Radiofrequency Thalamotomy for Tremor

Thalamotomy is an endorsed treatment for medication-refractory tremor. It used to be the standard, but nowadays deep brain stimulation (DBS) has become the treatment option of choice. Nevertheless, DBS has the disadvantage of hardware failure, battery replacement, and frequent setting adjustment. Radiofrequency thalamotomy lacks these issues, is relatively inexpensive, and has a broad applicability in patients with significant comorbidity. Therefore, Pauwels et al. analyzed the long-term patient-reported outcome of RF thalamotomy in a cohort of patients with an otherwise intractable tremor.

A single-center cohort of 27 consecutive patients with intractable tremor was assessed after unilateral RF thalamotomy. Over time, 4 patients had died because of non-related causes. In total, 21 patients responded to a telephone survey to assess their personal judgment on postoperative tremor severity, using a validated tremor scale, adverse events, recurrence, and patient satisfaction. The median time between surgery and telephone survey was 39 months (range 12-126). Seven patients had an additional analysis with postoperative imaging, video-assisted electromyography tremor registration, and a self-reported treatment effect (SRTE) assessment.

Nineteen out of 21 patients (90.5%) reported absence or significant improvement of their tremor. The rating score (WHIGET/UPDRS-III) dropped significantly from a mean of 3.57 preoperatively to 1.05 postoperatively ($p < 0.001$). Eleven patients (52.4%) reported adverse events, but the majority (76.2%) did not consider the adverse events to be severe. SRTE assessment showed a direct postoperative effect of 89.6 of 100 points (SD 10.8), with a gradual decrease to 75.3 (SD 23.5) during follow-up.

RF thalamotomy is a very effective long-term treatment for medication-refractory tremor and should, therefore, be considered in patients with a refractory unilateral tremor [1)].

Unclassified

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