



Deep Brain Stimulation for Thalamic Pain Syndrome with Additional Lead for Dystonia

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Introduction

Thalamic pain syndrome is known to be refractory to medications and difficult to control. We present the first case of thalamic pain syndrome associated with dystonia that was treated with deep brain stimulation (DBS).

Methods

This is a case report of a 60-year-old female who suffered a right posterior cerebral artery stroke after aneurysm clipping complicated by thalamic pain syndrome which developed in a delayed fashion. This was manifested by severe left-sided face and body allodynia and hyperesthesia, and was associated with marked left-sided dystonia. Her symptoms were progressive and refractory to conservative management. The pain was disabling and debilitating. After multidisciplinary discussion, the patient underwent stereotactic right-sided lead implantation in the ventral capsule/ventral striatum for pain and right-sided stereotactic lead in the globus pallidus interna for dystonia, with microelectrode recording. A single impulse generator (IPG) was implanted. The leads placement and the IPG placement were performed in a single stage under general anesthesia.

Results

The surgery was successful without complications. She had marked improvement in her dystonia, with successful programming. Her affective component of pain improved subjectively but required multiple programming session and adjustment over time. She was able to reduce her pain medication consumption. The patient was satisfied with the results and her surrounding reported marked improvement and re-integration to society. She continued however to have intermittent breakthrough spells of severe pain. Unfortunately, she died from small cell lung carcinoma a year after her DBS surgery.

Conclusions

Deep brain stimulation targeting multiple networks is feasible and safe. It seems feasible and successful for pain management but would require multiple programming sessions.

Learning Objectives

Deep brain stimulation is feasible and effective for thalamic pain syndrome, however, subsequent programming to achieve adequate control can be challenging and time consuming

References

Please refer to main manuscript