

Pioneering treatment could help people with severe depression

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Pioneering neurosurgical treatment, a world first in Bristol, which very accurately targets brain networks involved in depression, could help people who suffer with severe and intractable depression.

The research led by Dr Andrea Malizia, Consultant Senior Lecturer in the School of Social and Community Medicine at the University of Bristol and Mr Nikunj Patel, Senior Clinical Lecturer in the Department of Neurosurgery at North Bristol NHS Trust, are pioneering a number of treatments including experimental antidepressants, [deep brain stimulation](#) (DBS) and stereotactic neurosurgery.

The patient, whose illness had stopped responding to conventional treatments, was offered DBS in the first trial in the world that stimulates two different brain networks that are involved in depression. DBS in this case provided some temporary response but was not sufficient to make her well. She is now well following further advanced stereotactic neurosurgery carried out in early 2010.

The personal history of the patient, whose life has been changed by the pioneering treatment, will be broadcast on BBC One's 'Inside Out West' tonight [Monday 24 January].

Deep brain stimulation consists of inserting thin wires in the brain that are connected to a 'pacemaker'. The effects are to inhibit and stimulate [brain circuits](#) that are specific to the condition being treated. The current DBS trial targets different circuits involved in depression. These monitor

the regulation of emotion, oversee the integration of emotion with bodily and intellectual function and regulate internal drives.

Some patients do not respond to DBS or are not suitable for it, in which case the option of an 'Anterior Cingulotomy' using implantable guide tubes (GTAC) has been specifically developed in Frenchay and this patient was the first to have it. This operation also modifies circuits that are important in emotion and the academics believe to be overactive in a number of [psychiatric disorders](#). The neurosurgical developments pioneered at Frenchay make the surgery much more accurate and hopefully this will have an impact on increasing efficacy and decreasing side effects.

Dr Malizia said: "Our patients and their families suffer enormously and it is often thought that nothing else can be done. This lady responded temporarily to two of the complex treatments that we initiated in Bristol, but in the end remission has only been achieved by persisting and moving on to the next advanced treatment.

"We are very grateful to our patients and their relatives who, in spite of depression destroying their lives, bravely carry on fighting the illness year after year, and also to the League of Friends at Frenchay hospital who have donated DBS equipment - their support has been essential in starting this important endeavour."

Depression is an illness that affects about 20 per cent of people at least once in their lifetime. About half the people get well within six months but about ten per cent of sufferers are still unwell after three years. From then on the proportion of people who get well is much reduced with only about one in ten getting better every year.

There are a number of conventional treatments for depression including specific psychotherapies, different antidepressant medicines and

electroconvulsive therapy (ECT). Long-term experience has shown that each time a medical treatment does not work, there is a decrease in the probability of the next treatment working of about a third. This means that although 60 per cent of patients respond to the first antidepressant, only about 10 per cent will respond to the fifth. ECT remains the most efficacious short-term treatment but it does not work for everyone, its effects can be short lasting and some people have considerable side effects.

People who experience chronic [depression](#) can be very severely disabled: many lose their jobs, are on benefits, have to change home or lose their family. Personal distress is high and about 15 per cent die by suicide.

Provided by University of Bristol

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