

# Bio-Medicine

According to a study, the scientists have bound dysfunction in a particular brain region to a psychiatric disorder marked by uncontrolled aggression. They say their findings extend the link that has been found between the brain area--called the orbital/medial prefrontal cortex circuit, or OMPCC and impulsive aggression.

In this case, the researchers studied 30 patients diagnosed with intermittent explosive disorder (IED). Considered an impulse-control disorder, IED is marked by outbursts of anger that far outweigh the provocation and that lead to aggressive or destructive acts.

Researchers sought to find out whether people with IED "express subtle dysfunction" that can be traced to a specific brain region. Using a series of tests that gauge functioning in the OMPCC, they were able to spot a pattern of behavior in the IED patients similar to that found in people with injuries to the brain region.

For one, IED patients showed marked differences from other study participants in tests of "emotion recognition"--being, for example, more likely to perceive "neutral" facial expressions as "disgusted." In other tests, Best's team found that IED patients, unlike the other study participants, failed to stop making "disadvantageous" choices over time in a standard gambling task. According to the researchers, this is similar to patients' everyday situations in which they react to problems with aggression, despite the possible consequences.

"In that sense," they write, "patients show an inability to learn from social cues." When asked to gauge emotions in photos of people's faces, IED patients showed problems in recognizing "anger," "disgust" and "surprise." And compared with other test subjects, they tended to label neutral expressions as "disgusted" and disgusted expressions as "angry," according to Best's team.

Finally, in a test of sensory perceptions related to OMPCC function, IED patients had more difficulty identifying various odors in "scratch-and-sniff" samples. All of this suggests that dysfunction in the OMPCC is involved in this impulse-control disorder, the researchers point out. In this study, researchers notes that individuals with other psychiatric disorders that involve impulsive behavior--such as antisocial personality disorder and obsessive/compulsive disorder--show deficits similar to those found.

<http://www.bio-medicine.org/medicine-news/Control-of-anger-disorder-connected-to-Brain-Dysfunction-1298-1/>