly inpatients (Rund, 1998; Kurtz, 2005).

Cognitive functions were not assessed in the study with the help of standardised tools. However it is possible to infer the presence of certain degree of cognitive impairment in the subject on the basis of his daily function and 'quality of life'. The findings of the previous studies can be considered as a basis for this inference. It is very well established that cognitive performance in Schizophrenia is predictive of functional outcome (Green, 1966; Green et al., 2000(a)). In outpatients, vocational functioning is a useful outcome measure patients who are able to maintain employment or study tend to perform better on cognitive tasks (Bellack et al., 1999; McGurk and Meltzer, 2000). The

patient failed in vocational functioning at the prodromal phase and after the first episode. Later on could not take up any vocation. This is a strong support for his cognitive dysfunction, which is stable. However it is not easily noticeable. The possible reason is before the onset of Schizophrenia and even earlier to prodromal phase. He was a very intelligent man. Thus, despite considerable cognitive decline appears to be as far as cognitive functioning are considered. The 'quality of life' is a measure of subjective well-being as well as aspects of social and occupational function and the impact of residual symptoms. The aspects of 'Quality of life' of an individual are predicted by memory (McDermid Vaz and Heinrichs, 2002) and other cognitive scores as well as negative symptoms (Browne et al., 1996; Galletly et al., 1997). In the subject of the study it is obvious that he has higher degrees of subjective well-being and negative symptoms; whereas social functioning is at lower level and absolutely no occupational functioning. This is also one of the challenges to diagnose his psychotic disorder.

One more interesting observation is the patient can be easily convinced to seek professional help when his negative symptoms are strong, because they are soon followed by depression and suicidal ideation, because when he suffers from positive symptoms like delusion of grandeur, he exhibit the attitude of 'subjective wellbeing' and gets irritated when his caretaker tries to take him to the psychiatrists. This findings favours the argument given by Norman and colleagues (2000), that subjective well-being is related more to positive than negative symptoms. Further it can be inferred that the patient was aware of the state of depression in him but, does not have insight about positive symptoms.

There are a few studies which attempted to ascertain the relationship between cognition, symptoms and function. In both the studies conducted by Evans et al. (2004) and McGurk et al. (2000), cognition predicted outcome more than did symptoms, although significant correlations were found between negative (but not positive) symptoms and function. The study conducted by Velligan and associates (1997) also found a greater predictive effect of cognition. However, Norman et al. (1999) noticed greater predictive effects of negative symptoms than cognition. In the present study also it was noticed that negative symptoms are associated with the functioning of an individual. The functioning level of the subject was far below the standard that can be expected for his cognitive functioning level. It is very difficult for the people to accept the fact that he was quite efficient in his occupation and social functioning before the onset of psychotic disorder.

Since the cognitive decline in the subject was apparently within the normal range the diagnosis of Schizophrenia was not made for quite a longer period. Attempts to set appropriate vocational goals in the subject were not successful. He was not ready to give up his unrealistic goal, despite confrontation and negative feedback. He did not bother to change his strategies for achieving his life goals. This may be due to cognitive inflexibility. He continued to exhibit same pattern of behaviour. This is in consensus with the earlier finding that the patients with Schizophrenia often persevere in making incorrect responses despite feedback (Stuss and associates, 1983; Abbruzzese and associates, 1996).

The subject had a longer duration of untreated psychosis (DUP) which might have affected his cognitive functioning as well as life functioning. The observations made by

other investigators (Larsen and associates, 1996; Barnes and associates, 2000; Hoff and associates, 2000; Joyce and associates, 2002; Tyson and associates, 2004). The observation of Barnes et al. (2000) that patients with longer DUP were more likely to be unemployed, living alone or homeless is also supported by the present study as the subject's life is characterised by all these problems. Barnes and associates concluded that these problems can be attributed to untreated psychotic symptoms and longer DUP may be on a multifactorial pathway between poor premorbid function and poor outcome. It is also possible to infer that unemployment, living alone or homeless further hinder the chances of getting treatment. The psychotic patients hardly seek professional assistance due to lack of insight, irritation, motivation, financial crisis. As revealed in the study the subject did not get any treatment till his second marriage. It may be a rare opportunity for the psychotic patients with 'poor quality of life' to get married or remarried. Another significant finding is when the subject started getting treatment, he was treated for mood related problems and substance abuse rather than for Schizophrenia. This might be due to difficulty in diagnosis in the absence of adequate and valid information about premorbidal life functioning, which in turn caused even prolonged delay. The subject was able to get treatment for Schizophrenia only recently. The challenges for diagnosis discussed in the previous sections all support there views.

The patient was treated with antipsychotic drugs along with mood stabilizers. He was administered antipsychotics for about a total period of 20 years with some discontinuance in between. But the outcome was poor to moderate only. This finding confirms the observation made by Scully and associates (1997) that duration of antipsychotic treatment was not associated with any outcome measures. This study also

strongly supports the idea that schizophrenia may involve a progressive decline that is halted by antipsychotic treatment. But what is important is the adequacy of different antipsychotics. Despite continuous treatment for the patient there was relapse in his case. This feature support the earlier findings made by other investigators. Most people with Schizophrenia fluctuate between severe and moderate levels of impairment throughout their lives (Harrow, Sands, Silverstein and Goldberg, 1997).

The discussions about the cause of pharmacological treatment clearly reveals that it is consistent with the standard recommendations for treating Schizophrenias. It was further noticed that each type of antipsychotic drug may eliminate/reduce/control only some symptoms and not all the symptoms. Since there is lot of heterogeneity among patients with schizophrenia, the treatment may still a process of trial-and-error or trial-and-success. The outcome depends upon the nature and success of this 'learning process' by the professionals, care givers and even the patients. At present the drug Amisulphide is working well with the patient. However it is too early to discuss about its long-term effect. Along with treatment the patient is also benefited by favourable life situations. He had been provided with all the opportunities to lead a 'good quality life'. But they were not helping him to overcome his negative symptoms. His delusion of persecution is almost nil, but ideation of grandeur is still continuing. It is possible to hypothesize that the patient has a strong achievement and self-esteem needs. Unless they are fulfilled he cannot overcome the positive symptoms like delusion of grandeur. The 'fictional finalism' continues till he attains self-esteem through accomplishment. But how to provide the chance for his success in life is a major challenge in the rehabilitation of the patient.

The patient knows the difference between his premorbidal functioning and present functioning. He wants to lead the life of the past standard. But he does not understand that he has to start the life afresh, take small steps to cover the long way. He strongly refuses to take small steps, as he knows, life ahead of him is too short to achieve the higher or even highest standards as per his expectation. His ego defense mechanisms are coming in the way of doing anything positive with minimal gain. He wants maximum gain within very short time. He was an employer, so he wants to be an employer even now. He doesn't want to be an employee. He exhibits the escape-oriented adjustment mechanism like fantasy. Till he comes out fantasy, he will not successful and till he succeeds he will not come out of fantasy! Some miracles have to happen in his life. That miracle, according to him is huge amount of grant from an international organization for his projects. This is also like a 'magical thinking'. He thinks, by sending the project proposals and compilation of some reports he can definitely get the huge grants. Despite a long history of failure in his efforts, has a strong convinction sooner or later he will get the grant. So he doesn't want to do anything else other than this. Whenever he touches the zone of reality that 'nothing works', but that realization will be soon followed by depression. He gets suicidal ideas at that time. This depression will be corrected when he comes across any news items or advertisement about grant-in-aid in TV or newspapers. He will become activated immediately and start corresponding with the granting agencies. Seeking huge grant is not an indicator of his greediness for money. Money has only instrumental value in his life, that is to realize his missions. If money is the end, he would have achieved that through antisocial methods. His esteem needs are dominant over other needs. His encouragement to his spouse for professional success also has the

motive of self-esteem, as he identifies with other. He takes pride in his wife's success because it compensates his limitations in an indirect manner. It is possible to hypothesize that 'depression' in the patient is environmental/situational/contextual/ stimulus bound; whereas delusion is governed by internal state of mind. So far no drug is successful in shaking his convinction. In him there are three clear states – one with predominantly negative symptoms, depression and predominantly with positive symptoms. The patient moves from one state to another state with or without identifiable factors in the environment including the drugs he take. The symptoms are apparently similar to that of bipolar affective disorder. But a closer look clearly indicates the total absence of a 'normal phase' between different states for about 15 years. This supports the diagnosis of schizophrenia beyond any doubt. The case is a true example for the complexity of differential diagnosis of psychotic disorders. The observation made by Zubin, Steinhauer and Condray (1992) show the course of development of schizophrenia among four prototypical groups. In their study about 22% of the group had one episode of schizophrenia and improved without lasting impairment. The remaining 78% experienced several episodes, with differing degrees of impairment between them. Further it can be understood that the rehabilitation of an individual with schizophrenia who achieved higher standard in the premorbidal phase of life is much more difficult than an ordinary individual.

His initial higher level of potential and use of antipsychotic drugs helped him to retain good amount of cognition. Knowledge in the areas of interest is quite good even now. He has good command over language also. This supports the observation that paranoid type of schizophrenia function better before and after episodes of schizophrenia

than people diagnosed with other subtypes (McGlashan & Fenton, 1991). He has a very narrow range of highly specific interests in life. But apart from the delusion as well as the ego defense mechanisms discussed earlier, difficulty in concentration and sustained attention were also acted as hindering factors in the occupational functioning of the individual. He seems to lack 'patience' for taking up tasks of even minimal level of complexity. Anything routine can only motivate him. This also can be attributed to deficient executive function.

Executive function refers to processes generally invoked by novel or non-routine situations and necessitating the control and shifting of attention, cognitive flexibility and abstraction, and the ability to hold and manipulate information 'online'. Alexander et al. (1986) and Delong et al. (1990) inferred that these various facets of executive function involve the partially segregated frontal-subcortical networks that have been identified connecting areas of frontal cortex, basal ganglia and thalamus. The neuropsycho-logical test results included in the present study reveal significant impairment of frontal lobe functions. The neurological examination with CT scan and MRI also indicate cerebral atrophy.

Apart from deficient executive functions, he suffers from the attitude of 'learned helplessness'. This influences several areas of his functioning, and inhibits from putting efforts. He thinks he cannot do anything, but at the same time desires to achieve something magnanimous. He claims to have 'intuition' about his success. This suggests the possibility of a kind of regression to early childhood stage. He is governed by intuitive thinking rather than logical thinking. It seems there is a loss of cognitive capabilities like inductive and deductive reasoning. From that point of view, it may not be

a ‘learned helplessness’, it may be a ‘real helplessness’ in the face of new situations. Keeping in mind some of his strengths in cognition, certain non-routine tasks are expected to be performed by him with relative ease. But if there is a regression to early childhood stage, as far as logical thinking and reasoning are considered, those seemingly simple tasks may be truly difficult tasks for him. So he avoids them. It is very difficult to judge the complexity of the tasks in his case. Being in the middle age, his cognitive functioning, in certain aspects similar to that of early childhood. The ‘miracle’ he is expecting with reference to his life goals, the ‘magical thinking’ and his claim of ‘intuition’ all support this interpretation of his behaviour.

At the time of remarriage, he was a middle aged man. As per the Erickson’s theory of Psycho-Social Development, he had difficulty in resolving his crisis, at least in three stages – adolescence, early adulthood and middle adulthood. The crisis of Identity vs. Confusion, Intimacy vs. Isolation and Generativity vs. Stagnation were not resolved in critical phases and even later on. This is very evident in his life experiences. He was interested in pursuing higher studies, but had to take family responsibility. He could not develop a strong sense of ‘Identity’. For a man establishment of ‘Identity’ is essential for establishing ‘Intimacy’. Though he had friends and spouse, he had to remain socially isolated. Remarriage in the middle age helped him to resolve the crisis of Intimacy vs. Isolation. Due to his own limitations and barriers, he failed totally to resolve the crisis-generativity vs. stagnation. Middle age is the critical period for resolving this crisis. Thus it is possible to interpret his negative symptoms as an effect of persistent stagnation and fantasy as a desire to become generative. These are some of the new ways for understanding the behaviour or symptoms of schizophrenic patients with late onset. It is

not enough to study the symptoms and cognitive functioning in patients with psychotic disorders. There is a need to make an intensive and extensive case study of schizophrenic patients in order to explain their symptoms. There is a need to search for the base in real life situations of the psychotic individuals that might lead to certain symptoms. Then only it is possible to provide early intervention even in the case of late onset schizophrenia. The professionals should have that much of time. Unfortunately over-loaded psychiatrists and inadequate number of trained clinical psychologists are the true barriers in this direction.

There are multiple causes for dementia in the patient. The symptoms, clinical features as well as the causative factors are already discussed in the previous sections. The possible causes may be consumption of alcohol beyond moderate level coupled with nutritional deficiency, prolonged duration of untreated psychosis, inability to enjoy life due to predominant negative symptoms and intermittent depression in the patient. Presence of 'at-risk mental state' which is responsible for schizophrenia may be another important factor. It will be fruitful to test this hypothesis in future studies. No indication of heritability of dementia in the subject. The neurological examination through CT scan and MRI and neuropsychological assessments as well other diagnostic tests of medical nature confirm dementia in the subject beyond doubt. The effectiveness of the cerebral activators administered to the patient has to be verified further. At the most it may be arresting further decline and deterioration. Prolonged state of stagnation may be a cause or effect of dementia in the patient. The functioning of the patient with schizophrenia might be affected by the early onset dementia. The nature of dementia in the subject better fits into subcortical dementia. Schizophrenics also suffer from frontal lobe and

network between cortical and subcortical areas. This may be one of the important causative factors for early onset dementia in the patient. Reviews of the literature on medical comorbidity in schizophrenia suggests that although generalized cognitive impairment is associated with schizophrenia, the main contributors to dementia in older patients are more likely to be comorbid neurological and other physical disorders, substance abuse and medication side effects (Jeste, Dilip V.; Gladisjo, Juli Akkio and associates, 1996; Encyclopedia of Mental Disorders; Kasahara, Kasahara and associates). The patients experienced delirium many times. The reason may be substance abuse. They were treated successfully during hospitalization. It is not clear in the study whether each episode of delirium increased the possibility of reduced the functional outcome of the patient. The subject of the study is suffering from chronic liver disorder and even demonstrated the symptoms of hepatic encephalopathy. He was hospitalised and treated successfully for that condition. The subject suffered form pulmonary tuberculosis, leptospirosis, as well as COPD. The treatment was effective in all the diseases. He was immunized for pneumonia as a precautionary measure. Is there any relationship between the frequent infectious diseases and delirium ? There is a need to test this hypothesis in future studies. The treatment for the schizophrenia and dementia in the subject is mainly through drugs. They were not supplemented by psychotherapy cognitive training and occupational therapy. The effects of such interventions on the symptoms of schizophrenia and dementia have to be verified in future research.

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