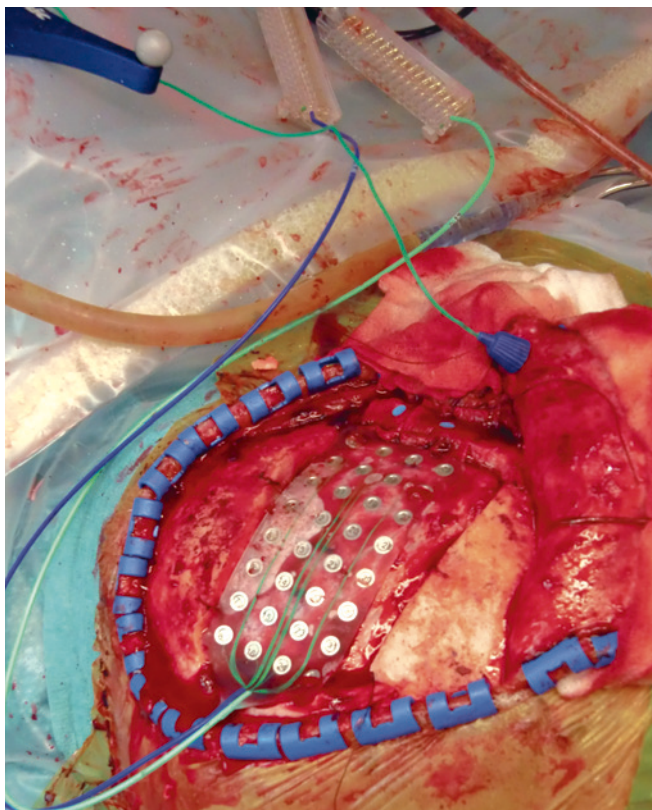


Stimulation of motor cortex for pain relief



A patient in his fifties had been suffering from debilitating pain in the right side of his body due to a thalamus infarction nearly 20 years earlier. He received long-term follow-up from several pain specialists without achieving satisfactory pain relief, despite treatment including high doses of various analgesics as well as intrathecal morphine and ziconotide.

Implantation of a motor cortex stimulator is a treatment that has proven to be effective in 50–75 % of selected patients with various pain syndromes (1). The procedure has not been carried out in Norway. In this case we performed the surgery at the Department of Functional Neurosurgery at Norrland University Hospital in Umeå, Sweden.

The images show an intra-operative assessment of the primary motor cortex of the pa-

tient. The assessment is performed using MRI and neuronavigation, somatosensory evoked potentials (SSEP) and electromyography (EMG). The aim of the surgery was to implant permanent electrodes over relevant areas of the primary motor cortex to relieve chronic and medically intractable pain.

Postoperatively the patient described a distinct alleviation of pain, especially in the face, where he stated that the pain was reduced by approximately 60%. In addition, he experienced improvement in walking function and chewing movement. He has not experienced any complications or adverse effects from the stimulation.

The patient has given his consent to the publication of this article.

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Received 4 January 2014 and approved 28 January 2014. Editor: Are Brean.