

## Schizophrenia and Anxiety Disorders

### MAGNITUDE OF THE PROBLEM

Comorbid anxiety disorders or symptoms are common in schizophrenia although differences in reporting are observed across cultures (Dixon et al.). Panic attacks in schizophrenia occurred in 45% of schizophrenia patients in the ECA. These individuals also had a high comorbidity with other psychiatric conditions and a higher cost of care.(Goodwin et al.). Similar figures were found in the community (Labbate et al. 99) with 43% of panic attacks (57% in paranoid patients). Past or current PTSD was found in 33% of patients. Actually PTSD was present in 14.3% of first admission psychosis in a clinical cohort of 426 patients (Neria et al.)

In a cohort of 100 consecutively presenting psychotic patients, Cosoff & Hafner found a prevalence of 45% for anxiety disorders, 13% for OCD, 17% for socialphobia in schizophrenia. No specific treatment of the anxiety disorder was provided in almost all cases.

The existence of a comorbid anxiety disorder correlates with positive and negative symptoms but not depression (Huppert et al.). The correlation with positive symptoms is the strongest, suggesting that the majority of anxiety is related to the acute exacerbation of schizophrenia (Emsley et al.).

Most of the time anxiety is considered secondary to the psychotic condition and is expected to improve in parallel with the Schizophrenic symptoms. [Benzodiazepines or sedative neuroleptics (Levomepromazine, Cyamemazine) with potent antihistaminic properties are often associated with the core antipsychotic treatment in schizophrenia presenting with an acute or sub-acute exacerbation for some weeks, as long as anxiety is present ](see below).

Although anxiety impacts on the quality of life (Huppert et al.) and on the outcome (Emsley et al.) the existence of comorbid anxiety disorders is rarely explored. Such an evaluation should be systematic. Antipsychotic treatment may induce obsessive compulsive symptoms (OCS) (see below) and possibly social phobia symptoms (Pallanti et al.) that can be treated successfully with SSRI's. The treatment of agitation and OCD are presented separately.

### A. ASSOCIATED SEDATIVE ANXIOLYTIC TREATMENT IN ACUTE PSYCHOTIC MANIFESTATIONS OF SCHIZOPHRENIA

The treatment of choice for acute schizophrenia is one of the newer generation antipsychotic drugs which are well-tolerated in the medium-term and can thus be used as maintenance therapy. In particular, drugs with little sedative effect are desirable in order to optimize functioning and preserve quality of life. Sedation is also undesirable as it may compromise management of negative symptoms. However, in certain patients who present with significant agitation and anxiety, drugs with low sedative

potential may not sufficiently attenuate these symptoms even though hallucinations, delusions and other positive treatments are satisfactorily managed. This 'residual' anxiety may interfere with compliance to medication, as well as being distressing to the patient. Two strategies are available to manage anxiety in such patients, namely the use of sedative antipsychotic drugs or the use of adjuvant benzodiazepine therapy.

Sedative antipsychotics, such as thioridazine, pipamperone, melperone, cyamemazine, a-flupenthixol, or levomepromazine can be used as treatment to manage both overt psychotic symptoms and anxiety (Garay et al., Meltzer et al., Squelart et al.). Once the patient is well-controlled, the treatment can be stopped or switched to a non-sedative antipsychotic for maintenance therapy. Several of these sedative antipsychotics have been shown to exert anxiolytic effects at low doses in non-psychotic patients and to relieve anxiety satisfactorily in schizophrenic patients at standard antipsychotic doses (Poldinger et al.).

Successful attenuation of anxiety and psychotic symptoms may also help in preventing the development of a full exacerbation (Carpenter et al.). Short-term adjuvant treatment with benzodiazepines can also be useful in managing patients presenting with marked anxiety and agitation (Barbee et al., Lingjaerde et al., Wolkowitz et al.). The benzodiazepine should be given in combination with non-sedative disinhibitory antipsychotics, such as several of the atypicals. The benzodiazepine should have potent anxiolytic action, low propensity for pharmacokinetic drug interactions and a long half-life to provide uninterrupted coverage. Benzodiazepine use should be restricted to as short a time as possible in order to prevent the risk of benzodiazepine dependence and rebound anxiety on treatment cessation. By the use of one of these two strategies, severe anxiety associated with acute psychotic episodes can be satisfactorily managed.

## **B. TREATMENT OF SCHIZOPHRENIA WITH OCD**

For the treatment of schizophrenia with OCD the evidence is based on case reports and open studies.

### **Magnitude of the problem**

In clinical samples the prevalence in schizophrenics of OCD was 14% in first episodes. (Poyurovsky et al.) 15.8% (Kruger et al.), 23.5% in chronic schizophrenics (Poyurovsky et al.), 15% for OCD & 29% for obsessive symptoms (OCS) (De Haan et al.). Patients with comorbid OCD are more disabled (Poyurovsky et al.)

### **Treatment**

Antipsychotics are not effective in treating OCS in schizophrenia (Poyurovsky et al.). This was confirmed in an open prospective study in 113 patients (De Haan et al.) comparing risperidone & olanzapine. Typically, the initial score of the YBOCS =17.5 changes to 17.8 after 6 weeks treatment.

Conventional antiobsessive drugs (chlomipramine or SSRIs) are effective when used as augmentation treatment (Rahman et al., Poyurovsky et al., Dwivedi et al.). This is a statement commonly accepted although not based on convincing double blind trials.

### **Effect of antipsychotics on OCS**

In schizophrenics, clozapine (Eales et al., de Haan et al., Mc Cabe et al.) and olanzapine (Morrison et al., Mottard et al., Lykouras et al.) are well known to exacerbate or to induce OCS. Case reports also exist with risperidone (Alevizos et al.) and quetiapine (Khullar et al.). Emergence of OCS was also described after clozapine withdrawal (Poyurovsky et al.).

Case reports of improvement of OCS in refractory OCD patients have also been reported with olanzapine (Potenza et al., Marazziti et al., Koran et al.), Risperidone (Jacobsen et al., McDougle et al.) including a double blind placebo controlled trial (McDougle et al.), Quetiapine (Denys et al., Mohr et al.).

### **C. Social phobia**

#### *Importance of the problem*

As mentioned above, social phobia is frequent in schizophrenic patients (Cosoff & Hafner 1998, 17 %, Cassano et al. 1998, 17.7 %) in both studies social phobia was associated with psychotic features. In both studies almost none had a specific treatment for the associated anxiety disorder.

The nature and severity of social anxiety was found to be similar in schizophrenia and in schizophrenics having social phobia as a primary diagnosis (Pallanti et al. 2004). In comparison with other schizophrenics, those with social phobia had more suicide attempts of a greater lethality and a lower social adjustment.

#### *Treatment*

Small sample studies suggest that Cognitive-Behavioural Therapy (CBT) is an effective intervention compared to a waiting list, as an adjunctive treatment (Kingsep et al. 2003). Some antipsychotic such as clozapine may worsen or induce social anxiety. Eight out of 12 schizophrenic patients with social anxiety were improved by an SSRI, fluoxetine (Pallanti et al. 1999). Although no systematic study is available, there is consensus that social phobia should be treated and that SSRIs are the first line treatment as an add on therapy.

### **D. Panic attacks**

#### *Importance of the problem*

Data from the ECA found panic attacks to be frequent (45 %) in patients with schizophrenia. Schizophrenics with panic attacks had elevated rates of coexisting mental disorders, psychotic symptoms and health service utilization (Goodwin et al. 2003). Panic attacks are associated with an increased risk for comorbid alcohol or substance use disorder. In a clinical sample Labbate et al. (1999) found a co-occurrence in 43 % with a higher rate in paranoid schizophrenics. Chen et al. 2001 also found that schizophrenics with panic attacks had more depressive symptoms, greater hostility and a lower level of functioning.

*Treatment*

Only anecdotal data are available. It could be that neuroleptics not only do not improve panic attacks but sometimes increase them (Argyle, 1990). Arlow et al. (1997) treated 8 patients with CBT with good outcome on panic attacks. In different studies benzodiazepines such as alprazolam prescribed as an add on medication improved panic attacks and also positive and negative symptoms of the patients (Takahashi et al. 1988, Kahn et al; 1988). Two patients treated with nefazodone improved their panic attacks (Joffe et al. 1999). Therefore alprazolam could be proposed as first line treatment and SSRIs as a second line treatment.

**E. Post Traumatic Stress Disorder (PTSD)***Importance of the problem*

PTSD is highly prevalent in clinical samples, 52 % for Shaw et al. 1997, 46 % for McGorry et al. 1991. Similar results were observed by Neria et al. 2002. Although a causal relationship is far from established, Mueser et al. (1998) found 98 % of exposure to a traumatic event in a sample of 275 patients. Other authors found lower prevalences (Tibbo et al. 2003). Frame & Morrison 2001 also found a high prevalence (67 %) and were able to show that psychotic symptoms and hospitalisation were a relevant contribution to the traumatization of the sample. Therefore the reduction of distress during hospitalization is a fundamental part of the therapeutic strategy. Few systematic guidelines exist for the treatment of this comorbidity.

*Treatment*

Almost no systematic study explored the treatment of PTSD in schizophrenics. It is clear that antipsychotics alone are not a treatment of PTSD in schizophrenics, therefore in practice we suggest that the usual treatment could be proposed as add-on therapies.

(Lecrubier)

**II. SEDATIVE ANXIOLYTIC TREATMENT IN ACUTE PSYCHOTIC MANIFESTATIONS OF SCHIZOPHRENIA**

The treatment of choice for acute schizophrenia is an atypical antipsychotic. This class of medications is well-tolerated in the medium-term and can thus be used as maintenance therapy. In particular, drugs with little sedative effect are desirable in order to optimise functioning and preserve quality of life. Sedation is also undesirable as it may compromise management of negative symptoms. However, in certain patients who present with significant agitation and anxiety, drugs with low sedative potential may not sufficiently attenuate these symptoms even though hallucinations, delusions and other positive treatments are satisfactorily managed. This 'residual' anxiety may interfere with compliance to medication, as well as being distressing to the patient. Two strategies are available to manage anxiety in such patients, namely the use of sedative antipsychotic drugs or the use of adjuvant benzodiazepine therapy.

Sedative antipsychotics, such as thioridazine, pipamperone, melperone, cyamemazine, flupenthixol or levomepromazine can be used as an associated treatment to manage

both overt psychotic symptoms and anxiety (Garay et al. 1995, Meltzer et al. 2001, Squelart et al. 1977). Once the patient is well-controlled, the treatment can be stopped or switched to a non-sedative drug for maintenance therapy. Several of these sedative antipsychotics have been shown to exert anxiolytic effects at low doses in non-psychotic patients and to relieve anxiety satisfactorily in schizophrenic patients at standard antipsychotic doses (Poldinger et al. 1984).

A benzodiazepine adjuvant to the usual antipsychotic treatment may also help in preventing the development of a full exacerbation (Carpenter et al. 1999). Short-term adjuvant treatment with benzodiazepines can also be useful in managing patients presenting with marked anxiety and agitation (Barbee et al. 1992, Lingjaerde et al. 1991, Wolkowitz et al. 1991). The benzodiazepine should be given in combination with non-sedative disinhibitory antipsychotics, such as several of the atypicals. The choice of benzodiazepine should be orientated towards agents with potent anxiolytic action, low propensity for pharmacokinetic drug interactions and a long half-life to provide uninterrupted cover. Benzodiazepine use should be restricted to as short a time as possible in order to prevent the risk of benzodiazepine dependence and rebound anxiety on treatment cessation. By the use of one of these two strategies, severe anxiety associated with acute psychotic episodes can be satisfactorily managed.

(Lecrubier)

## References

- Alevizos B, Lykouras L, Zervas IM, Christodoulou GN. Risperidone induced obsessive-compulsive symptoms: a series of six cases. *J Clin Psychopharmacol* 2002; 22:461-467
- Argyle N. Panic attacks in chronic schizophrenia. *Br J Psychiatry*. 1990, 157 : 430-433
- Arlow PB, Moran ME, Bermanzohn PC, Stronger R., Siris SG. Cognitive-behavioral treatment of panic attacks in chronic schizophrenia. *J Psychother Pract Res*. 1997, 6(2) : 145-150
- Barbee JG, Mancuso DM, Freed CR, Todorov AA. Alprazolam as a neuroleptic adjunct in the emergency treatment of schizophrenia. *Am J Psychiatry*. 1992; 149: 506-510.
- Carpenter WT Jr, Buchanan RW, Kirkpatrick B, Breier AF. Diazepam treatment of early signs of exacerbation in schizophrenia. *Am J Psychiatry*. 1999; 156: 299-303.
- Cassano GB, Pini S, Sacttoni M, Rucci P, Dell'Osso L. Occurrence and clinical correlates of psychiatric comorbidity in patients with psychotic disorders. *J Clin Psychiatry*. 1998, 59(2) : 60-68
- Chen CY, Liu CY, Yang YY. Correlation of panic attacks and hostility in chronic schizophrenia. *Psychiatry Clin Neurosci*. 2001, 55(4) : 383-387
- Cosoff SJ, Hafner RJ. The prevalence of comorbid anxiety in schizophrenia, schizoaffective and bipolar disorder. *Austr N Z J Psychiatry* 1998; 32 : 67-72
- De Haan, Beuk N, Hoogenboom B, Dingemans P, Linszen D. Obsessive-compulsive symptoms observed during treatment with Olanzapine and Risperidone : A prospective study of 113 patients with recent onset schizophrenia or related disorders. *J Clin psychiatry* 2002; 63:104-107
- Denys D, van Megen H, Westenberg H. Quetiapine addition to serotonin reuptake inhibitor treatment in patients with treatment-refractory obsessive-compulsive disorder: an open-label study. *J Clin Psychiatry*. 2002 Aug;63(8):700-3.

Dixon L, Green-Paden L, Delahanty J, Lucksted A, Postrado L, Hall J. *Psychiatr Serv* 2001; 52:1216-1222

Dwivedi S, Pavuluti M, Heidenreich J, Wright T. Response to fluvoxamine augmentation for obsessive-compulsive symptoms in schizophrenia. *J Child Adolescent Psychopharmacol* 2002; 12:69-70

Eales MJ, Layeni AO. Exacerbation of obsessive compulsive symptoms associated with Clozapine. *Br J Psychiatry* 1994; 164/687-688

Emsley RA, Oosthuisen PP, Joubert AF, Roberts MC, Stein DJ. Depressive and anxiety symptoms in patients with schizophrenia and schizophreniform disorder. *J Clin Psychiatry* 1999; 60:747-751

Frame L, Morrison AP. Causes of posttraumatic stress disorder in psychotic patients. *Arch Gen Psychiatry*, 58(32), March 2001 : 305-306

Garay RP et d'Alche-Birée F. Cyamémazine : profil neuroleptique ou anxiolytique ? *L'Information Psychiatrique* 1995 ; 71 : 969-971.

Goodwin R, Lyons JS, McNally RJ. Panic attacks in Schizophrenia. *Schizophr Res* 2002; 58 : 213-220

Goodwin RD, Amador XF, Malaspina D, Yale SA, Goetz RR, Gorman JM. Anxiety and substance use comorbidity among inpatients with schizophrenia. *Schizophr Res* 2003, May 1, 61(1) : 89-95

Huppert JD, Weiss KA, Lim R ,Pratt S, Smith TE. Quality of life in Schizophrenia: contribution of anxiety and depression. *Schizophr Res* 2001; 51:171-180

Jacobsen FM. Risperidone in the treatment of affective illness and obsessive compulsive disorder. *J Clin Psychiatry* 1996; 56:423-429

Joffe G, Appelberg B, Rimon R. Adjunctive nefazodone in neuroleptic-treated schizophrenic patients with predominantly negative symptoms : an open prospective pilot study. *Int Clin Psychopharmacol*. 1999, 14(4) : 233-238

Kahn JP, Puertollano MA, Schane MD, Klein DF. Adjunctive alprazolam for schizophrenia with panic anxiety : clinical observation and pathogenetic implications. *Am J Psychiatry*. 1998, 145(6) : 742-744

Khullar A, Chue P, Tibbo P. Quetiapine and obsessive-compulsive symptoms (OCS): case report and review of atypical antipsychotic-induced OCS. *J Psychiatry Neurosci*. 2001 Jan;26(1):55-9.

Kingsep P, Nathan P, Castle D. Cognitive behavioural group treatment for social anxiety in schizophrenia. *Schizophr Res*. 2003, 63(1-2) : 121-129

Koran LM, Ringold AL, Elliot MA. Olanzapine augmentation for treatment resistant obsessive compulsive disorder. *J Clin Psychiatry* 2000; 61:514-517

Kruger S, Braunig P, Hoffler J, Shugar G, Borner I, Langkrar J. Prevalence of obsessive compulsive disorder in schizophrenia and significance of motor symptoms. *J Neuropsychiatry Clin Neurosci* 2000; 12:16-24

Labbate LA, Young PC, Arana GW. Panic disorder in Schizophrenia. *Can J Psychiatry* 1999; 44 : 488-490

Lingjaerde O. Benzodiazepines in the treatment of schizophrenia: an updated survey. *Acta Psychiatr Scand*. 1991; 84: 453-459.

Lykouras L, Zervas IM, Gournellis R, Malliori M, Rabavilas A. *Eur Neuropsychopharmacol* 2000; 10:385-387

McDougle CJ, Fleischman RL, Epperson CN et al. Risperidone in Fluvoxamine refractory obsessive-compulsive disorder: three cases. *J Clin Psychiatry* 1995; 56:526-528

McDougle CJ, Epperson CN, Pelto GH et al. A double blind, placebo controlled study of Risperidone addition in serotonin reuptake inhibitor-refractory obsessive-compulsive disorder. *Arch Gen Psychiatry* 2000; 57:794-801

McGorry PD, Chanan A, McCarthy E, Van Riel R, McKenzie D, Singh BS. Posttraumatic stress disorder following recent-onset psychosis. An unrecognized postpsychotic syndrome. *J Nerv Ment Dis.* 1991 May;179(5):253-8.

Marazziti D, Pallanti S. Effectiveness of Olanzapine treatment for severe obsessive compulsive disorder. *Am J Psychiatry* 1999; 156:1834-1835

Meltzer HY, Sumiyoshi T, Jayathilake K. Melperone in the treatment of neuroleptic-resistant schizophrenia. *Psychiatry Res.* 2001; 105: 201-209.

Morrisson D, Clark D, Goldfarb E. Worsening of obsessive compulsive symptoms following treatment with Olanzapine. *Am J Psychiatry* 1998; 155:855

Mottard JP, De la Sablonière JF. Olanzapine induced obsessive-compulsive disorder. *Am J Psychiatry* 1999 ; 156 :799-800

Mueser KT, Goodman LB, Trumbetta SL, Rosenberg SD, Osher C, Vidaver R, Auciello P, Foy DW. Trauma and posttraumatic stress disorder in severe mental illness. *J Consult Clin Psychol.* 1998 Jun;66(3):493-9.

Neria Y, Bromet EJ, Sievers S, Lavelle J, Fochtmann LJ. Trauma exposure and post traumatic stress disorder in psychosis : findings from a first admission cohort. *J Consult Clin Psychol* 2002 ; 70 :246-251

Pallanti S, Quercioli L, Rossi A, Pazzagli A. The emergence of social phobia during Clozapine treatment and its response to Fluoxetine augmentation. *J Clin Psychiatry* 1999; 60 : 819-823

Pallanti S, Quercioli L, Hollander E. Social anxiety in outpatients with schizophrenia : a relevant cause of disability. *Am J Psychiatry.* 2004, 161(1) : 53-58

Poldinger WJ. Melperone in low doses in anxious neurotic patients. A double-blind placebo-controlled clinical study. *Neuropsychobiology.* 1984; 11: 181-186.

Potenza MN, Wazylink S, Longhurst JG et al. Olanzapine augmentation of Fluoxetine in the treatment of resistant obsessive compulsive disorder. *J Clinical Psychopharmacol* 1998; 18:423-424

Poyurovsky M, Bergman Y, Shoshani D, Schneidman M, Weizman A. Emergence of obsessive compulsive symptoms and tics during Clozapine withdrawal. *Clin Neuropharmacol* 1998; 21:97-100

Poyurovsky M, Dorman-Etrog P, Hermesh H et al. Beneficial effect of Olanzapine in Schizophrenic patients with obsessive compulsive symptoms. *Int Clin Psychopharmacol* 2000; 15 :169-173

Poyurovsky M, Hramenkov S, Isakov V, Rauchverger B, Modai I, Schneidman M, Fuchs C, Weizman A. Obsessive-compulsive disorder in hospitalized patients with chronic schizophrenia. *Psychiatry Res* 2001; 102:49-57

Rahman MS, Grace JJ, Pato MT, Priest B. Sertraline in the treatment of clozapine-induced obsessive-compulsive behavior. *Am J Psychiatry.* 1998 Nov;155(11):1629-30.

Shaw K, McFarlane A, Bookless C. The phenomenology of traumatic reactions to psychotic illness. *J Nerv Ment Dis.* 1997 Jul;185(7):434-41.

Squelart P, Saravia J. Pipamperone (Dipiperon), a useful sedative neuroleptic drug in troublesome chronic psychotic patients. *Acta Psychiatr Belg.* 1977; 77: 284-293.

Tibbo P, Swainson J, Chue P, LeMelledo JM. Prevalence and relationship to delusions and hallucinations of anxiety disorders in schizophrenia. *Depress Anxiety*, 2003, 17(2) : 65-72

Wolkowitz OM, Pickar D. Benzodiazepines in the treatment of schizophrenia: a review and reappraisal. *Am J Psychiatry.* 1991; 148: 714-726.