Depression and Sleep Apnea: Investigating the Links

By Aisling Fitzpatrick
Undergraduate University Student

Ruzica Jokic, MD, FRCP
Assistant Professor of Psychiatry, Queen’s University

Introduction

Obstructive sleep apnea (OSA) and major depressive disorder (MDD) have many clinical, neuropsychological and functional features in common. Both patients with OSA and those with MDD experience fatigue, chronic pain, and mood and anxiety symptoms. The Mood Disorders Research and Treatment Service team at Providence Care Mental Health Services is conducting a study, funded in part by Queen’s University, that is designed to examine the prevalence of OSA in patients diagnosed with treatment resistant depression (TRD). We will also assess the effects on mood and cognitive function of adding continuous positive airway pressure (CPAP) to the current psychiatric treatments of patients diagnosed with both TRD and OSA. This is, to our knowledge, the first study designed to examine the co-morbidity of OSA and TRD in a population referred to a tertiary mood disorders clinic.

The interaction between sleep, disordered breathing and mood is complex, multidimensional, and still not fully understood (Bardwell et al, 2003). Our study will investigate this interaction as we focus our attention specifically on the relationship between TRD and OSA.

According to the Canadian Community Health Survey of Mental Health and Well Being (Patten et al, 2006) the lifetime prevalence of MDD ranges from 6 to 18 per cent. Patients diagnosed with MDD experience symptoms that severely limit daily function. Moussavi and colleagues (2007) studied two hundred fifty thousand respondents in 60 countries and found that MDD produces a greater decrement in health than other chronic diseases such as angina, arthritis, asthma and diabetes. Furthermore, MDD in combination with any one of these diseases produced a disability score worse than that produced by any pair of these physical diseases.

Most individuals diagnosed with MDD respond to pharmacological treatment, resulting in improved mood and capacity to function in daily life. However, there is a subgroup of patients, with clinical symptoms of TRD, who are unable to achieve remission following at least

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Editor’s Note

As we begin a beautiful winter in southeastern Ontario I am happy to introduce another excellent edition of Synergy. This issue is comprised of articles which offer readers an array of important information about mental health research, practice and policy.

We are delighted to present our cover article by Ms Aisling Fitzpatrick and Dr. Ruzica Jokic on their important groundbreaking examination of sleep apnea and treatment resistant depression. Ms Tracey McMullen’s article on autism and key issues in the diagnosis and treatment of comorbid mental health concerns provides a valuable summary of practical information for the new and seasoned professional. We know you’ll enjoy reading Ms Sandra Lawn’s thoughtful commentary on child and adolescent mental health policy developments in our Policy Corner. As well, you’ll appreciate Ms Karen Gagnon’s practical encouragement on how mental health practitioners can meet the challenge of assisting information-seeking consumers in accessing reliable mental health information on the Internet in our Librarian’s Corner.

I wish to thank our new and continuing Editorial Board members for their work on this issue and for their contributions to improving Synergy to make it more relevant to its readership all the while keeping our costs down. In our efforts to save paper and respond to readers’ requests we are now sending out electronic copies of Synergy far and wide. If you have received such a copy and prefer a paper copy please let us know at: robertk@providencecare.ca. Finally, I extend a special thank you to our outgoing Assistant Editor, Ms Barbara Theman, whose dedication to Synergy over several years was exemplary and inspiring. Barbara has recently retired and we wish her all the best in her retirement endeavours.

We look forward to hearing or reading your feedback on this issue of Synergy.

By Philip Burge, PhD
Social Worker, Associate Professor of Psychiatry
Queen’s University

Philip Burge, PhD

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Southeastern Ontario Addictions and Mental Health Services & Information www.recoveryconnections.ca

DEPRESSION AND SLEEP APNEA: INVESTIGATING THE LINKS

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one adequate trial (with appropriate dose and duration) of an antidepressant treatment. TRD has been estimated to contribute to half of the total treatment costs for depression (Parker et al, 2005). Moderate treatment resistance is defined as an inadequate response to a single antidepressant trial, while more severe treatment resistance is either failure of two monotherapy trials or one or more augmentation trials.

OSA is a condition characterized by intermittent, partial or complete collapse of the upper airway during sleep. This causes decreased blood-oxygen saturation, increased heart rate, and sleep fragmentation. Patients experiencing these events describe feelings of non-refreshing sleep, cognitive difficulties (including difficulty concentrating), daytime hypersomnolence, and fatigue (Fogel et al, 2004). When left untreated, OSA is associated with an increased likelihood of severe motor vehicle accidents, arterial hypertension, myocardial infarction, stroke and premature death (Peppard et al, 2000).

Although OSA was first recognized almost 40 years ago, its prevalence has only been investigated during the last two decades. Recent studies suggest that approximately 1 in 5 adults have mild OSA, and about 1 in 15 adults have moderate to severe OSA (Young et al, 2002). The prevalence of OSA is much higher in some populations. For example, patients with congestive heart failure have a 50 per cent chance of being diagnosed with OSA (Newman et al, 2000). Unfortunately, by current estimates, only about 10-20 per cent of OSA-affected individuals have been diagnosed (Young et al, 2001). Studies show that 75-80 per cent of undiagnosed cases of OSA would benefit from treatment (Young et al, 2002). This apparent under-diagnosis of sleep apnea (especially mild and moderate cases) can be explained partly because many cases do not present with typical OSA symptomology (i.e., snoring and snoring). For this reason, symptoms of sleep apnea are incorrectly identified leading to misdiagnosis and ineffective patient treatment.

Numerous studies demonstrate a high prevalence of depressive symptoms among patients with OSA (Peppard et al, 2006). One recent preliminary study examined sleep-related breathing events in a small sample of individuals with MDD as compared to controls and determined a significant difference in the number of episodes of nasal airflow limitation and oxygen desaturation between the two groups. The authors postulated that disordered breathing during sleep may play a more important role in MDD than previously recognized, and that it may contribute to, or exacerbate, symptoms in individuals predisposed to MDD (Deldin et al, 2006).

Since its introduction in the early 1980’s, continuous positive airway pressure (CPAP) has been considered the gold standard treatment for OSA. CPAP acts as a pneumatic splint which forces the upper airway open during sleep (Baldwin et al, 2001). Most studies indicate that treating OSA leads to improved quality of life as well as a reduction in depressive symptoms and cognitive impairment associated with OSA (Mc Mahon et al, 2003; Schwartz et al, 2005). We hypothesize that daytime functioning is more severely impaired in patients with TRD and OSA receiving routine psychiatric treatment when compared to patients with TRD only. We also hypothesize that patients with TRD and OSA receiving CPAP treatment (in addition to the

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psychiatric treatment) will have a significant improvement in mood symptoms and daytime function as compared to patients receiving routine psychiatric treatment only.

Our Study

Our study is using a prospective, single-blind, randomized, parallel group design to evaluate the effect of treatment with CPAP on the daytime function in patients with TRD and co-morbid OSA. Consecutive patients with TRD of either gender, between the ages of 18 and 65, with elevated Hamilton Depression rating scale scores, i.e., HAM-D > 18 (Hamilton, 1967) are invited to participate in the study. A variety of experiences or co-morbid conditions exclude some patients from participating in the study. As well, participants are administered a variety of other measures at predetermined intervals and randomly assigned into the CPAP or no-CPAP arms of the study if diagnosed with sleep apnea. For the duration of the study, the dosage of psychotropic medications is held constant and! no medication or psychological treatment changes are allowed during this period.

To date over 50 patients with TRD have been screened for inclusion in this study and approximately one third of them have been diagnosed with OSA of varying degrees of severity as confirmed by polysomnography. Of varying degrees of severity as confirmed by polysomnography. Of varying degrees of severity as confirmed by polysomnography.

References


Mental Health Issues in Autism: Exploring Complexities

By Tracey McMullen, MA

Doctoral Student, York University

Autism is a lifelong and pervasive disorder, emerging in early childhood with hallmarks of social and communicative impairments and odd or intense patterns of interests and behaviours. As children with autism develop, they become exceptionally vulnerable to a variety of mental health disorders (Bradley et al, 2004); especially in individuals without intellectual disability (Szatmari et al, 1989). This paper briefly discusses some of the key challenges in diagnosing comorbid mental health disorders in children and young adults with autism.

Diagnosis of comorbid psychiatric conditions in people with autism can be complicated for several reasons. First is the issue of diagnostic overshadowing – the tendency to attribute all problems and symptoms to the primary diagnosis of autism. As well, psychopathology in autism can sometimes have a different presentation than would be expected in individuals who have a history of typical development. A further complexity is that some of the characteristics of autism (impaired or unusual communication, abnormalities in affect, and poor access to internal mental states) can make diagnosis of additional psychiatric disorders difficult. These same characteristics of autism can also create barriers to treatment.

To lessen the unique barriers to diagnosis and treatment, mental health professionals may have to obtain consent so as to enlist the assistance of collateral sources of information. As the patient with autism may be less able to communicate his/her emotional state or have the self-monitoring skills to describe change, family members or support workers can help to establish the historical baseline for the individual and determine any changes. For example, social aloofness is common in autism but a family member might note that there has been an increase in social withdrawal over recent months.

The ability to ascertain comorbid psychiatric disorders in autism is important for earlier intervention because currently up to 50 per cent of people with autism will have contact with psychiatric hospitals for co-occurring mental health problems in the future (Mouridsen et al, 2008).

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autism also receive a comorbid OCD diagnosis. Preliminary studies have demonstrated that standard OCD treatment with SSRIs and modified relapse prevention cognitive-behavioural therapy (CBT) are also effective for individuals with autism and OCD (e.g., Lehmkuhl et al., 2008).

It is important that practitioners take anxiety seriously in autism. Untreated, anxiety creates an additive effect to the disabilities associated with autism. For instance, as they develop, young adults with autism often have an increased desire for social connectedness. Unfortunately, an emergent social anxiety problem can interfere with their opportunities to learn and practice underdeveloped social skills (Bellini, 2006). Untreated anxiety puts the individual with autism at increased risk for developing a secondary depression (Howlin, 2000). Evidence for the effectiveness of modified CBT for anxiety disorders in autism is promising (Sofronoff et al., 2005). Additionally, SSRIs are effective in the psychopharmacological treatment of anxiety in autism with the caveat to be aware of the possible side effect of agitation (Kolevzon et al., 2006). There is some evidence that benzodiazepines can have a paradoxical effect in autism with increased nervousness and aggression (Marrosu et al., 1987).

Depression

From the first descriptions of autism by both Kanner and Asperger, depressive symptoms were present in some of the cases. Depression, like other forms of mental illness can be easily missed in autism (Ghaziuddin & Greden, 1998). The expected vegetative symptoms may be present but identifying changes in mood can be difficult. Special features of depression particular to autism can include an even greater tendency toward social withdrawal than usual for that person. Depression may be associated with an increased irritability or take on more of a ritualistic quality or the content of the interests may transform to contain more frightening, increased or take on more of a ritualistic quality or the content of the interests may transform to contain more frightening, or death themes. Even though these symptoms may not be typical of non-autistic depression they may still be ameliorated by anti-depressive medications (Clarke et al., 1999).

It is important that practitioners take anxiety seriously in autism.

Catatonia

There is accumulating evidence that adolescents and adults with autism are at relatively high risk for developing catatonia (i.e., up to 1 in 7; Wing & Shah, 2000). It is important that appropriate and early intervention is taken as permanent effects of the deterioration can persist and treat with antipsychotic medication can cause a worsening of symptoms. Autism-specific catatonia intervention has been well established to include large doses of benzodiazepines with the use of electroconvulsive therapy in more resistant cases (see treatment protocol in Fink et al., 2006).

Schizophrenia/Psychosis

There have been conflicting results regarding whether adults with autism are at increased risk for developing schizophrenia. For the most part, a diagnosis of autism precludes a diagnosis of schizophrenia in the absence of frank delusions or hallucinations. Most studies have concluded that people with autism are not at higher risk for developing schizophrenia (Ghaziuddin, 2005). Misdiagnosis of schizophrenia can occur in autism due to diagnostic overlap (Konstantareas & Hewitt, 2000). Confusion in differentiating autistic symptoms from schizophrenic symptoms for clinicians and from the research has likely arisen due to the similarity of the surface presentation of symptoms. A few recent studies have done an excellent job of disambiguating this overlap, particularly in the area of paranoia and thought disorder.

Paranoid and persecutory ideation can often be elevated in people with autism (Blackshaw et al., 2001). The paranoia tends to arise from theory of mind deficits in autism and is different from the paranoia of schizophrenia because individuals with autism do not have a pathological attributional style (Craig et al., 2004).

People with autism may also exhibit loose associations, clangs, neologisms, and illogical thinking. Although these symptoms are typically associated with the thought disorder in schizophrenia, research has shown that they can arise from the underlying disability associated with autism (Solomon et al., 2008). This same study demonstrated that what looks like thought disorder in autism was directly related to communicative-pragmatic difficulties typical of individuals with autism.

Ultimately, the cognitive and linguistic style of people with autism can account for symptoms that look like schizophrenic symptoms. This differentiation is very important because treatment with antipsychotics can worsen the symptoms of autism. That is, the side effects associated with antipsychotics can cause mental slowing, lack of energy, and decreased facial expressiveness, all of which can be detrimental to a person who both does not have schizophrenia and who already needs to put forth much effort to be engaged in the social world (D. Tantam, personal communication, April 15, 2008).

On occasion though, an individual with autism may demonstrate an acute and transitory psychotic episode in reaction to the experience of increased stress (Tantam, 2000). When this includes the presence of frank delusions or hallucinations, an additional diagnosis of brief psychotic disorder would be warranted. Usually, the episode is precipitated by an event that is perceived by the individual as stressful (e.g., increased demands of school). The DSM-IV modifier of “with major stressor” may still be appropriate even though a person without autism might not perceive this same event as particularly stressful.

Although current studies do not show a predisposition in autism toward developing schizophrenia, the prognosis for individuals diagnosed under the more recently expanded autism diagnostic criteria may be different. Children whose symptoms were previously described as schizoid (Wolff & McGuire, 1995) or borderline (Demb & Koskin, 2000) are more likely to receive a diagnosis of pervasive developmental disorder - not otherwise specified or Asperger’s disorder by current diagnostic standards. These children, under previous diagnostic classifications, were at increased risk for developing schizophrenia as adults (Wolff, 1992). Practitioners should be aware of diagnostic subtype differences in an individual’s developmental history when the possibility of an additional schizophrenia diagnosis is being considered.

Prescribing physicians should also be alert to the possibility of paradoxical responses...

Preventing psychiatrist treatment issues

There has been very little research in what contributes to the increased vulnerability to mental illness in autism. Typically, mental health is viewed as being affected by the interplay of biological and environmental factors. Autism is a neurodevelopmental disorder so life begins with certain biological disadvantages. These neurodevelopmental differences interface with stressors and social supports. Because of their social disability, people with autism can not take full advantage of social supports. Additionally, they have more difficulty in coping with stress and in regulating their emotions (Baron, Groden et al., 2006). Ninety per cent of people with autism experience the acute and chronic stressor of bullying which continues into adulthood for most (Tantam, 2004). Additionally, there is the autistic tendency to be less tolerant to change. The extreme reactivity to changes in life circumstances (e.g., increased stressors at school, loss of job, death of parent,) is exacerbated by impoverished coping strategies.

To observers, people with autism seem to become very distressed by minor events and this reaction can persist longer than expected. These responses to stress can include reactive versions of OCD, anxiety, depression, and brief psychotic reactions. As a result, threats to mental health can be predictably associated with transitions and crises in the life of the person with autism. Prevention can play a large role in safeguarding the mental health of autistic individuals with autism by preparing well for transitions, having extra support during crises, and learning stress management strategies.

For the most part, individuals with autism respond well to medication. The psychopharmacological interventions associated with specific psychiatric diagnoses as do people without autism. This is only the case though if a correct differential diagnosis has been made. Prescribing physicians should also be alert to the possibility of paradoxical responses and unpredictable dose-sensitivity due to underlying neurodevelopmental differences (Tantam, 2000).

Psychotherapy can prove unhelpful without appropriate modifications. There is mounting evidence that specially modified CBT can be beneficial in the treatment of anxiety for people with autism (Sofronoff et al., 2005). Deficits in the ability to self-monitor require that the therapist be particularly flexible and remain problem-focused; using situations that arise in the present as “teachable moments”. People with autism may be unable to identify specific negative thoughts so thought-reading is impossible to do. Instead, additional focus is paid to learning to identify emotional distress and learning self-soothing techniques. Due to difficulties with
abstract thought and language, therapists have found the addition of visual aids to be beneficial as well. Trying to help the individual see other people’s perspectives can be futile and may threaten the therapeutic relationship so should be attempted cautiously. (For specific guidelines on therapy, see the following books: Counselling People on the Autism Spectrum; Cognitive-Behavioral Therapy for Adult Asperger Syndrome; Exploring Feelings-Cognitive Behaviour Therapy to Manage Anxiety.)

People with autism continue to gain skills as they develop into adulthood (Howlin, 2000). Unfortunately their developmental potential and prognosis can be impeded by mental illness. Awareness of the special predispositions and profiles of psychiatric disorders in autism is the first step in intervening. Autism-specific treatments are being tested and the evidence base is just beginning to accumulate. Special care by parents, schools, and health care providers may go a long way to lessen specific stressors and build resilience in young people with autism.

References


Our information seeking behaviours have certainly changed over the last decade. We still talk with colleagues and look to the print literature, including books and journals, for information. But increasingly, we are turning to the Internet for information, and often, as our first starting point. This is particularly so for the current generation, who have grown up having access to the Internet. An interesting study from the U.S. (Grunwald Associates, 2003) found that 85 per cent of American children between the ages of 2-17 use the Internet from either home, school or a library. The result is a generation who will look up information on the Internet as easily as we looked up information in Encyclopedia Britannica.

This shift in information seeking behaviours will also be seen in people seeking mental health information and in people suffering from mental illness. In a recent general population survey, Powell and Clarke (2006) found that 10 per cent of respondents used the Internet as a source of mental health information. The use was even higher, at 20 per cent, among those respondents with a past or current history of mental health problems. Berger et al (2005) noted that the Internet may have a particularly important role to play in mental health for the anonymity it offers to people for whom stigma may be a barrier to accessing mental health information. In a later study, Powell and Clarke’s (2007) research highlighted that privacy was an important benefit for accessing mental health information via the Internet.

The Internet allows for anonymity and private access by people in their own home. Their research also found other motivators for using the Internet: including hearing other people’s experience with mental health problems. Users felt that they were not alone with their problems, and they obtained understanding and empathy from others in similar situations. As well, respondents’ other main motivator was for personal research into the causes of their illness, alternative diagnoses and treatment options, as they felt their health or mental health practitioner did not provide them with the information. Another interesting aspect of Powell and Clarke’s research is that they found that respondents trusted certain websites and that these tended to be related to organizations they would trust in the real world. Respondents recognized that there are websites with poor or inaccurate information, but they were confident in their ability to evaluate the accuracy of these sites.

The use of the Internet to find mental health information ties into health literacy, which the Canadian Public Health Association (2008) defines as the “skills to enable access, understanding and use of information for health”. A recently released study by the Canadian Council on Learning (2008), found that the average health literacy level in Canada is low: “60 per cent of adult Canadians lack the capacity to obtain, understand and act upon health information and services and to make appropriate health decisions on their own”. This is somewhat contrary to the Mental Health Literacy in Canada report (Canadian Alliance on Mental Illness and Mental Health, 2007) which identified that “Canadians appear to have reasonably good mental health literacy regarding prevalence, awareness of warning signs, and ability to identify a mental disorder as such”.

There is an opportunity for health care professionals to share reliable mental health websites with their clients, encourage the use of the Internet thereby empowering clients and guiding them towards increased health literacy levels. This will be especially important and relevant with the current “computer savvy” generation, who will feel empowered by using the Internet for health information.

References

POLICY CORNER
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allow for many more youth to get intervention” as many have drug addiction, some are depressed, even suicidal. Justice Diane Nicholas remarks that these assessments “rip my heart out.”

Dr. Davidson and his collaborators across Canada are promoting a clear path forward; we eagerly await further policy changes and implemented action plans, so essential to a mental health system for children and youth that puts them truly in the centre!

3 Butler, Don, “Mental health court proves a huge success; Youth initiative ‘most satisfying work I’ve ever done,’ judge says,” Ottawa Citizen, November 14, 2008 p F3.