Neurosurgery CME 2018

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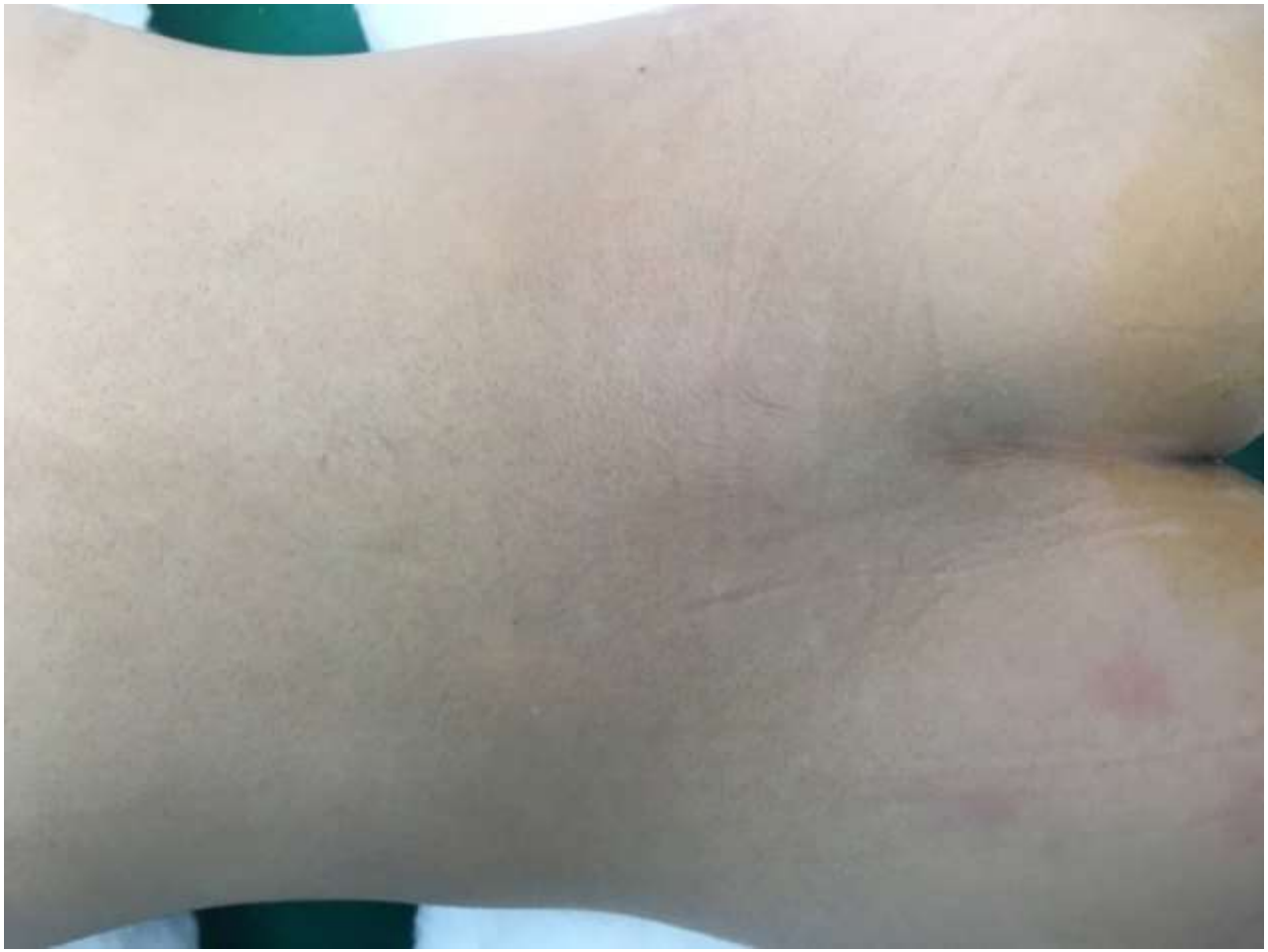
Case history 1:

- 12 year old male child came with chief complaints of:
- Backache since 6 months
- Pain radiating in b/l lower limb since 6 months.

- All symptoms except backache aggravated since last 1 month.

- Difficulty in walking since 1 month.

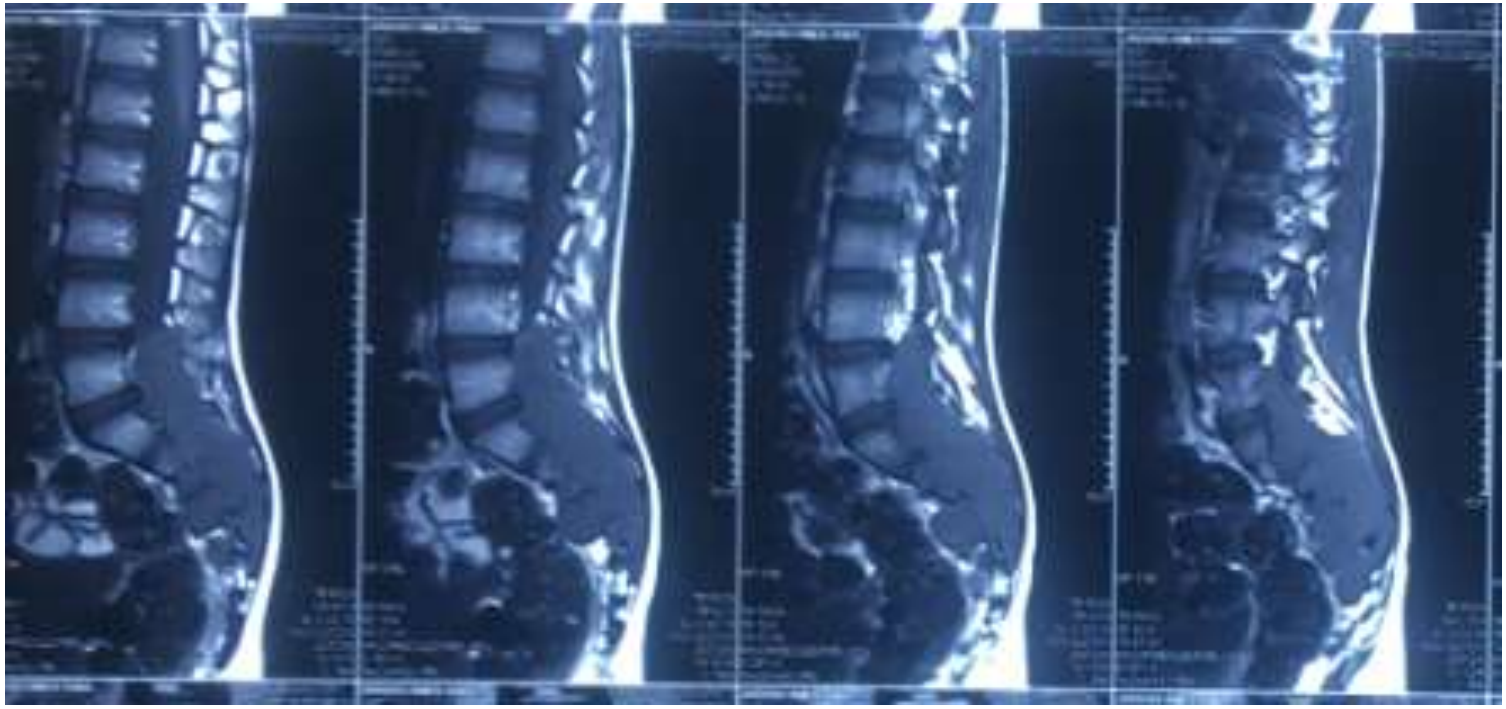
- Straining during micturition since 1 month.



Clinical exmination

- Mild weakness of b/l ankle, plantar flexors/knee flexion .
- B/l ankle jerk absent.
- Sacral hypoasthesia.

T1WI



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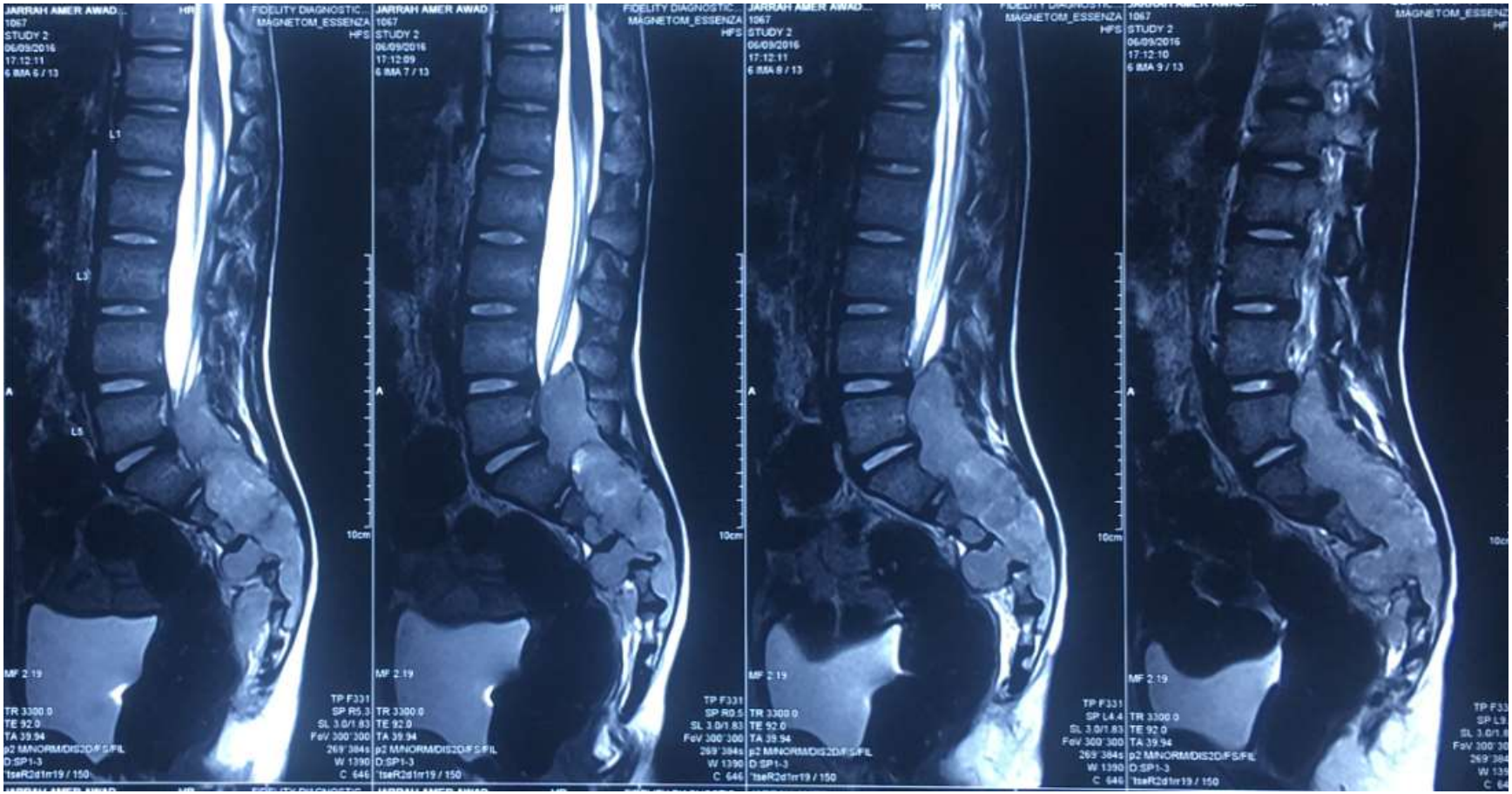
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FIDELITY DIAGNOSTIC...
MAGNETOM_ESSENZA
HFS
L1
L3
L5
A
10cm
MF 2.19
TR 3300.0
TE 92.0
TA 39.94
p2 MNORM/DIS2D/FS/FIL
D:SP1-3
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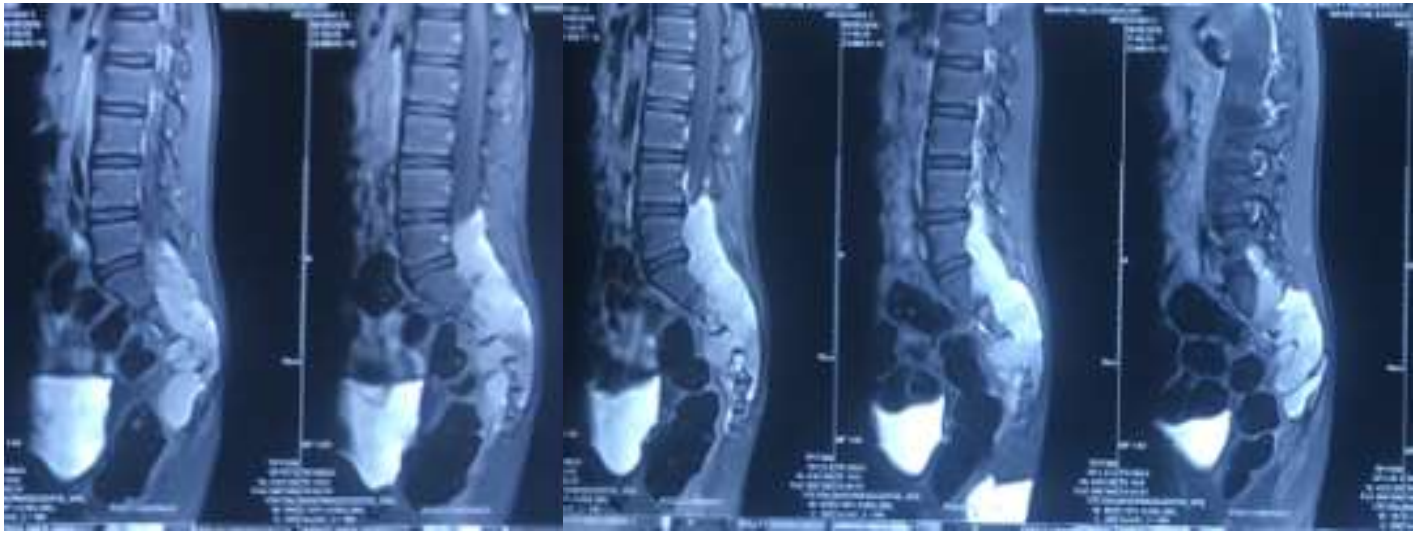
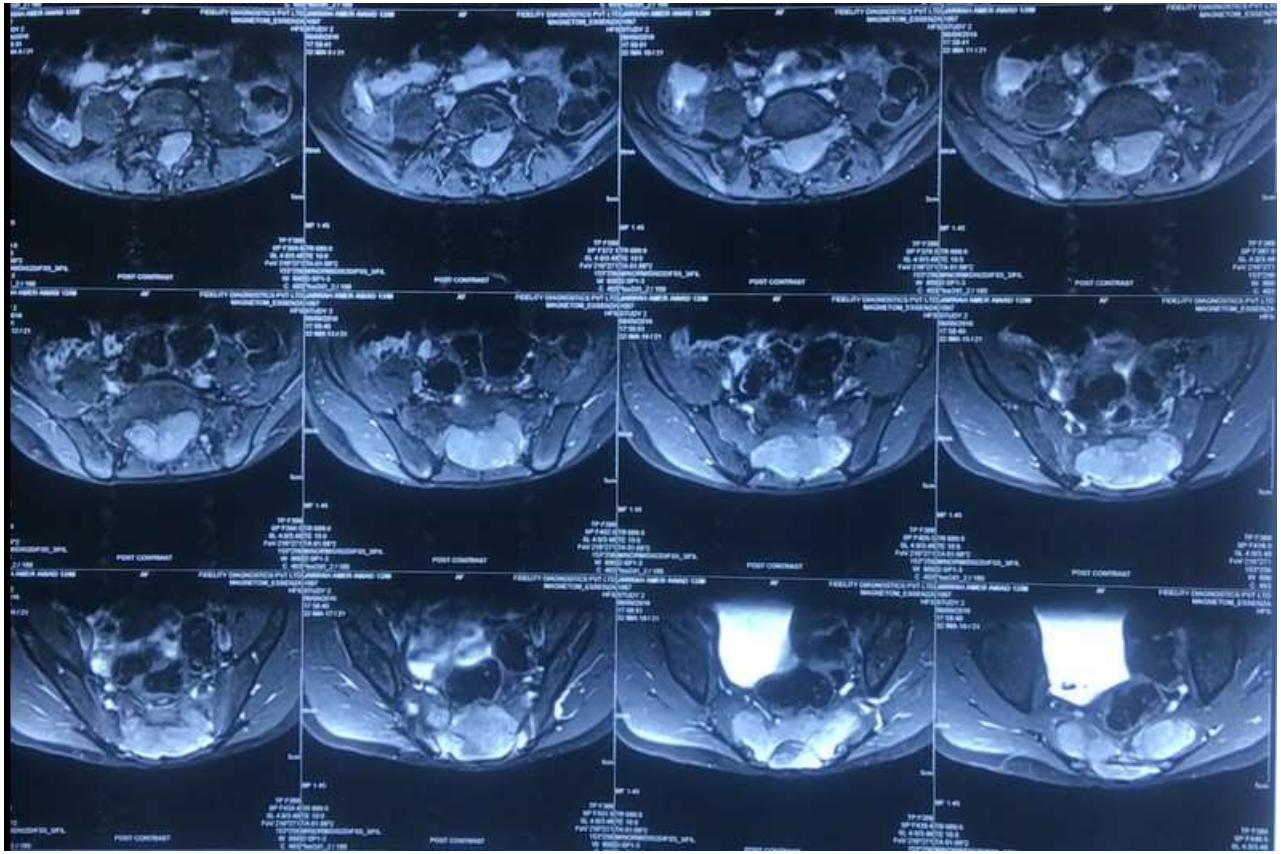
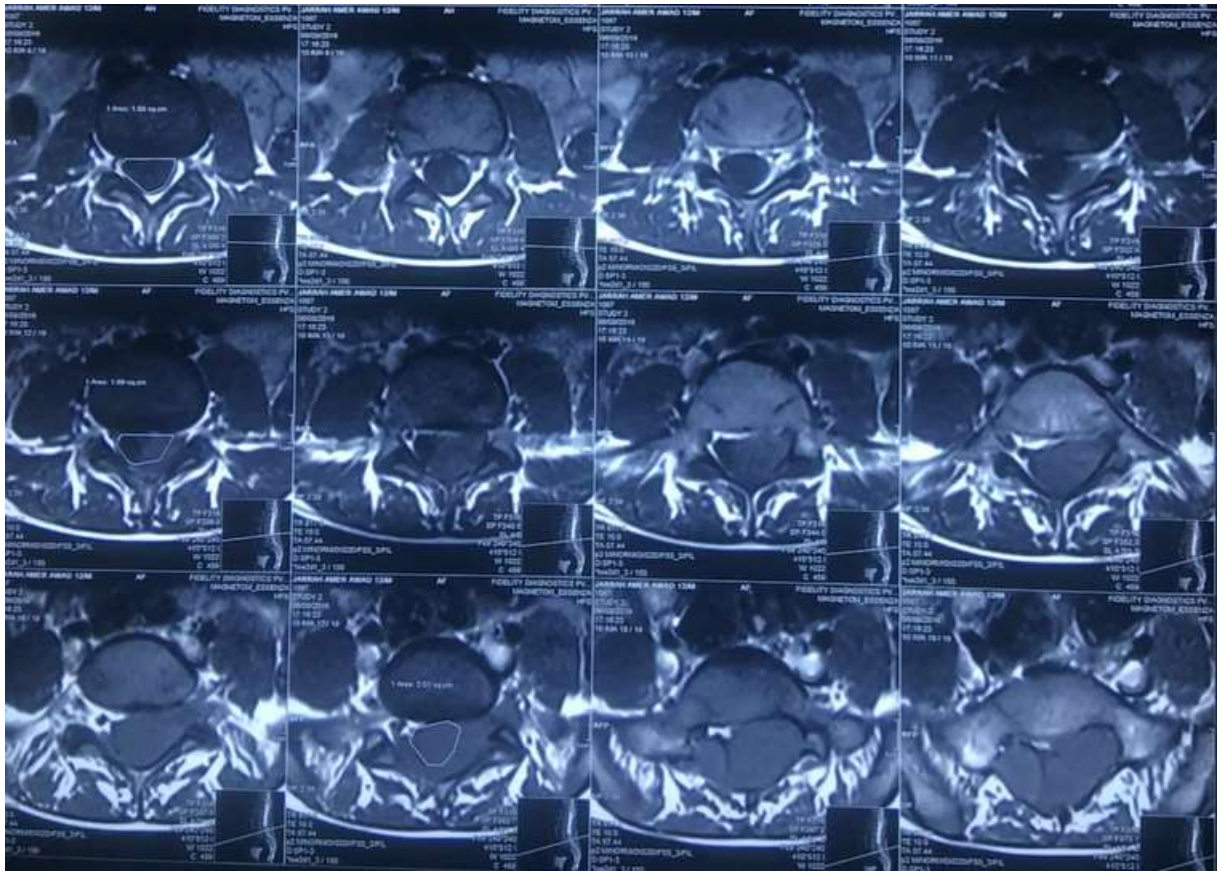
Contrast image



Contrast axial image



T1 axial



MRI LUMBR SPINE PLAIN +CONTRAST

- There is seen expansible lytic lesion in the sacrum from L1 to S5 vertebral body.

- There is a mild erosion of the posterior portion of the S1 vertebral body.

- The lesion occupies the canal and extend into the sacral foramina causing compression of contained and exiting nerve root.

- The lesion appears hyper intense on T2 and hypo intense on T1 weighted image

- The lesion measures 10.4x 8.4x 2.3 cms in superioinferior , transverse and anterioposterior dimensions.

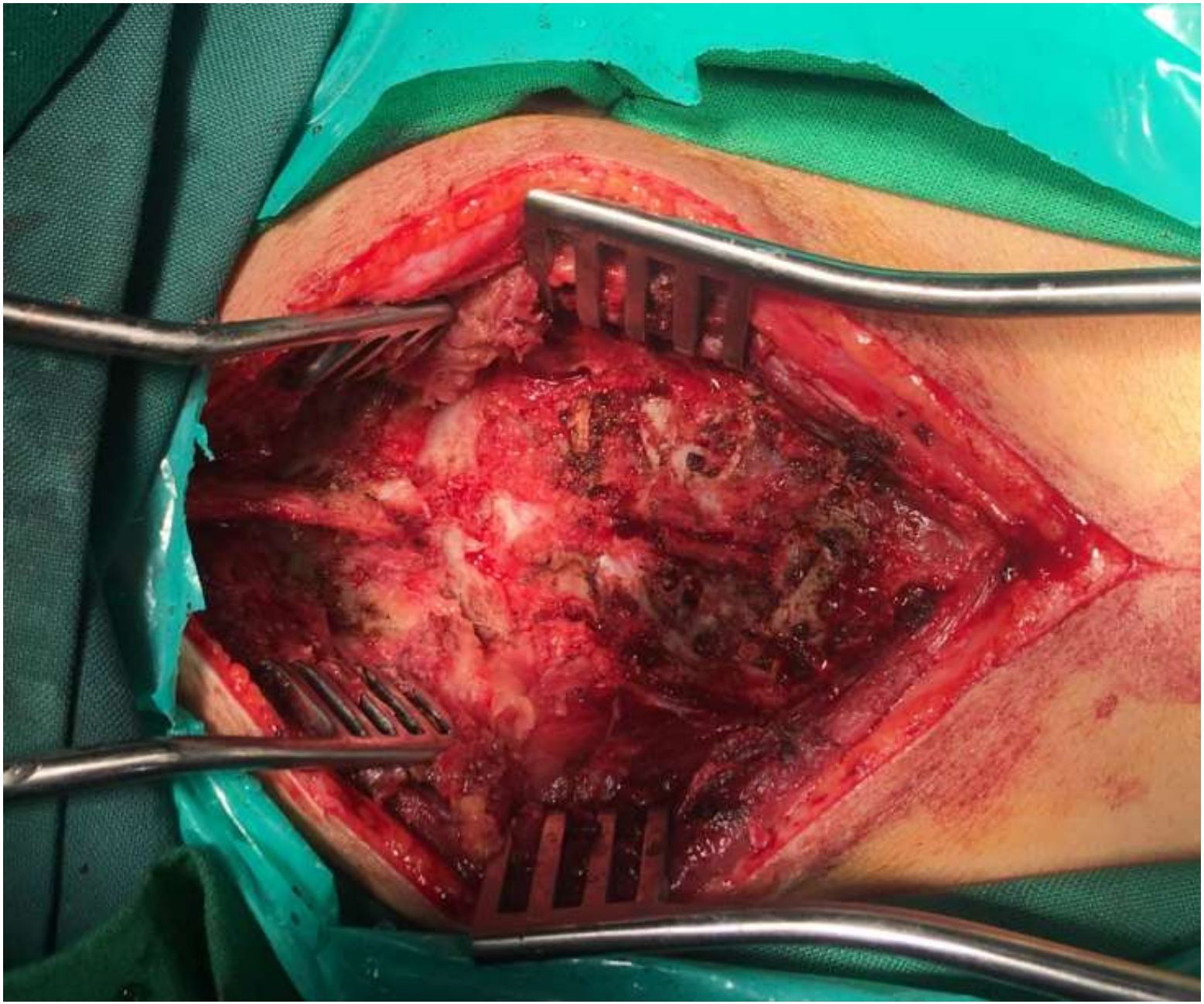
- There is seen extension inferiorly on both sides.

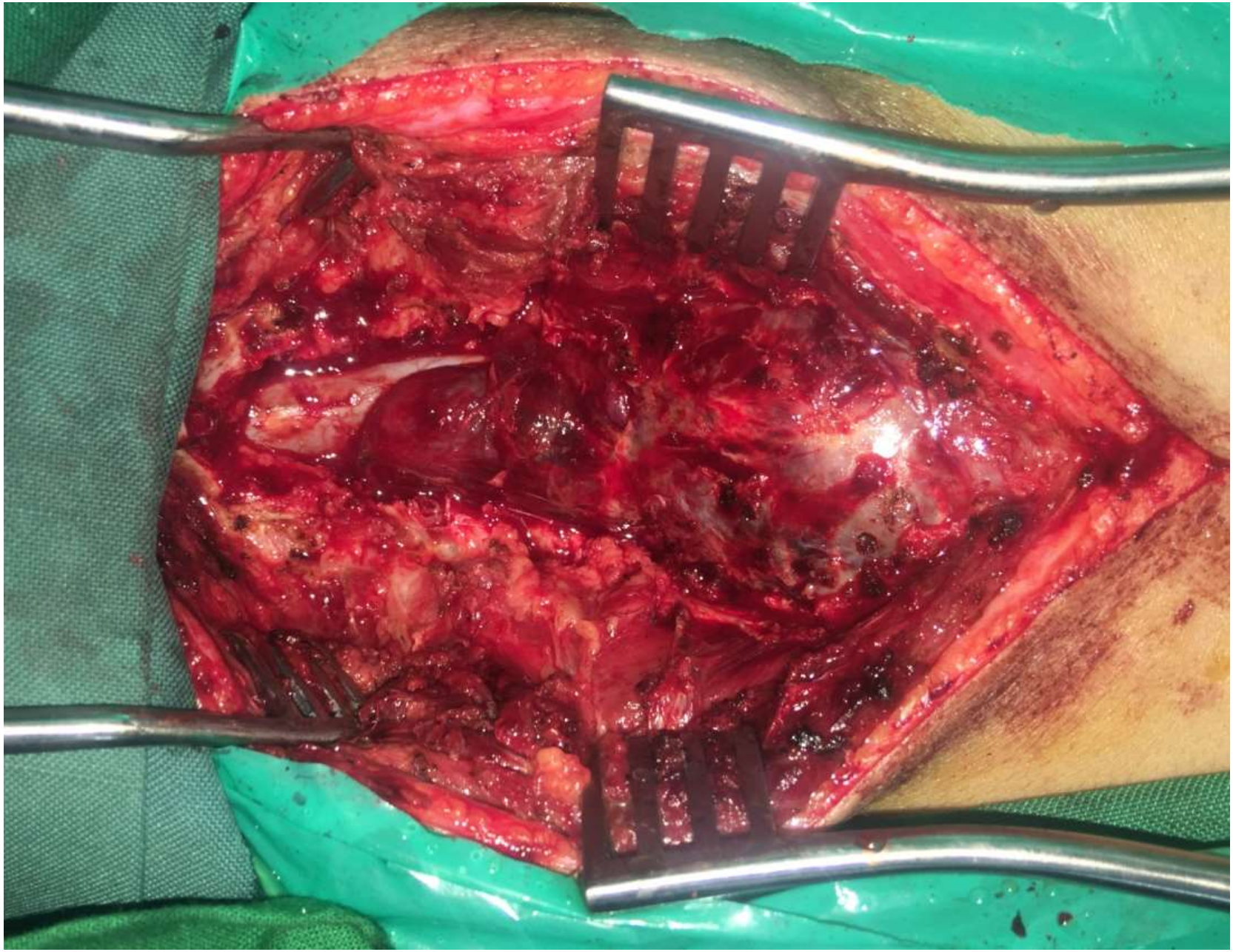
- Contrast administration shows enhancement.

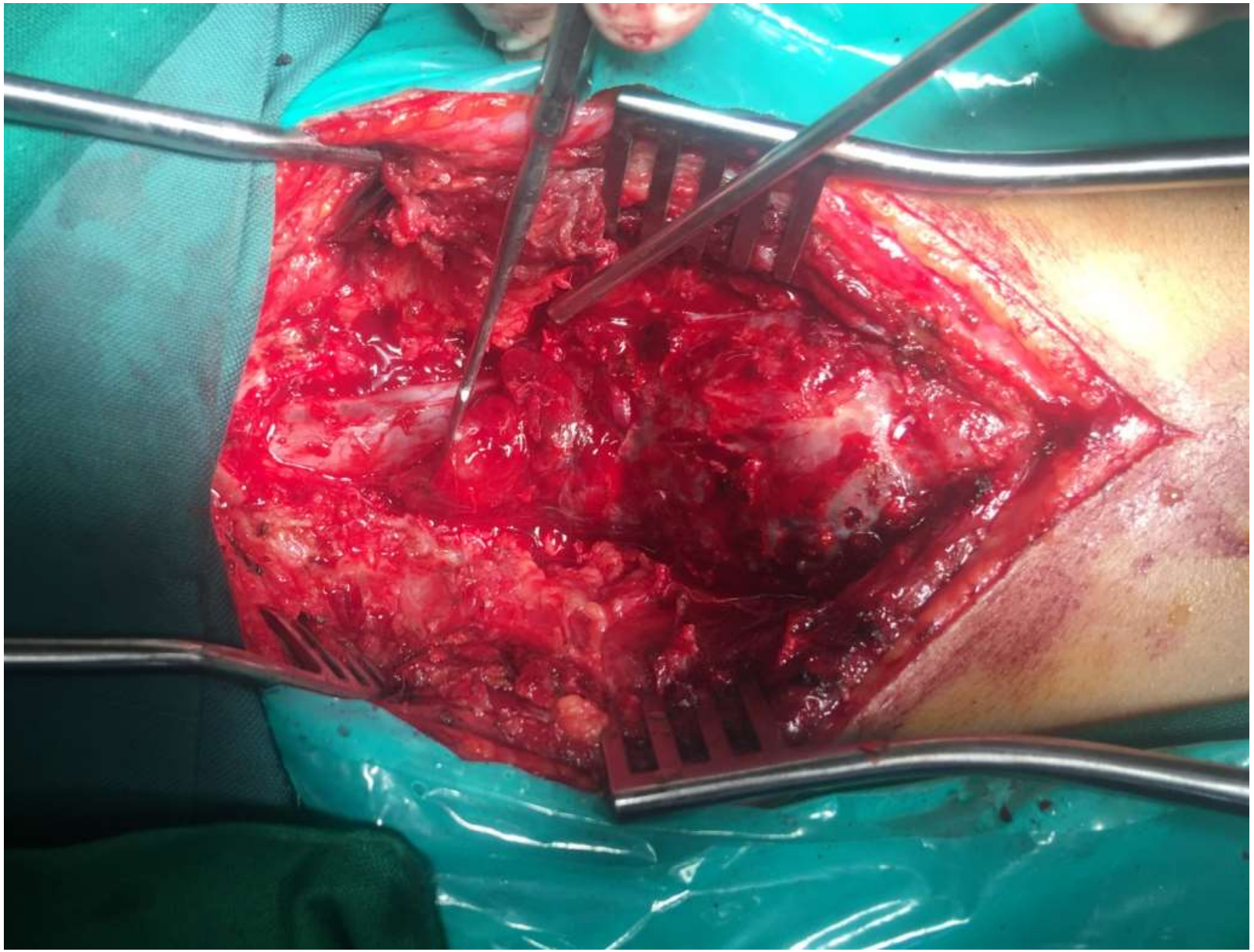
- IMPRESSION : chordoma / nerve sheeth tumor.

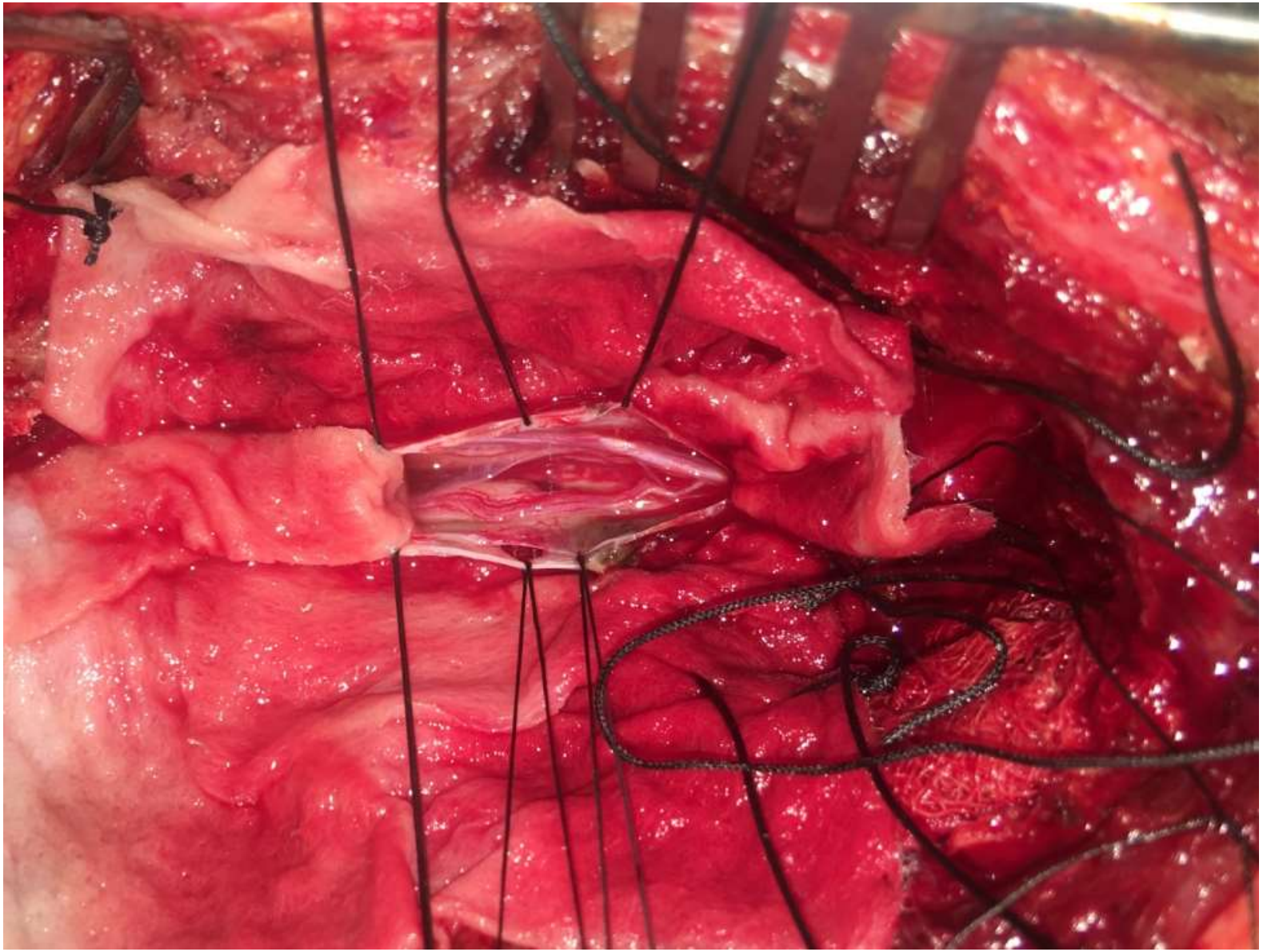
INTRA OPERATIVE FINDING

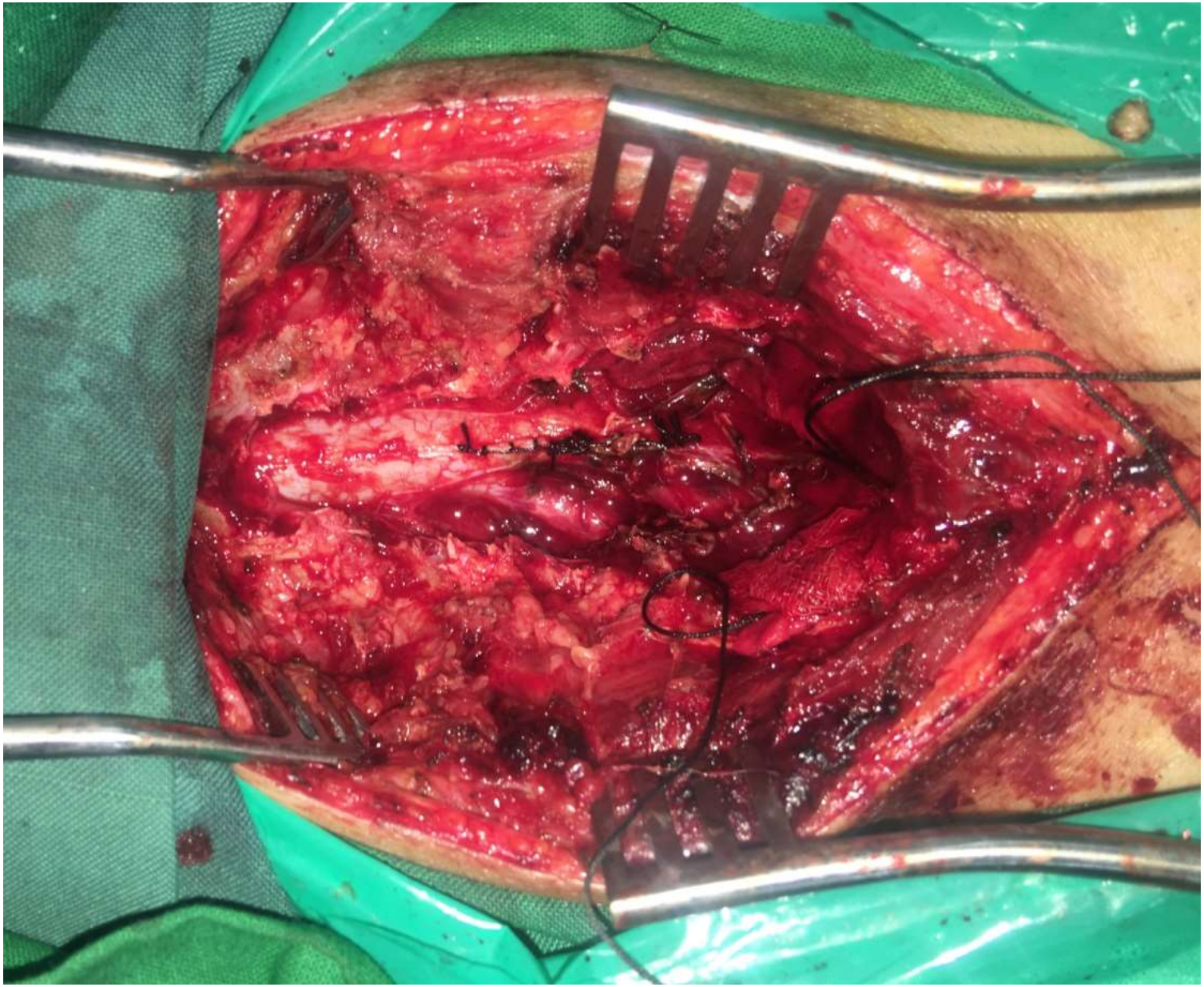
- Sacral lamina was thinned out.
- Laminectomy performed.
- Extradural , fleshy lesions extending from L5 to S5 identified.











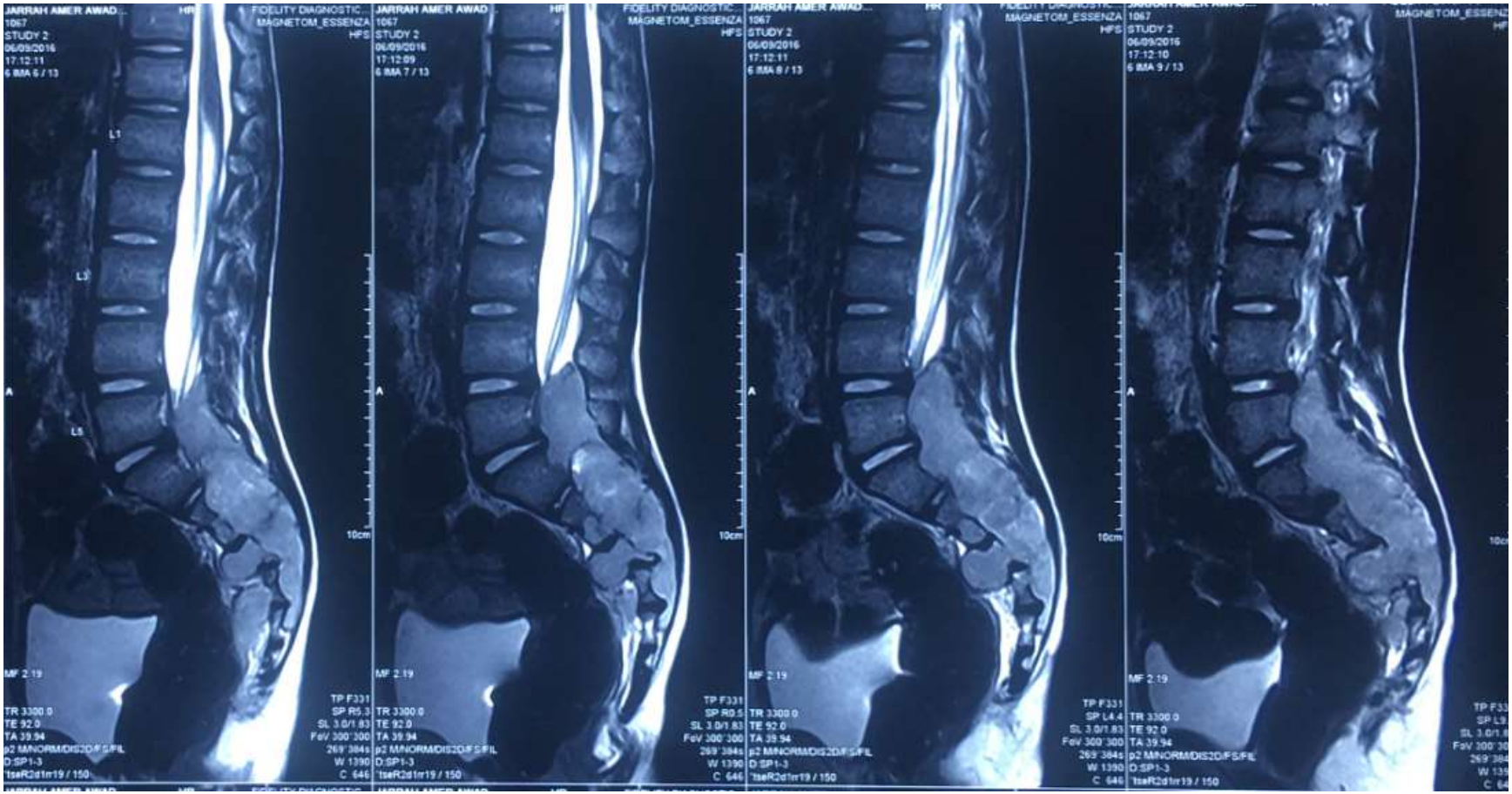
- Easily separated from dura.
- Decompression done around the thecal sac.
- Frozen section was done which was s/o ependymoma.
- Dura opened – no e/o any lesion intradural.

BIOPSY REPORT

- FROZEN SECTION – s/o ependymoma.

- FINAL HISTOPATHOLOGY REPORT – myxopapillary ependymoma (WHO GRADE 1).

T2WI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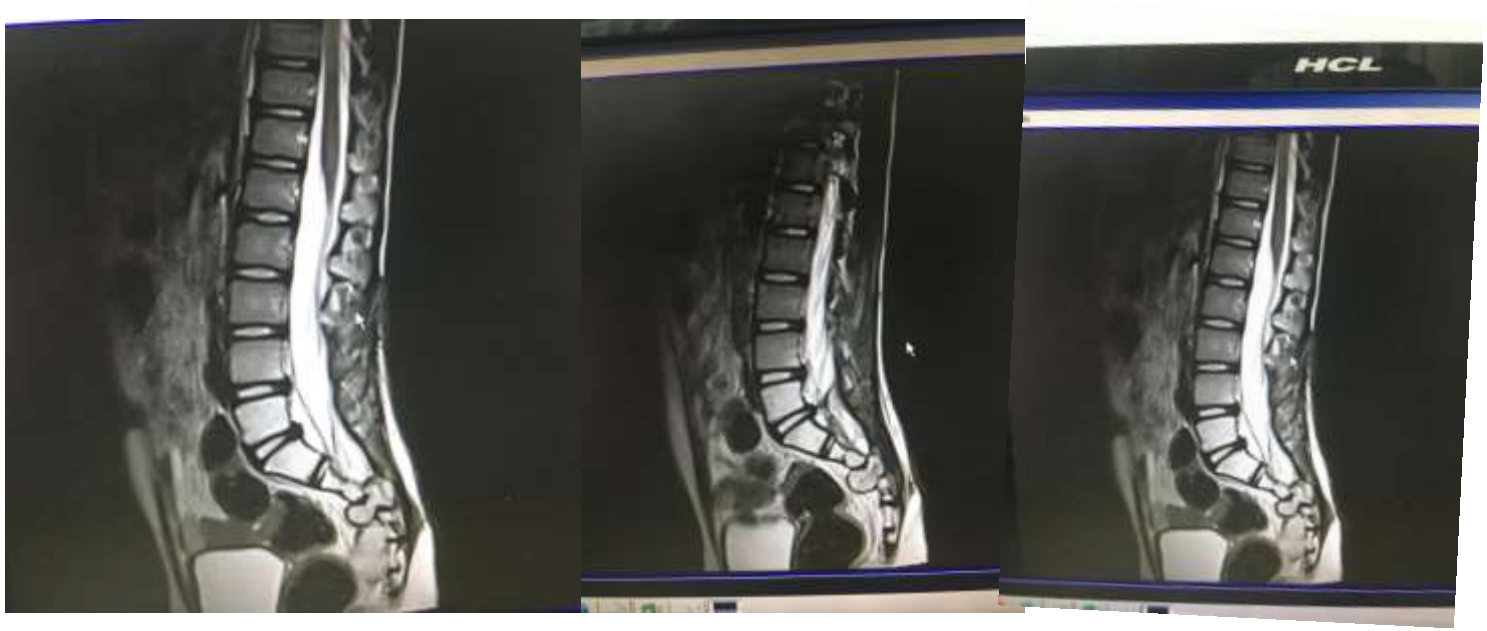
Post-op course:



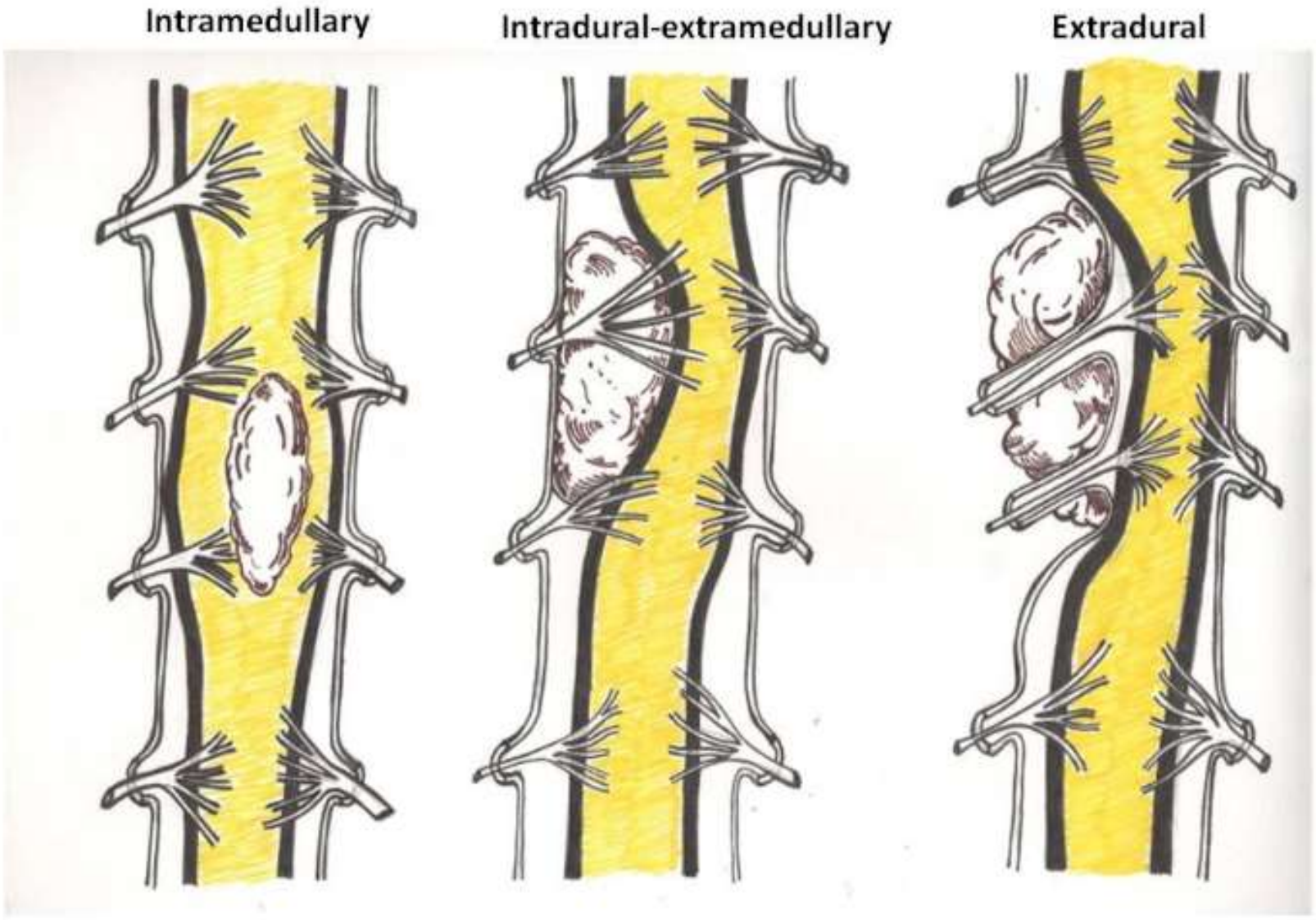
Discussion:

- Spinal Myxopapillary Ependymomas are a variant type of Spinal Ependymoma that occur almost exclusively in the conus medullaris and filum terminale.

- Literature review shows that this highly vascular tumour is infrequent and usually described in the cauda equina.

- It can mimic discogenic pathology and its occurrence in an extradural location may prove challenging.

TYPE OF TUMOURS



•They represent 13% of all spinal ependymomas and are by far the most common tumors of the conus medullaris and filum terminale.

•They tend to have an earlier clinical presentation than other spinal ependymomas, with a mean age of presentation of 35 years.

•There is a slight male predominance. The most common presenting symptoms are low back, leg or sacral pain. Up to 25% of patient may present with leg weakness and sphincter dysfunction.

- Any tumor that arises from the glial cells in the brain is called a “glioma.”

- Glial cells provide support and protection for the nerve cells, or neurons, in the brain.

- One type of glioma is the ependymoma.

- Ependymomas arise from ependymal cells that line the ventricles of the brain and the center of the spinal cord.

There are four major types of ependymomas:

- Myxopapillary ependymomas,
- Subependymomas,
- Ependymomas
- Anaplastic ependymomas.

- Myxopapillary ependymomas tend to occur in the lower part of the spinal column.

- Subependymomas usually occur near a ventricle. Both are slow growing, and are considered to be low-grade or grade I tumors.

- Ependymomas are the most common of the ependymal tumors, and are considered grade II tumors.

- These tumors are usually located along, within or adjacent to the ventricular system, often in the posterior fossa or in the spinal cord.

- Anaplastic ependymomas are high-grade tumors (grade III) and tend to be faster growing than low-grade tumors.

- They most commonly occur in the posterior fossa.

TREATMENT:

- With improved neurosurgical and radiation therapy techniques, patients with ependymomas have a significantly increased chance of survival.

- The treatment of an ependymoma varies depending on its location, grade, and whether the tumor has spread to the spine

SURGERY

The most important first step in the treatment of an ependymoma is surgery to remove as much tumor as possible.

Radiation:

- There are different methods of administering radiation.
- External beam radiation is given five days a week for six weeks.

- Conformal beam radiation therapy is a type of external beam radiation that contours the radiation beams to the shape of the tumor.

- Stereotactic radiosurgery is a way of giving a single or a few high doses of precisely focused radiation to the tumor.

- This is often used for ependymomas that grow back after conventional radiation.

CHEMOTHEREPY

- Drugs such as cisplatin and carboplatin may cause shrinkage in about half of ependymomas, although not usually for a long time.

- Either standard chemotherapy, or experimental chemotherapy as part of a clinical trial, are often used for patients whose tumors regrow after radiation.