

Percutaneous cordotomy

Pain is often one of the most debilitating symptoms in patients with advanced **oncology** disease.

Patients with localized pain due to malignancy refractory to medical treatment can benefit from selective percutaneous **cordotomy** that disconnects the ascending pain fibers in the **spinothalamic tract**.

Over the past year, Strauss et al. have been performing percutaneous radiofrequency cordotomy with the use of the O-Arm intraoperative imaging system that allows both 2D fluoroscopy and 3D reconstructed computerized tomography imaging. We present our experience using this technique, focusing on technical nuances and complications.

A retrospective analysis was conducted of all patients who underwent percutaneous cordotomy between March 2016 and March 2017.

Nineteen patients underwent percutaneous cordotomy procedures. Two patients developed intraoperative delirium and were unable to tolerate the procedure. In 16 out of 17 completed procedures, we achieved excellent immediate pain relief (94%). At 1 month after operation, 15 of the 17 (88%) patients were pain free, and at 3 months 5 out of 5 patients available for follow-up were still free of their original pain. Mirror pain developed in 6 of the 17 patients (35%), but was mild in 4 of these cases and controlled with medications. We experienced 1 serious complication (6%) of ipsilateral hemiparesis.

Percutaneous cordotomy using the O-Arm is safe and effective in the treatment of intractable oncological pain ¹⁾.

It has also been used in cases of severe pain of the abdomen or lower extremities due to less and other nonmalignant disease when the pain cannot be controlled by specific therapy. Max Peet in a recent article reviews the history of this operative procedure. and published nineteen cases of his own. The series includes three cases of primary malignancy of the spine, three of tabes dorsalis, two of myelitis. two of carcinoma of the rectum, one of carcinoma of the cecum, one of carcinoma of the uterus, one carcinoma of the breast, one sarcoma of the thigh, and one shell wound of the sciatic nerve in the pelvis. Most of the malignant cases had metastases of the spine or involvement of the pelvic glands with pressure on the lumbosacral plexus. A satisfactory relief of pain was obtained in fourteen cases and partial relief in five. These operations are not shocking ones, but should be reserved for patients in fairly good condition whose expectancy of life is at least several months ²⁾.

¹⁾

Strauss I, Berger A, Arad M, Hochberg U, Tellem R. O-Arm-Guided Percutaneous Radiofrequency Cordotomy. Stereotact Funct Neurosurg. 2018 Jan 10;95(6):409-416. doi: 10.1159/000484614. [Epub ahead of print] PubMed PMID: 29316547.

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