

CARING FOR PATIENTS WITH TOMOTHERAPY IN AN ERA OF PERSONALIZED MEDICINE



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Radiotherapy or Radiation Therapy is one of the important modalities in the management of cancer. The cancerous cells are killed with megavoltage X-Rays in Radiotherapy. It is used after surgery as an adjuvant treatment or as a lone modality as curative treatment. Some of the tumors may be treated with palliative intention too.

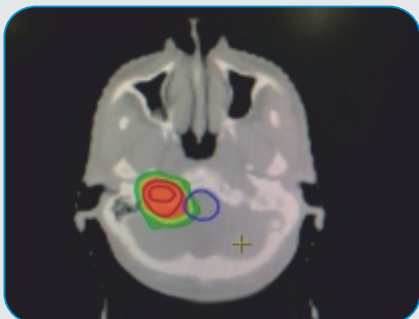
As like other treatments of malignancies, radiotherapy is also associated with some side effects. As surrounding normal cells get damaged by radiation, it produces unwanted side effects. To reduce these side effects lot of advancements happened in the Radiotherapy machines. The new advanced machine for Radiotherapy is called Tomotherapy H. This machine is currently the most conformal Radiotherapy equipment right now.

Tomotherapy looks like a CT Scan machine. The technique which is used by this machine is called Helical IMRT under image guidance. By doing Helical IMRT on Tomotherapy H, the dose to the normal tissues can be minimized and patient can tolerate the treatment better.

Tomotherapy can be used for any kinds of cancers. The main advantage of it is in the cases where a larger area needs to be given treatment or patients with multiple areas requiring radiation therapy at same time.

There are a few non cancerous conditions too where Radiotherapy can be used. Some brain tumors like Pituitary Adenoma, Schwannoma, Meningioma, Hemangioma, Craniopharyngioma etc can be treated with radiotherapy though there are benign.

Case Study



Case of jugular foramen Schwannoma treated with Tomotherapy

63 year old man was presented with giddiness and vertigo in 2016. He was evaluated with MRI of brain in June, 2016; which showed 2.3 X 2.8 X 1.3 cm size well defined mass lesion in Rt CP angle. He was treated with some medicines to relieve symptoms. He was fine till January, 2018. In January, 2018; he started experiencing tingling in right ear area and hearing impairment. MRI was done in March, 2018; which showed 2.7 X 2.5 X 3.1 cm mass in rt jugular fossa.

He was treated with fractionated radiosurgery on Tomotherapy in April, 2018. The dose of 25 Gy in 5 fractions was given. The patient is recovering well for now.