Researchers find new way to examine major depressive disorder in children

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A landmark study by scientists at Wayne State University published in the May 6, 2011, issue of *Archives of General Psychiatry*, the most prestigious journal in the field, has revealed a new way to distinguish children with major depressive disorder (MDD) from not only normal children, but also from children with obsessive compulsive disorder (OCD).

MDD is a common, debilitating disease prevalent in childhood and adolescence. Examination of cortical thickness in patients with MDD has not been widely studied, and WSU's team of researchers set out to determine if differences in cortical thickness might not only distinguish children with depression from healthy children who are not depressed but also from those with other psychiatric disorders such as OCD.

Using a new technique to measure cortical thickness of 24 MDD patients, 24 OCD patients and 30 healthy control patients, the research team led by David Rosenberg, M.D., the Miriam L. Hamburger Endowed Chair of Child Psychiatry and professor of psychiatry and behavioral neurosciences in the School of Medicine at Wayne State University, and Erin Fallucca, M.D., a psychiatry resident at Wayne State University and the Detroit Medical Center, observed cortical thinning in five regions of the brain and greater thickness in the bilateral temporal pole in MDD patients. In OCD patients, the only significantly different region from healthy control patients was a thinner left supramarginal gyrus.

"The findings from our study are very exciting," said Rosenberg. "By measuring cortical thickness, we were able to distinguish depressed children not only from healthy children without depression, but also from those with another psychiatric disorder, obsessive compulsive disorder."

The study also revealed that familial depressed patients, or children with at least one first-degree relative with depression, had distinct cortical thickness compared to children with no obvious family history of mood disorder.

"Depressed children with and without a family history of depression who met the same clinical criteria of depression and who appeared the same clinically, had completely different cortical thickness based on their family history of depression," said Rosenberg.

This study offers an exciting new way to identify more objective markers of psychiatric illness in children. "It may have potential treatment significance for one-third of depressed children who do not respond to any treatment, and also for many who only partially respond with continued functional impairment," said Rosenberg. "We have found a clue to guide us to look at subtypes of depression just as we would in other chronic medical illnesses like diabetes, such as insulin dependent and non-insulin dependent diabetes."

Provided by Wayne State University