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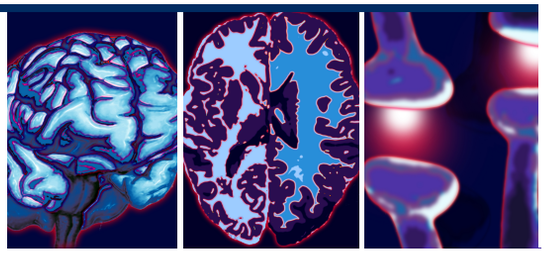


Promising signs that blood test may indicate how well a depressed patient responds to antidepressants

A study carried out at Loyola University (IL, USA) has evaluated the effectiveness of a blood test for VEGF used to predict response to antidepressant medications. The findings of the study suggest that the blood test may be a promising approach to evaluating antidepressant effectiveness on a patient-by-patient basis.

These results were presented at the 2011 Society of Biological Psychiatry annual meeting and the 4th Annual Illinois Brain, Behavior and Immunity meeting.

It has previously been found that approximately 60% of depressed patients do not respond well to antidepressant medications. The researchers found that of the 35 depressed patients studied, those who had higher than normal blood levels of VEGF were more likely to respond positively to pharmacological treatment for their depression. More than 85% of the patients with high VEGF levels experienced partial or complete relief from depression after taking escitalopram (brand name Lexapro®). In patients with low VEGF levels, fewer than 10% responded to the drug.

"This would be the first time we would have a predictor for how well a patient would respond to an antidepressant," explained first author Angelos Halaris from Loyola University.

"It would greatly benefit our patients if we could predict ahead of time whether a given medication would be effective for a certain patient," Halaris continued.

Escitalopram is prescribed to treat major depressive disorder. The drug belongs to a class of antidepressants called selective serotonin-reuptake inhibitors. Other commonly prescribed drugs in this class include Prozac®, Paxil® and Zoloft®. It has long been known that selective serotonin-reuptake inhibitors only seem to work in some patients, although the reasons for this are uncertain.

Further studies are needed, but if these findings are confirmed, the blood test may help physicians tailor treatment to specific patients needs. If, for example, a patient had low levels of VEGF, the physician might first try an alternative class of antidepressants or an alternative therapy, such as psychotherapy or transcranial magnetic stimulation.

– Written by Laura McGuinness

Source: Blood test might predict how well a depressed patient responds to antidepressants: www.sciencedaily.com/releases/2011/12/111215135853.htm

Future Medicine part of fsg

Potential biomarkers may have been identified for diagnosing children with ADHD

Owing to the wide range of symptoms that patients present with, it is difficult to diagnose ADHD in children. However, the authors of a study presented at the Radiological Society of North America's annual meeting last November report that by using functional MRI technology, they have identified abnormalities in the brains children with ADHD that may serve as useful biomarkers of the condition.

"Diagnosing ADHD is very difficult because of its wide variety of behavioral symptoms," explained lead researcher Xiaobo Li, from the Albert Einstein College of Medicine (NY, USA). "Establishing a reliable imaging biomarker of ADHD would be a major contribution to the field."

Since there is no single test capable of diagnosing ADHD, children are frequently misdiagnosed with ADHD, while conversely children who do have the disorder remain undiagnosed.

Abnormalities in the brain were identified when the researchers performed functional MRI scans on 18 children (9–15 years of age) diagnosed with ADHD and 18 control children. The study required the children to undergo a test involving number matching to measure their sustained attention. Brain activity maps were compiled for each group of children.

> "Establishing a reliable imaging biomarker of ADHD would be a major contribution to the field."

The brain maps for the children with ADHD showed abnormal functional activity (compared with the children without the disorder) in several regions of the brain connected to the processing of visual attention information. A disruption in the communication among the brain regions within this visual attention-processing pathway was also recorded for children with ADHD.

Li explained that, "What this tells us is that children with ADHD are using partially different functional brain pathways to process this information, which may be caused by impaired white matter pathways involved in visual attention information processing."

ADHD affects an estimated 5–8% of school-aged children. Children with ADHD are often hyperactive, inattentive and display impulsive behaviors that are incongruous with the normal range for the child's age and development.

It should be cautioned that the size of this study was relatively small, so it may be presumptive to extrapolate results to the wider population.

– Written by Laura McGuinness

Source: Radiological Society of North America, press release: www.rsna.org/Media/rsna/RSNA11_newsrelease_target.cfm?id=559

ADASUVE recommended by Psychopharmacologic Drugs Advisory Committee for use in patients with schizophrenia and bipolar disorder

The Psychopharmacologic Drugs Advisory Committee (PDAC) of the US FDA has recently voted to recommend that Staccato® (Alexza Pharmaceuticals, CA, USA) should be used alongside the FDA-recommended risk evaluation and mitigation strategy (REMS), given as a single dose in 24 h when patients with schizophrenia or bipolar disorder are exhibiting signs of agitation.

It is well known that approximately 90% of people who suffer from schizophrenia and bipolar disorder experience agitation at one point or another in their lives. This could include approximately 2.4 million adults with schizophrenia and 5.7 million adults with bipolar disorder in the USA alone. It is essential that the agitation is treated as soon as possible; although it may begin as a minor problem, it could well escalate and have implications on and may propagate the patient's general symptoms, making their condition more noticeable to people around them and potentially causing threatening and even violent episodes from what began as a tense, restless mood or uncomfortable feeling. Normal treatments for these patients include antipsychotics and/or benzodiazepines, which are often available in oral or intramuscular forms; at present, however, there are no available quick-acting, noninvasive therapies.

ADASUVE™ is an antiagitation product that combines Alexzas Pharmaceuticals' proprietary Staccato system with loxapine. Loxapine is an antipsychotic currently available in the USA in an oral formulation for the management of schizophrenia. The Staccato system consists of a hand-held, single-dose inhaler that delivers the medication in a way that is comparable to intravenous administration. This system has numerous advantages, including greater ease of administration, patient comfort and convenience. In clinical studies, ADASUVE has demonstrated an onset of effect within 10 min of dosing, which is the first time-point measured in the Phase III

clinical studies. The ADASUVE new drug application contains efficacy and safety data from more than 1600 patients and subjects who have been studied in 13 different clinical trials.

> "Staccato® ... should be used alongside the FDA-recommended risk evaluation and mitigation strategy ... given as a single dose in 24 h when patients with schizophrenia or bipolar disorder are exhibiting signs of agitation."

The FDA will be taking the PDAC's recommendations into account when reviewing the new drug application, but this is only qualifies as a committee recommendation. The committee discussed ADASUVE, studied the available data and determined whether to recommend the drug based on the following criteria: whether ADASUVE (loxapine) inhalation powder was effective as a treatment for agitation in patients with schizophrenia or bipolar disorder and whether the inhalation powder is acceptably safe for use as a treatment for agitation in patients with schizophrenia or bipolar disorder when used in conjunction with the REMS proposed by the sponsor and the FDA.

The committee concluded that ADASUVE (loxapine) inhalation powder should be approved for use as an administration of a single dose in 24 h when used in combination with the FDA-recommended REMS for the treatment for agitation in patients with schizophrenia or bipolar disorder. However, in Europe, the EMA is processing an application of the drug's use and will follow their centralized procedure.

– Written by Michael Dowdall

Source: FDA committee recommends approval of ADASUVE for bipolar and schizophrenia: www.medicalnewstoday.com/articles/239137.php

Are group programs the key to preventing depression in children?

A systematic review has demonstrated that psychological interventions are useful in preventing depression in young children and adolescents and demonstrate protective effects that can last for up to 1 year.

> "...young people who participated in diverse and group prevention programs were significantly less likely to have a depressive disorder in the year following the program than those who did not participate."

According to the authors of the study, depression can wear away at a young person's enjoyment of daily life, have effects on their social relationships and performance at school, as well as increasing their risk of substance abuse. It is known that in these people, a first episode of depression dramatically increases the risk of subsequent episodes, initiating what is often a recurring course of illness and one that ranked as the second greatest cause of disability in developed countries, and is even the greatest cause in many developing countries in 2002.

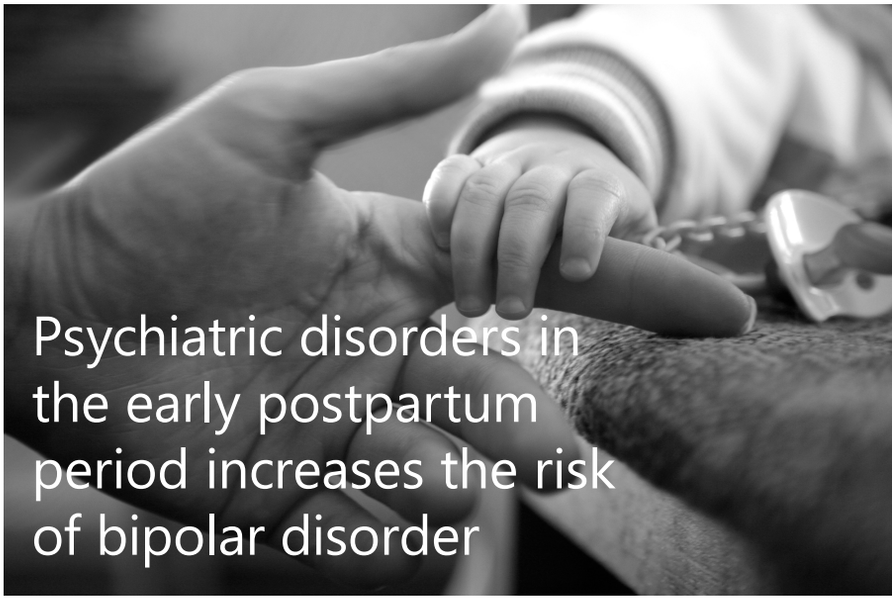
Commenting on why the prevention of depression and other mental illnesses is critical, Tamar Mendelson from the John Hopkins Bloomberg School of Public Health (MD, USA) noted that "For one, there are far too few clinicians to treat all the people suffering from depression and other mental illnesses. By intervening before the start of a disorder, prevention strategies have the potential to avert a chronic, episodic course of mental illness. Thus, prevention efforts with children and adolescents are particularly critical."

In the review, the research team, led by Sally Merry at the University of Auckland (New Zealand), analyzed a total of 53 studies, which included over 14,406 participants between the ages of 5 and 19 years, who were free of depressive disorder at the time they began to participate in the prevention programs. The authors found that the young people who participated in diverse and group prevention programs were significantly less likely to have a depressive disorder in the year following the program than those who did not participate. The same effect was observed, even if the same interventions were targeted at only a specific subset of children. The authors commented that group-based prevention strategies may offer a means of reaching more individuals than other treatment approaches. These approaches also tend to be generally less stigmatizing and more acceptable to participants than mental health treatments.

Most of the psychological interventions included some components of cognitive–behavioral therapy, while others emphasized the self-efficacy, stress reduction techniques and methods for handling trauma and maintaining optimism. Due to the widespread depression experienced in young people, the authors believe that these findings are important for multiple audiences, including young people, their parents and their schools, as well as healthcare professionals.

– Written by Michael Dowdall

Source: Group programs to prevent childhood depression prove effective: www.medicalnewstoday.com/releases/239386.php



Psychiatric disorders in the early postpartum period increases the risk of bipolar disorder

Researchers from the National Centre for Register-Based Research, Arhus University (Denmark) have recently published the results of a study that demonstrates that mothers experiencing a psychiatric episode in the first 30 days postpartum have an increased risk of developing bipolar affective disorder.

The study included data on more than 120,000 women born in Denmark from 1950 to 1991 who were alive in 2006 and had a history of first-time psychiatric issues, including admission or out-patient contact, with any type of psychiatric disorder, excluding bipolar affective disorder. Each woman was followed up individually from the day of discharge and data were collected on in-patient or out-patient psychiatric contacts during the follow-up period.

The authors found that of the women included in the study, more than 2.5% had their first psychiatric consultation within the first year after delivery of their first child. During follow-up, more than 3062 of the 120,378 women received diagnoses of bipolar affective disorder, and 132 of them had their initial psychiatric contact at 0–12 months postpartum. The researchers adjusted the data, screening for first diagnosis and family history of psychiatric illness, and demonstrated that conversion rates to bipolar disorder could be pinpointed by the timing of initial psychiatric contact.

A significantly higher conversion rate to bipolar affective disorder was observed in women having their initial contact within the first postpartum month. Furthermore, the severity of the initial postpartum psychiatric episode may be important, as in-patient admissions were associated with a higher conversion rate than were out-patient contacts.

The authors concluded that the study confirmed the already-established link between childbirth and bipolar affective disorder, demonstrating that initial psychiatric contact within the first 30 days postpartum significantly predicted conversion to bipolar affective disorder during the follow-up period. This indicates that the presentation of mental illness in the early postpartum period could potentially be a marker of possible underlying bipolarity.

– Written by Michael Dowdall

Source: Post-partum psychiatric problems increase risk of bipolar disorder: www.medicalnewstoday.com/articles/238665.php

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If you have newsworthy information, please contact: Laura Harvey, Commissioning Editor, *Neuropsychiatry*
Future Medicine Ltd, Unitec House,
2 Albert Place, London, N3 1QB, UK
Tel.: +44 (0)20 8371 6090;
Fax: +44 (0)20 8343 2313;
l.harvey@futuremedicine.com