

Clinic offers new treatment for depression

## **rTMS has skeptics, but Royal Ottawa doctor calls it a 'benign' alternative**

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It can feel like a tiny woodpecker perched on your scalp, and your eyebrows tend to twitch a lot.

But a new private clinic says that electric stimulation offers hope to mental health patients in Eastern Ontario and Western Quebec, especially those not responding to conventional treatment.

Repetitive transcranial magnetic stimulation (rTMS) electrically stimulates parts of the brain believed to influence depression and other mood disorders. The procedure is legal in Canada, although U.S. regulators have been hesitant to approve its widespread use.

The Royal Ottawa Mental Health Centre seems on board though, leasing space at its Carling Avenue facility to MindCare Centres, which already operates clinics in Vancouver and Toronto. The Ottawa location opened this week.

Advocates argue it's a non-invasive outpatient procedure that doesn't require a general anesthetic, is mostly painless, and qualified by mounds of research.

"Depression is a terrible, terrible disease that is very debilitating," said Iain Glass, MindCare's Vancouver-based founder and chief executive officer. "Unfortunately, there is a very large number of people who don't adequately respond to pharmaceuticals."

Researchers have also studied rTMS in the treatment of strokes, migraines, bipolar disorder and memory loss.

For upwards of \$7,000, patients typically undergo two to three weeks of treatment, though some go longer. Mr. Glass said the cost is less than hospital-based electroconvulsive (shock) therapy.

Twice a day, the patient reclines in a black chair for 40 minutes. An insulated coil is placed near the scalp above the brain's prefrontal cortex, where an electrical current gives off about 3,000 pulses in a single sitting to target specific nerve cells.

"What we're doing is applying a very concentrated magnetic field with the same sort of horsepower as an MRI," Mr. Glass said.

Mild headaches, the treatment's only major side effect, are experienced by 10 per cent of patients, he added. A preliminary examination determines the appropriate dosage of electrical current for each patient.

The average rTMS user is in his or her mid- to late-40s and has battled depression for at least 16 years. MindCare has treated about 500 Canadian patients since 2002, with a 70-per-cent positive response rate, Mr. Glass said.

The Ottawa clinic, currently with two staff members, hopes to have a full patient load by early next year. Patients with more complex symptoms, or those who resist traditional treatment, stand to benefit from rTMS, said Dr. Jean-Claude Bisslerbe, director of the Royal Ottawa's mood disorder clinic. In fact, he said, the Royal Ottawa sought funding a few years ago for its own rTMS operation.

"It's an interesting option, given the fact it's benign, given the fact it's still growing," Dr. Bisslerbe said.

Scientific minds have sought to harness the electromagnetic powers for medical use since the 19th century. The first TMS device was built in England in 1985, with the first clinical trial eight years later, once repetitive stimulation was introduced. But governments have taken a cautious approach toward rTMS therapy.

In the U.S., the Food and Drug Administration has yet to approve a TMS device for the clinical treatment of depression. In January, an FDA neurological advisory panel said the procedure showed no signs of efficacy compared to electroconvulsive therapy, even if it was viewed as a safer alternative. But several patients wrote supportive letters that lauded rTMS treatment over medication, psychotherapy and shock therapy.

Health Canada approved the treatment in 2002, but Ontario doesn't cover it. The Ontario Health Technology Advisory Committee told the Ministry of Health in 2004 that rTMS trials weren't conclusive enough to determine effectiveness in treating major depressive disorder.

Employer insurance plans have covered rTMS on a case-by-case basis.