



EXCELLENCE IN
CANCER CARE

NCCI Neurospinal & Cancer Care Institute

M. HASHIM MEMORIAL TRUST



أفضل الأفعال خدمت الناس

PAKISTAN GAMMA KNIFE & X-KNIFE RADIATION ★ PET CT & PET-GUIDED RADIOTHERAPY ★ NEUROSPINAL & MEDICAL SERVICES

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Stereotactic Functional Neurosurgery have been started at Neurospinal & Cancer Care Institute

Functional neurological symptom disorder (FNsD) is a condition in which patients experience neurological symptoms such as weakness, movement disorders, sensory symptoms and blackouts. The brain of a patient with functional neurological symptom disorder is structurally normal, but functions incorrectly.

Functional neurosurgery is concerned with the treatment of conditions where the central nervous system (brain and spinal cord) physiology (normal function) is altered but the anatomy may or may not be normal. Examples of conditions treated by functional neurosurgery are chronic pain (including cancer pain and failed back surgery syndrome), spasticity, movement disorders (Parkinson's disease, dystonia, tremor etc), psychiatric conditions and epilepsy etc

20 years old lady with childhood Monosegmental Dystonia GPI noble art of lesioning, first patient who treated at Neurospinal & Cancer care institute. Pic.1 is before surgery, dystonia affected her hand and forearm (repetitive activity), such as writing (writer's dystonia).

Her surgery was done by **Prof. A. Sattar M. Hashim**, after surgery she can easily move her hand and no difficulty in movement. Pic. 2 after surgery and in pic. 3 can see stability of hand

Procedures

- Noble art of lesioning
- Deep Brain Stimulation
- Functional Neurosurgery by GAMMA KNIFE ICON



Pic. 2

Indications

- Essential Tremors
- Parkinson Disease
- Dystonia's
- Psychosurgery - OCD

Pic. 4 Second patient was treated with same disease.



Pic. 4



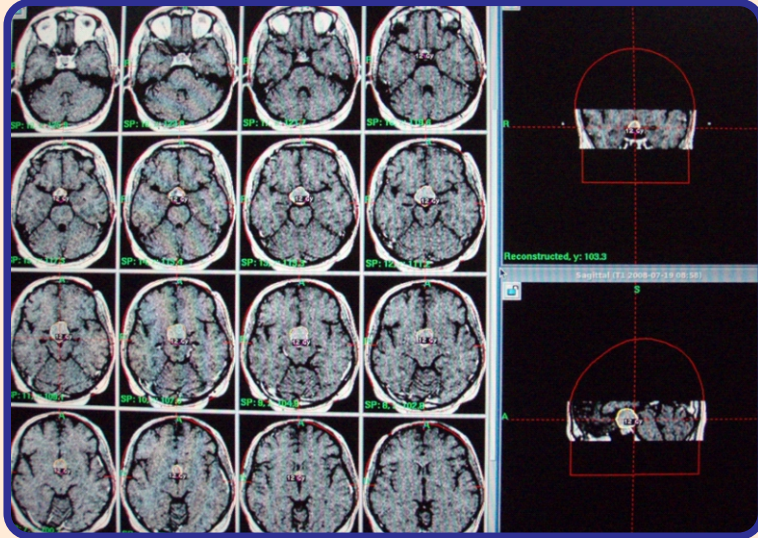
Pic. 1



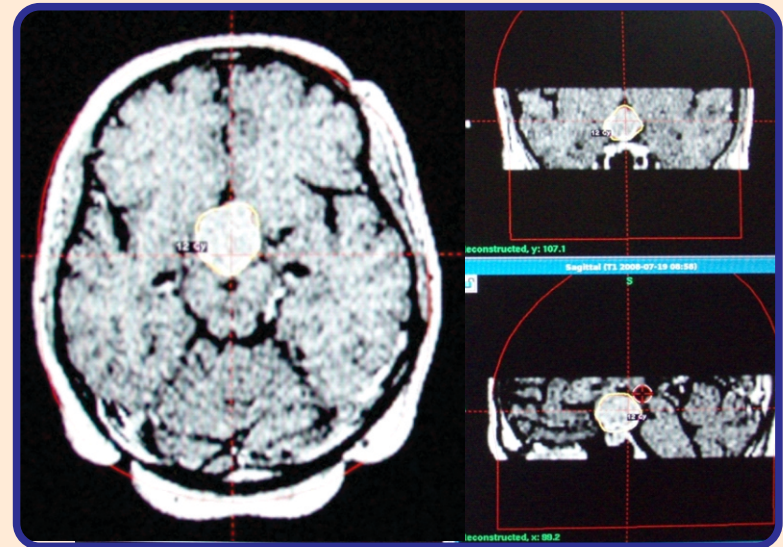
Pic. 3

GAMMA KNIFE RADIOSURGERY FOR CRANIOPHARYNGIOMA

Presentation
Fig.I) Male 32 years old
 H/o Headache and diminished vision more on Lt. Side.
 Lt. frontal craniotomy July 2007
 Residual Craniopharyngioma.



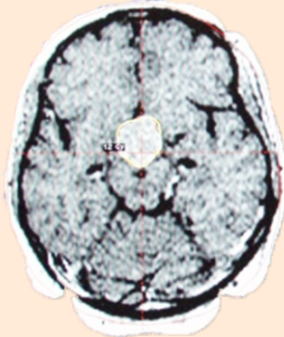
(Fig.II)



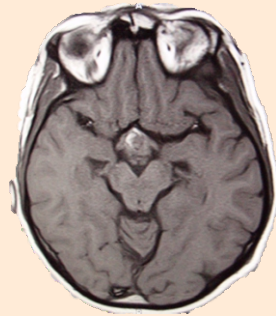
(Fig.I)

Gamma Knife treatment
(Fig.II)
 Marginal dose 12 Gy at 50% Isodose Line.
 Target Volume: 7.1 cc.
 Multiple isocenters with 4 and 8 collimators.

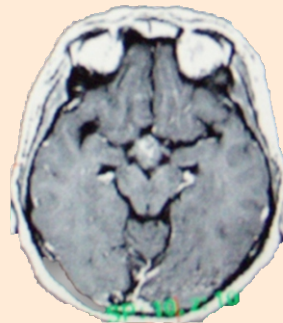
Result
(Fig.III) Follow up MRI after one year and two years.
 No headache or fits and marked improvement in vision



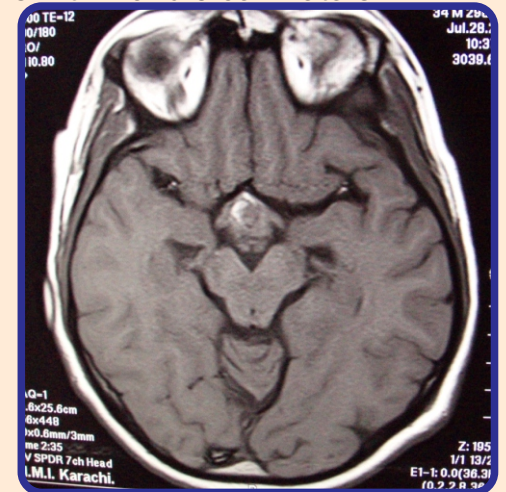
AT GKRS



AT ONE YEAR

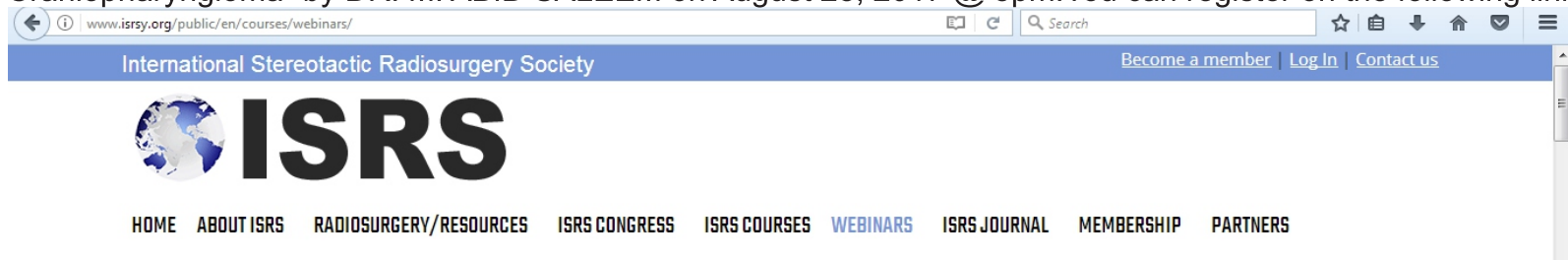


AT TWO YEARS



(Fig.III)

International Stereotactic Radiosurgery Society WEBINARS SERIES, Exclusive Webinar on “Gamma Knife for Craniopharyngioma” by DR. M. ABID SALEEM on August 28, 2017 @ 5pm. You can register on the following link.



August 28, 2017



Gamma Knife Radiosurgery of Craniopharyngiomas by Abid SALEEM

1:00 pm (Dublin, Edinburgh, Lisbon, London) - 2:00 pm CET (Amsterdam, Berlin, Bern, Paris, Rome, Stockholm, Vienna) - 8:00 am (Eastern time - New York, Canada) - 9:00 am (Brasilia) - 9:00 pm (Tokyo) - 5:00 am (Pacific time - Los Angeles) - 10:00pm (Brisbane)

Craniopharyngiomas are benign tumors with malignant clinical course. The microsurgical removal is desirable but perilous due to its adherence with adjacent neurovascular structures. In this webinar an account of our own experience with adult and pediatric cases will be provided and the literature reviewed to define the role of gamma knife radiosurgery in the management of craniopharyngiomas.

[Http://www.isrsy.org/public/en/courses/webinars/](http://www.isrsy.org/public/en/courses/webinars/)

13th International Stereotactic Radiosurgery Society Congress 2017 held in Montreux, Switzerland, from May 28 to June 1, 2017

Leading consultants of Neurospinal & Cancer Care Institute, Prof. Abdul Sattar M. Hashim (Neurosurgeon), Dr. Muhammad Abid Saleem (Neurosurgeon) & Dr. Azhar Rashid (Radiation Oncologist) attend "13th International Stereotactic Radiosurgery Society Congress 2017" at Montreux, Switzerland.

The 13th ISRS biannual meeting and our 25 years of successful multidisciplinary work to develop Radiosurgery worldwide. We experienced a scientific revolution in Neurosurgery, Radiation Oncology and Medical Physics working with our society. This year, as traditionally, the ISRS leadership brought several lines of development key for the progress in Neurosurgery and Radiation Oncology, supported by Medical Physics. Our specialties enjoy the security of a technic using principles previously existent in both specialties, but necessitating a genius' mind to take the obvious to the knowledge of all. Dr. Lars Leksell conceptualized Radiosurgery in 1951, idea that 40 years later would give the birth to our truly international and multidisciplinary society in 1991.

ISRS President

Antonio de salles, Brazil

Five fraction stereotactic radiosurgery (srs) for Brain meningiomas by Dr. Azhar Rashid

Objectives: To describe the efficacy and toxicity of the five fraction stereotactic radiosurgery (SRS) for brain meningiomas.

Background: Effectiveness of conventional adjuvant EBRT, affront single session gamma knife radiosurgery and moderately hypo fractionated radiotherapy for brain meningiomas are well studied and proven to have good local controls with minimum side effects.

Five fractions hypo-fractionated radiotherapy (multisession SRS) was used for relatively large tumors and for those closely lying with critical organs and not suitable for gamma knife single session radiosurgery. This schedule was considered to be beneficial equivalent to single session in terms of local control rate while good protection of critical organs in terms of fractionated irradiation for the large volume meningiomas.

Methods: From 01.01.10 to 30.06.16, 1220 patients were treated on Synergy-S (Linac based radiosurgery system). 100 patients of intracranial meningiomas (including recurrent) were treated with 5 fractions radiosurgery. 40% were male and 60% were female patients. Mean age was 41.74 years (range: 18-67 years). Patients were followed up at 6 weeks, 3 months and then 6 months till 5 years time. Mean volume (PTV) was 46.87 cc (range: 2.20-90.20cc). Prescription dose 2500 cGy was used in five fractions at 400 to 500 cGy/day (Mean Fraction dose= 4.5 Gy/day). Mean prescription Isodose line was 80 % (range: 65-100%). Median Maximum Dose was 3119 cGy (range: 2442- 4284 cGy).

Median Mean dose was 3070 cGy (range: 2251-3592 cGy). Median Minimum dose was 2321cGy (range:1909-2950 cGy). Review of literature by using Pubmed, Medscape and Pubmed Central was carried out to establish the safety and efficacy of 5 fractions SRS in brain meningiomas.

Results: Clinical Improvement was seen in about 88 % of the patients, radiologically most of the tumors were stable around 68 %, 10 % had small residual disease while 10% progressed from original size at about 18 months after SRS. 02% patients were lost to follow-up. 10% patients were dead at median follow-up time of 4.2 years (range:1-5.5 years). 50 % of the dead patients had non tumor related death, while 50% had death due to progressive disease. No acute toxicity was observed, while use of steroids was prolonged in about 10 % of the patients mean duration was 3 months(range 1-6 months).

Conclusion: This retrospective study revealed high local tumor control rate and acceptable toxicity of five fractions radiosurgery for brain meningiomas. Further larger studies required to establish its future use.



Dr. Azhar Rashid Presentation
on ISRS 2017



Prof. A Sattar M Hashim with
Dr. Muhammad Abid Saleem

Gamma Knife Radiosurgery for Arteriovenous malformations in pediatric and adolescent patients. By Dr. M. Abid Saleem

Objective: To determine the efficacy and safety of gamma knife radiosurgery for arteriovenous malformations of paediatric and adolescent patients.

Methods: Between May 2008 and August 2016 more than 2300 patients were treated using 201 source cobalt 60 Leksell gamma Knife 4c at Pakistan gamma Knife center Karachi. It included 372 patients with AVMs. There were 93 patients which were 18 yrs or younger. Seventy one patients (72.4%) had hemorrhage at the time of presentation. Fifteen patients had multiple hemorrhages (15.3%). Mean target volume was 3.7cc (range 0.32-31.8cc). Mean prescription margin dose used was 18.9 Gy (range 14-22 Gy).

Result: Out Of 93 patients, radiological follow up for more than 03 years was available for 52 patients. Complete Obliteration on angiography/MRI images was found in 32 patients (61.5 %). Partial or ongoing obliteration is described in 20 patients. No acute morbidity is noted within 48 hours of treatment. Two patient (post embolisation) with partial obliteration with evidence of rebleed was retreated at 02 years. The incidence of hemorrhage at 03 years after gamma knife was 4%. Post gamma knife odema was noted around the obliterating AVM in 5% cases without new neurological deficits. One patient with SM grade IV in Rt. thalamic region had increase in left hemiparesis. One patient with left occipital AVM developed visual field defects.

Conclusions: Gamma Knife Radiosurgery for paediatric AVMs offers a safe and effective treatment option, with low permanent complication rates during early follow up.



Dr. Azhar Rashid
&
Dr. Muhammad Abid Saleem

PET CT/SCAN

CA Esophagus with Metastasis
Superior mediastinum at left para-tracheal regeon

