

LINAC-STEREOTACTIC RADIOSURGERY (LSRS) IN THE MANAGEMENT OF TRIGEMINAL NEURALGIA

Stereotactic Radiosurgery (SRS) with the Gamma Knife has been used successfully in the treatment of Trigeminal Neuralgia (TN). Results have been comparable to open surgery. Between 2000 and 2004, we have treated 27 patients with medically refractory TN with Linac Stereotactic Radiosurgery (LSRS). Targeting was defined by CT Cisternogram and MRI Scans, utilizing axial and coronal images. Autofusion with MRI and CT compatible external fiducials was performed. Treatment planning was accomplished thru the Radionics X-Knife Treatment Planning System. The dose was 87 Gy to D_m , in one fraction using the 5 mm collimator and 6 arcs with the 20% Isodose line just touching the brainstem. The dose rate was 400 MU/min. Average Arc length was 130 degrees. Machine Quality Assurance (QA) was performed prior to LSRS to insure that isocenter accuracy was < 1 mm. In addition, frame placement QA was done to insure stable frame position from the time of CT to the time of treatment. Our clinical results indicate that LSRS appears to offer comparable results to Gamma Knife SRS in the management of TN.