CT GUIDED PERCUTANEOUS DRAINAGE OF RETROPERITONEAL COLLECTIONS IN A PATIENT WITH ACUTE NECROTISING PANCREATITIS & MULTI-ORGAN DYSFUNCTION

KEYHOLE SURGICAL EVACUATION OF HEMATOMA IN A PATIENT WITH SPONTANEOUS INTRACEREBRAL HEMATOMA

AN UNUSUAL CASE OF A COMPLETE LEFT LUNG COLLAPSE TREATED SUCCESSFULLY
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As we move forward, we would like to take this opportunity to share with you all, significant information of high-risk and exceptional cases treated right from day one at Alexis.

‘Alexis Pulse’ is a magazine exclusively highlighting and sharing these exceptional case studies. This is a clinical magazine for the doctors by the doctors.

We hope you will gain from the knowledge of these case studies and contribute to the communities by stepping forward and engaging with us on any interesting insights you may have for us to deliberate on.

Best regards,

Dr. Jatinder Arora
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KEYHOLE SURGICAL EVACUATION OF HEMATOMA IN A PATIENT WITH SPONTANEOUS INTRACEREBRAL HEMATOMA

A CASE REPORT BY
DR. HUSAIN BHATI, DR. ABHISHEK WANKAR, DR. MANOJ PETHE & DR. RAKESH BHAISARE

Abstract:

Although the surgical management of spontaneous intracerebral hematoma (SICH) is a controversial issue, it can be life-saving in a deteriorating patient. Surgical techniques have varied from the open large craniotomy, burr hole and aspiration to the minimally invasive techniques like stereotactic aspiration of the SICH, endoscopic evacuation and stereotactic catheter drainage. The authors report a case of SICH treated with keyhole craniectomy technique. A small craniectomy of 2.5 cm diameter was made using a vertical incision over a relatively silent area of the cortex closest to the clot. Using a small cortical incision the hematoma was evacuated and decompression was achieved. Hemostasis was achieved using standard microneurosurgical techniques. Good outcome was achieved with minimal blood loss during the procedure. The keyhole craniectomy technique is minimally invasive, safe and can achieve good clot evacuation with excellent hemostasis. It can be combined with microscope or endoscopic assistance to achieve the desired result.

Introduction:

Spontaneous intracerebral hematoma (SICH) is one of the most devastating forms of cerebrovascular disease accounting for about 15% of all strokes. It is associated with high morbidity and mortality.[1] The role of surgery in the management of these cases is controversial. It is possible that some cases will benefit from surgical evacuation. Current practice favours surgical intervention in following situations: lobar haemorrhage, clot volume between 20 to 80 ml, worsening neurological status, relatively young patients, and haemorrhage causing midline shift or raised intracranial pressure(ICP).[2] Surgical indications in cerebellar hematomas however are more accepted. Hematomas above 3 cm diameter and those causing hydrocephalus, generally require surgical evacuation.[2,3,4] Various surgical strategies have been adopted over the years for evacuation of the intracerebral hematomas ranging from the large open craniectomies and decompression to the more minimally invasive therapies like stereotactic evacuation of hematomas, endoscopic evacuation, stereotactic endoscopic evacuation, stereotactic fibrinolytic therapy etc.[5,9] Tsementzis has advocated a method of a small trephine craniotomy 3 cm in diameter and evacuation of hematoma through this craniotomy.[5] The authors present a case treated with a keyhole craniectomy in the evacuation of SICH.
Case report:
A 78-year old woman was brought in an emergency with history of headache, vomiting, altered sensorium and left-sided paralysis. Patient was a known case of hypertension, but on irregular treatment. CT scan brain was performed which showed massive right basal ganglia bleed with intraventricular extension with mass effect and midline shift. An emergency surgery was performed by doing a 2.5 cm keyhole craniectomy and hematoma evacuated under microscope. Postoperative CT brain showed minimal residual hematoma with decrease in intraventricular bleed without any mass effect or midline shift. Postoperatively, patient was on ventilatory support which was weaned off gradually. Patient improved gradually with improvement in paralysis and discharged in a stable condition.

Discussion:
SICH forms 15% of all strokes and carries a high morbidity and mortality.[4] Typically the intracerebral hematomas secondary to hypertension are found in the basal ganglia, putamen and globus pallidus; thalamus; cerebral lobes; cerebellum and brain stem.[1,5] The role of surgical treatment in the management of these hematomas is controversial. Clear-cut indications and guidelines for surgical treatment are not available. However, it is considered by most that, surgery may be indicated in patients where the hematoma is large in the basal ganglia; lobar; where there is secondary neurological worsening; in young patients; in those with hydrocephalus and in those whom a secondary cause is suspected.[1,4,5] There is little to be gained by direct surgery in patients with thalamic and pontine haemorrhage.[1] However, the indications for surgery are more frequent for cerebellar hematomas as the risk of brainstem compression and hydrocephalus from ventricular obstruction are important.[4]

The authors advocate a keyhole craniectomy which is a minimally invasive technique by which significant evacuation of the hematoma (near total and subtotal evacuation) can be achieved with excellent hemostasis. The formal large craniotomy or decompressive large craniectomy and dural enlargement subsequent to hematoma evacuation, have proved to be very useful in a group of severely compromised patients with SICH. The evacuation of hematoma and hemostasis has been found to be excellent with this modality. However, associated morbidity of the craniotomy, prolonged operative time and blood loss have been noted as some of the disadvantages of this approach. The ‘edge effect’ resulting in compression of the brain and the cortical veins along the edges of the craniectomy has also been cited as one of the disadvantages. In the minimally invasive procedures, the morbidity of extensive craniotomy can be obviated, but the evacuation of hematoma and subsequent perfect hemostasis may be technically difficult. The keyhole craniectomy is a less invasive method requiring less operating time and blood loss. Perfect hemostasis can be achieved using the standard microneurosurgical techniques. The ‘edge effect’ of a large craniectomy is obviated. Endoscopic usage is also possible through the same approach. The keyhole craniectomy can also be extended into a formal craniotomy if a secondary lesion such as an aneurysm or an arterio-venous malformation or a tumour is encountered. This surgical procedure can be performed at all neurosurgical centres with basic neurosurgical infrastructures, without any expensive instruments such as the stereotactic apparatus or the endoscope.

Conclusion:
Keyhole craniectomy for the surgical evacuation of SICH is a less invasive and effective surgical modality. Good evacuation of the clot can be achieved with perfect hemostasis. Good results with this procedure can be obtained in young patients with lobar or large basal ganglionic hematomas with worsening neurological status. Surgery is not a preferred modality of treatment in patients with deep seated (thalamic and brainstem) hematomas. Poor results may be expected in patients with advanced age, hematoma volume of more than 60 ml, and GCS less than 6.

References:
AN UNUSUAL CASE OF A COMPLETE LEFT LUNG COLLAPSE TREATED SUCCESSFULLY AT ALEXIS MULTISPECIALITY HOSPITAL

A CASE REPORT BY
DR. MANOJ PETHE, DR. SANJIV GOLHAR, DR. AJAY PATEKAR, DR. DILIP WASNIK & DR. RAKESH BHAISARE

Abstract:

Foreign body aspiration is not an uncommon problem particularly in children, elderly and those with predisposing factors like neurological impairment. In adults the diagnosis is usually delayed as it is confused with other lung diseases. [1] Foreign body aspiration, if undiagnosed, can often lead to distal airway complications such as partial or whole lung collapse, post obstructive pneumonia, etc. Once diagnosed, the management involves use of rigid or flexible bronchoscopy for prompt removal of foreign body. Here we present a case of a 75-year old male presented to us after almost one month history of aspiration of betel nut pieces and complete left lung collapse. Removal of multiple pieces of betel nut with the use of rigid bronchoscopy and flexible bronchoscopy under general anaesthesia, and thereafter successful management of this patient for post obstructive pneumonia and sepsis in our Intensive Care Unit (ICU) are the highlights of this case.

Case Report:

A 75-year old male with no previous medical problems was admitted in first week of June in 2017 at Alexis Multispeciality Hospital with complaints of cough with expectoration and breathlessness on exertion for 1 month duration, and history of intermittent fever of about 1 week duration. On admission, he was afebrile and his blood pressure (130/74mmHg), pulse rate (86/min) and respiratory rate (20/min) were normal. Examination of respiratory system revealed absent breath sounds and dull note on percussion over left hemithorax. Other systemic examination was unremarkable. Posteroanterior radiograph of chest x-ray showed complete collapse of the left lung and there was cut off of left main bronchus (Fig 1).

CT scan examination of the thorax revealed complete collapse of left lung and endobronchial opacity in the left main bronchus suggestive of a foreign body which was almost completely occluding the lumen of the left main bronchus. Patient’s history was reviewed again and he recollected history of foreign body aspiration (betel nut) a month earlier while chewing betel nuts after dinner. He had intractable cough and choking sensation after this episode again and he recollected history of foreign body aspiration. Bronchoscopy was done, which showed aggregated betel nut particles completely occluding the left main bronchus. In view of this, rigid bronchoscopy under general anaesthesia was performed the next day. With rigid as well with a flexible bronchoscope, multiple pieces of betel nuts were removed from left main bronchus and segmental bronchi on left side (Fig 2).

Fig 1- Chest X-Ray on admission showing complete collapse of left lung

Fig 2- Foreign bodies (betel nut particles)
This procedure lasted for 3 hours and during this procedure it was also noted that from 2 segments of left lower lobe bronchi, pus was oozing out. At the end of this procedure, it was ensured with flexible bronchoscopy that the all bronchi in left lung were patent and there were no visible foreign bodies (fig 3 & 4).

His post procedure chest x-ray showed complete expansion of left lung (fig 5).

**Fig 5 - Chest X-ray on discharge**

**Discussion:**

Adults constitute approximately 20% cases of tracheobronchial aspiration. Among adults, the median age group reported is 60 years. This is attributed to higher incidence of cerebrovascular and neurodegenerative disorders in elderly that compromise swallowing and airway protective reflexes. Most commonly aspirated materials include vegetable matter, dental appliances/prosthesis, medical appliances, bone fragments etc.[2] A history suggestive of aspiration may not be forthcoming in most of the adults and some may recollect it retrospectively. Betel nut is a commonly incriminated agent in foreign body aspirations from the South East Asian region. Once diagnosed, prompt removal of foreign bodies from bronchial tree is essential to avoid irreversible complications.

This patient already had developed pneumonia due to obstruction of major bronchi in left lung and further delay in removing betel nut particles would have led to haemoptysis, lung abscess, scarring and destruction of lung and permanent collapse of left lung. Betel nut as it absorbs moisture while in bronchi, it swells up and causes more bronchial obstruction. It is known to cause excessive damage and scarring surrounding it, and also can cause bronchial erosions.[3] Removal of multiple betel nut particles by the use of both rigid and flexible bronchoscope under general anaesthesia along with successful management of post procedure sepsis due to post obstructive pneumonia in ICU make this case report unique.

A high index of suspicion is required in young adults and elderly for early diagnosis, and management of endobronchial foreign bodies to avoid long term complications.

**References:**

CT GUIDED PERCUTANEOUS DRAINAGE OF RETROPERITONEAL COLLECTIONS IN A PATIENT WITH ACUTE NECROTISING PANCREATITIS & MULTI-ORGAN DYSFUNCTION

A CASE REPORT BY:
DR. NISHANT DESHPANDE, DR. ABHIJIT DESHMUKH, DR. PRAKASH JAIN, DR. RAJESH MUNDHADA,
DR. NITIN WADASKAR & DR. MANOJ PETHE

Abstract:
Necrotising pancreatitis carries a very high rate of mortality especially in those patients presenting with multi-organ dysfunction. In recent years, the treatment of severe acute pancreatitis has shifted from early surgical treatment to aggressive intensive care. Minimally invasive procedures can avoid laparotomy and reduce perioperative stress in patients with multi-organ dysfunction and sepsis who are unfit for surgery. This is a case report that describes a complicated patient with acute necrotising pancreatitis with renal failure who was successfully managed with aggressive intensive care, hemodialysis, percutaneous CT guided drainage of infected peripancreatic collections without surgical intervention. A good collaboration among intensive care physicians, gastroenterologists, surgeons, interventional radiologists and nephrologists can improve patient outcomes.

Introduction:
Acute Necrotising Pancreatitis with multi-organ dysfunction carries a very high rate of mortality risk.[1] Early phase is marked by systemic inflammatory response and often leads to associated renal, pulmonary and cardiovascular complications.[2] Pancreatic necrosis develops in the first few days and gets organised after 4 weeks of presentation following which secondary infections can occur, that often lead to late complications.[3] Surgical debridement is the recommended treatment for infected pancreatic and peripancreatic necrosis. However, performing extensive debridement in the setting of sepsis and malnourishment carries a high mortality risk. In recent years less invasive techniques like CT guided percutaneous aspiration of pancreatic and peripancreatic collections have been described which can postpone or avoid laparotomy in such situations.[4] This case report describes the clinical profile, investigations performed, microbiology of collections and a minimally invasive strategy in case of acute necrotising pancreatitis treated at Alexis Multispeciality Hospital, Nagpur.

Case Report:
The patient N.P, a 36-year old male with a previous history of chronic alcoholism was admitted through emergency, on AMBU ventilation with a diagnosis of acute necrotising pancreatitis. He had 7 days history of abdominal pain and distention before admission to Alexis Multispeciality Hospital, more in the upper quadrants. There was a history of rapid deterioration during previous hospitalisation at his native place, where he required endotracheal intubation and ventilator support for the first 72 hours and initiated on hemodialysis as urine output declined. On admission to the Surgical Intensive Care Unit at Alexis Multispeciality Hospital, he had an APACHE score of 24 and was shifted on mechanical ventilator support and given IV fluid bolus. Blood and urine cultures were obtained from invasive devices already in situ. Emergency hemodialysis was given through right internal jugular double lumen catheter as anuria persisted. An elevated white cell count with shift to left (29,660/cumm) was noticed and platelet count was 218000/cumm and serum biochemistry revealed creatinine - 7.1mg%, serum amylase. Initial treatment consisted of antibiotics (Imipenem - Cilastatin 250mg IV thrice a day and metronidazole 500mg IV thrice a day for 15 days).
A non-contrast CT abdomen was performed which revealed necrotising pancreatitis with severe mesenteric fat stranding with partial thrombosis of portal vein, low molecular weight heparin was added to the treatment regimen. Nasojejunal tube was inserted for enteral feeding. Daily Sustained Low Efficiency Hemodialysis (SLED) was done. Tracheostomy was done on day 7 as the patient required ventilator support. Over the first week, the patient remained febrile and had abdominal distention. Gradually white cell count declined and he had improvement in urine output. Gradual withdrawal of hemodialysis support was done.

During the second week, he continued to have abdominal distention and subsequently developed paralytic ileus on day 20. A repeat CT abdomen revealed necrosis with retroperitoneal collections that were suitable for surgical drainage. However, he declined surgical intervention in view of the possible requirement for frequent laparotomy and lavage as well as associated potential complications. The treating team then decided that the only option to drain these collections and achieve source control would be to use percutaneous drains placed in to the collections under image guidance.

On day 21, a 16 Fr Malecot’s catheter was introduced percutaneously in the left-sided retroperitoneal collection under ultrasound guidance, haemorrhagic fluid was drained and patient required blood transfusion and fresh frozen plasma transfusion. As a staged procedure on day 30, CT guided 18 Fr Malecot’s Catheter was introduced in left sided retroperitoneal collection, along with another 18 Fr catheter in right paracolic gutter. There was about 1000 ml of thick, grey and non-smelling pus coming out directly after the placement of drains. The culture from the pus resulted positive for klebsiella pneumoni and tigecycline was added to the regimen accordingly. Abdominal distention gradually declined and he was weaned off ventilator support after 25 days of admission. Patient was shifted out of intensive care unit on day 26.

Drain output volume was closely monitored. On day 37, CT guided 24 Fr percutaneous drains were placed in the left retroperitoneal collection (three separate sites – one close to the tail of pancreas and other two in the left paracolic gutter) and saline irrigation and aspiration from the collections was done under strict aseptic precautions on regular basis. In the event of blockage of drains they were exchanged with drains having a wider bore (28 Fr ICD), under CT guidance.

As the patient and his family consistently declined surgical intervention, nine such exchanges from day 37 to 85 (every sixth day on an average) were performed. These were done when monitoring clinical parameters, abdominal distension, clinical evidence of fever, rising counts, CRP and falling urine output and drain output were observed. As drain volume declined sequential removal of drains was done with a single drain left in situ on the left side and irrigation and aspiration continued through it. High protein diet and nutritional support was given to prevent protein energy wasting. Tracheostomy tube removal was done on day 95 of hospital stay.

The patient was discharged from the hospital after 104 days of hospitalisation, in a stable condition. Meanwhile, a CT scan control was performed, which showed minimal fluid collection in left retroperitoneal space for which a drain was left in situ at the time of discharge. On follow-up, drain output continued for a period of another two months while the patient was at home, after which it was removed on OPD follow-up. Hence, in this case surgical treatment was completely avoided.
Discussion:
Interventional techniques have become increasingly important in recent years due to the now ubiquitous availability of CT scanning and ultrasonography. Freeny P, Escallon and colleagues developed a technique of percutaneous drainage which not only drained infected necrosis passively but included necrosectomy by adding aggressive irrigation through large bore percutaneous catheters (28 F). [4]
Thirty four patients with necrotising pancreatitis and uncontrolled sepsis were treated in their series. An average of three separate catheter sites per patient and four catheter exchanges per patient were necessary for the removal of necrotic material. Pancreatic surgery was avoided in 16 patients (47%), and sepsis was controlled in 25 patients (74%). Although nine of the latter group needed elective surgery, the surgical procedure could be avoided successfully in critically ill patients until stabilisation.
Percutaneous drainage was ineffective in nine patients who needed surgery to control sepsis or bleeding (26%). The overall mortality was 12%. [4] These four patients were all critically ill with multi-organ failure, bleeding, or shock. Patients with central gland necrosis, who often present with disruption of the midsection of the main pancreatic duct resulting in a fistula, responded poorly to percutaneous drainage. Percutaneous drainage is a viable option for bridging the treatment for patients with infected necrosis who are critically ill and have multi-organ dysfunction without peritonitis. Appropriately timed surgical drainage and necrosectomy is still the standard of care for necrotising pancreatitis, but in situations where surgical operation is not possible nor preferred, radiological drainage can be considered. It requires high commitment from the treating team with very frequent CT guided catheter exchanges and long duration of catheter placement.

Conclusion:
This case report describes a successful treatment procedure in a patient with severe necrotising pancreatitis with an adverse prognostic profile on admission by percutaneous CT guided drainage of retroperitoneal necrotic collections. Percutaneous drainage of infected pancreatic necrosis is an option for critically ill patients who have multi-organ dysfunction who are malnourished and unfit for extensive surgical debridement. A good collaboration among intensive care physicians, gastroenterologists, surgeons, interventional radiologists and nephrologists can improve patient outcomes.

References:
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He is a very poor risk for surgical
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4. Freeny P, Hauptmann E, Althaus S, et
1. Steinberg W, Tenner S. Acute
2. Hsu, Yi-Yin Jan, Tsann-Long Hwang.
3. Timing of mortality in severe acute
1998-1210
J Roentgenol1998; 170:969–75.
References:
1. Hsu, Yi-Yin Jan, Tsann-Long Hwang.
2. Steinberg W, Tenner S. Acute
3. Timing of mortality in severe acute
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8
Abstract:

Patients with solid tumours developing brain metastases generally have poor outcomes, if multiple in numbers. However, few brain metastases at diagnosis with good performance status can be treated with radical intent, hence providing improved survival and quality of life to patients. Surgical resection was treatment of choice for such patients till few decades back. However, the advent of stereotactic radiosurgery has made it possible to treat patients with few (commonly <=4 metastases) with non-invasive treatment providing comparable local control and survival.

Introduction:

Incidence of brain metastases in patients with cancers has increased, owing to increased survival in cancer patients with improved oncological treatments. Brain metastases are mainly seen in patients suffering from solid tumours, of which 37-50% present with single lesion and around 50-63% have multiple brain metastases.[1] The traditional treatment for brain metastases has been whole brain radiotherapy, with poor survival and treatment outcomes involving significant neurological impairment. The median survival with such treatments was approximately 3-4 months.

With better follow-up compliance, many patients are diagnosed with single or few (2-4 brain lesions) at diagnosis. Such patients are candidates who should be treated with more aggressive treatment in order to achieve disease control as well as improve survival. To improve this outcome, patients having single brain lesion are offered surgical resection (if location of the brain metastasis is surgically suitable) followed by adjuvant whole brain radiotherapy so as to achieve better local control as well as overall survival.[2,3] With the improvement in radio-imaging (MRI, MR spectroscopy) and radiotherapy treatment planning techniques, it has become possible to deliver high ablative radiation dose in a very precise and accurate manner to the brain lesions thus achieving comparable local control to surgical management. Stereotactic Radiosurgery (SRS) is an effective technique that helps in sparing patients from neurological sequelae due to whole brain radiotherapy and thus achieving better disease control along with better quality of life.

Stereotactic radiosurgery (SRS) is defined as ablative radiotherapy dose delivered in single or up to 5 sessions.[4] Lesions amenable to SRS are defined as lesions measuring ≤3cm in maximum diameter on MRI scan and minimal (<1cm midline shift) mass effect. Although the exact number of lesions that can be treated with SRS is not yet defined, the total volume of lesions to be treated with SRS should be less than 10 cubic cm.[5] The fact that high dose is delivered in SRS to brain lesions (hypofractionation), it is an radiobiologically effective for treating brain metastases originating from radioresistant tumours like RCC, melanoma.

It is an effective way for deferring whole brain radiotherapy as a salvage treatment without any significant adverse sequelae. Also, SRS helps in treating brain metastases which are surgically unresectable, achieving good local control.[6]

SRS has also been proven as an effective treatment for benign lesions like acoustic neuroma, glomus jugulare and temoral neuralgia with good results.
**Case report:**
A 54-year old postmenopausal female was diagnosed with locally advanced carcinoma of right breast (ER/PR negative, her 2 neu positive) in 2016. She was treated with neoadjuvant chemotherapy followed by Rt modified radical mastectomy and locoregional radiotherapy to right chest wall and supraclavicular fossa, and received maintenance Trastuzumab for 1 year until March 2017.

She developed diplopia in Rt eye in May 2017, for which she was evaluated with MRI brain with contrast, which showed 2 x 1.6 x 1.5 cm lesion in left parieto occipital region with post contrast enhancement and mild perilesional edema. Whole body FDG PET CT showed FDG avid left temporo parietal lesion, no evidence of FDG avid disease anywhere else in the body.

She was counselled about the option of SRS as she had good performance status with solitary brain metastasis versus surgical resection. As patient was not willing for surgery, she was taken up for SRS treatment.

Immobilisation with 3 clamp thermoplastic mould was achieved and MRI with contrast and CT scan of brain was done in treatment position with appropriate head rest and thermoplastic mould. The CT and MRI images were co-registered using deformable registration. The gross disease was delineated on registered images as GTV (Gross Tumour Volume) and PTV (Planning Target Volume) was generated by growing isotropic margins of 2 mm around the GTV. All normal organs at risk in brain such as brainstem, optic chiasm, optic nerves, cochlea, eyes, lenses, normal brain, motor cortex and hippocampus were delineated on the planning CT scan.

A single fraction of 18Gy was delivered to the brain lesion, keeping the doses to all normal cranial structures within the acceptable dose range as per RTOG 9508 protocol with adequate premedications like anti-emetic, steroid to prevent significant post radiation edema of the brain. The treatment delivery was verified by intrafracion imaging twice by kilo-voltage cone beam CT so as to verify accurate delivery of dose to the target. Patient tolerated the treatment well. She received 2 cycles of oral capecitabine.

Follow-up MRI scan of brain, with contrast in October 2017, showed complete resolution of left temporo-parietal lesion with no residual enhancement or edema. Rest of the brain parenchyma was also normal. Patient was started on maintenance Lapatinib as she had her 2 neu positive disease. She is clinically well and asymptomatic with follow-up evaluation PET CT also showing no evidence of active disease till date.
Neuralgia and glomus jugulare.

Due to location or residual useful for treating benign life to the patients. SRS is also control rate and survival as of offering non-invasive Stereotactic Radiosurgery (SRS)

Conclusion:

Stereotactic Radiosurgery (SRS) is an effective treatment offering non-invasive management for brain metastases in patients with good performance status and those who warrant aggressive treatment with equal local control rate and survival as of surgery. It is tolerated well and has acceptable toxicity profile thus providing good quality of life to the patients. SRS is also useful for treating benign lesions which are unresectable due to location or residual lesions after surgery like acoustic neuroma, temporal neuralgia and glomus jugulare.

References:

96:45–68

Case report:

A single fraction of 18Gy was delivered to FDG avid left temporo parietal lesion, no edema. Whole body FDG PET CT showed hippocampus were delineated on the imaging twice by kilo-voltage cone beam delivery was verified by intrafraction premedications like anti-emetic, steroid to prevent significant post radiation edema of the brain.[8] The treatment to right chest wall and radical mastectomy and locoregional radiotherapy to right chest wall and radical mastectomy and locoregional radiotherapy to right chest wall and radical mastectomy and locoregional radiotherapy to right chest wall and radical mastectomy and locoregional radiotherapy to right chest wall and radical mastectomy and locoregional radiotherapy to right chest wall and radical mastectomy and locoregional radiotherapy to right chest wall and radical mastectomy and locoregional radiotherapy to right chest wall and radical mastectomy and locoregional radiotherapy to right chest wall and radical mastectomy and locoregional radiotherapy to right chest wall and radical mastectomy and locoregional radiotherapy to right 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mastectomy and locoregional radiotherapy to right chest wall and radical mastect
neuralgia and glomus jugulare.

Acoustic neuroma, temporal lesions which are unresectable, achieving good local control and survival. SRS is also providing improved survival and for brain metastases in patients with melanoma.

Conclusion:

Stereotactic Radiosurgery (SRS) is an effective treatment for brain metastases originating from tumors. Neurosurg Focus 17 (2):E10, 2005

Abstract:


Stereotactic radiosurgery (SRS) is an effective treatment for brain metastases originating from tumors. Neurosurg Focus 17 (2):E10, 2005

Patient was started on maintenance treatment providing comparable survival with such treatments was to the brain. N Engl J Med 354:509–19, 2006

Stereotactic radiosurgery (SRS) is defined as ablative radiotherapy dose delivered in a very precise and accurate manner to the brain lesion, keeping the doses to all organs at risk in brain such as brainstem, optic chiasm, optic nerves, cochlea, eyes, organs at risk and reducing the volume of lesions to be treated with SRS without any significant adverse sequelae. The figures show how the target volume (GTV) and organs at risk were delineated on the CT and MRI images were co-registered generating by growing isotropic margins of 2 mm around the GTV. All normal structures were contoured and their respective isodose curves were generated. A single fraction of 18Gy was delivered to the GTV in a fixed frame for whole brain radiotherapy (WBRT) and a single fraction of 18Gy to the GTV and a single fraction of 16Gy to the remaining volume in case of fractionated SRS. The dose to the target. Patient tolerated the delivery was verified by intrafraction shift mass effect. Although the exact shift is not calculated. Loeffler JS, McDermott M, Mehta MP, Ammirati M, Cobbs CS, Gaspar LE, DeLaney TF, DeLaney T, Harris J, Kondziolka D, Lunsford LD, Lunsford DL, Reardon DA, Woodring RJ, Werner-Wasik M, Demas W, Ryu J, Bahary J, Hung MY, Balog M, Burri SH, Robinson PD, Morris RE et al. Int J Radiat Oncol Biol Phys 75(1):5–14, 2009


Case report:

She developed diplopia in Rt eye in May 2016 and was referred for further assessment. On examination, she was found to have bilateral papilledema. She had evidence of neurological impairment. The median survival was approximately 3-4 months. However, SRS helps in treating brain metastases originating from tumors. Neurosurg Focus 17 (2):E10, 2005

FDG avid left temporo parietal lesion, no evidence of FDG avid disease anywhere else in the body.

Patient was started on maintenance Lapatinib as she had her 2 neu positive.

Patient was started on maintenance oral capecitabine.

Patient was started on maintenance oral capecitabine.

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Abstract:

Neurofibroma, a common benign tumour of soft tissues, continues to grow slowly, and rarely becomes giant. According to the location and extent of the lesion, as well as the adjacent anatomy, surgical management is performed to partially or almost completely resect the tumour. We are presenting a case in which we excised the giant neurofibroma from post lower thigh completely. The wound was repaired by skin flap. Most of the skin flap survived well. After operation, the appearance of the patients and the function of the limbs were immensely improved. In conclusion, for the giant neurofibroma, surgical treatment effectively reduces the tumour burden, rehabilitates the appearance and function, and so improves the quality of life. Skin expander and interventional embolization of nutrient artery can be used when appropriate.

Introduction:
Neurofibromas are benign, nerve sheath tumours in the peripheral nervous system. They evolve anywhere along a nerve from the dorsal root ganglion to the terminal nerve branches.[1,2] Neurofibromas are commonly, but not always, associated with neurofibromatosis type 1 (NF-1).[3] Neurofibromas have been known to occur mostly in the trunk and head compared to other body surfaces.[5] The solitary form occurs in those who do not have neurofibromatosis.[4]

Case Report:
A case is presented of a 28-year-old female who complained of a painless, growing, palpable mass in her left thigh, just above popliteal region since her childhood, associated with erythema/necrosis of the overlying skin. There were multiple neurofibromas of various sizes in the whole body. No other findings at the physical examination or any other symptomatology were noted. Her family history and past medical history were not significant. For diagnosis, magnetic resonance imaging (MRI) of her left thigh was performed. On the MRI of the left thigh, a discrete, large, well-defined homogeneous tumour measuring 17 × 28 × 21 cm was seen. The patient underwent surgical excision of the mass and a discrete, large, not-capsulated mass lesion was exposed and completely removed. There was no significant adhesion to the adjacent tissue or vascular involvement. Pathological findings confirmed the neurofibroma diagnosis and revealed tumour-free margins on all specimens. Soon after the surgery, regular dressing with post slab was done. Her early physiotherapy was instituted, her limb function and walking improved significantly. Previously she was not able to sit on the ground, but now she can and her quality of life improved significantly.

Discussion:
There are three types of Peripheral Neural Sheath Tumours (PNST) including schwannoma, neurofibroma, and neurogenic sarcomas.[4] Schwannomas and neurofibromas, as benign PNSTs, account for 10% of benign soft-tissue tumours.[2,6] Neurofibromas can develop in any peripheral nerve of the body and it can be divided into:
- Solitary or isolated neurofibromas, which more commonly originate from cutaneous nerves.
- Diffused, most likely to arise from the nerves in the subcutaneous tissues of the head and neck and trunk and upper limbs.
- Plexiforms, which are diffused masses with tortuous expansion along the
branches of the parent nerve.[2,4]
Although 10% of the lesions are isolated, up to 10% of the neurofibromas are associated with neurofibromatosis. In the setting of NF-1, neurofibromas tend to be larger and have a higher propensity of malignant transformation. The lesions may be deep or superficial, and can involve small or cutaneous nerves or large main nerve trunks. Superficial neurofibromas characteristically present with painless masses, while manifestation of deeper types are mainly neurological symptoms.[2,4,6]
In case of encountering a neurofibroma, the clinician should search for other manifestations of generalised neurofibromatosis. Neurofibromatosis type 1 (NF-1), formerly known as Von Recklinghausen disease is an autosomal dominant condition which is clinically characterised in part by pigmented skin lesions known as café-au-lait spots, benign cutaneous and subcutaneous tumours known as neurofibromas, characteristic bone lesions, and focal malformations of the iris.[3]
On gross appearance, a neurofibroma is a firm mass with variable size, from a few millimeters to a few centimeters. Pathologically, diagnosis of neurofibromas is made by detection of the cells in the nerve sheath including: Schwann cells, perineurial cells, fibroblasts, and mast cells.[1] They too are similar to schwannomas. The differentiating features include the presence of neurofibromatosis, nerve fibers, and more myxoid tissue (Antoni B tissue) in the neurofibromas, while schwannomas are well-capsulated, and the matrix is more compact, associated with fascicular formation and Antoni A cells.[3,7]
In contrast to schwannomas, neurofibromas are closely connected to their nerve of origin and cannot be separated from the nerve fibers. Therefore, sometimes resection needs sacrificing of the parent nerve.[2,7]
Regarding the location and size of tumour, the symptoms are variable. Discoloration of skin accompanied with disfiguration in the cutaneous form of NF is expected, whereas, deeper masses can cause neurological symptoms and destruction as a result of compression of the neighbouring organs. Neurofibromas are often asymptomatic, but can cause debilitating pain and motor sensory dysfunction. They are usually benign and grow slowly, but sometimes degenerate to become malignant.
The management of a neurofibroma depends on the symptoms and is indicated when there is pain, progressive neurological deterioration, compression of the adjacent tissues, with loss of functions and cosmetic consideration, as well as suspected malignant degeneration.[11]
In summary, we have presented a case of a giant neurofibroma in the left thigh, which was rare in size and location. The differential diagnosis of neurofibroma included myxoma, myoid liposarcoma, and schwannoma.

References:
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