

DIFFUSE UTERINE LEIOMYOMATOSIS: PRESERVING FERTILITY IN A YOUNG 23 YEAR OLD WOMAN

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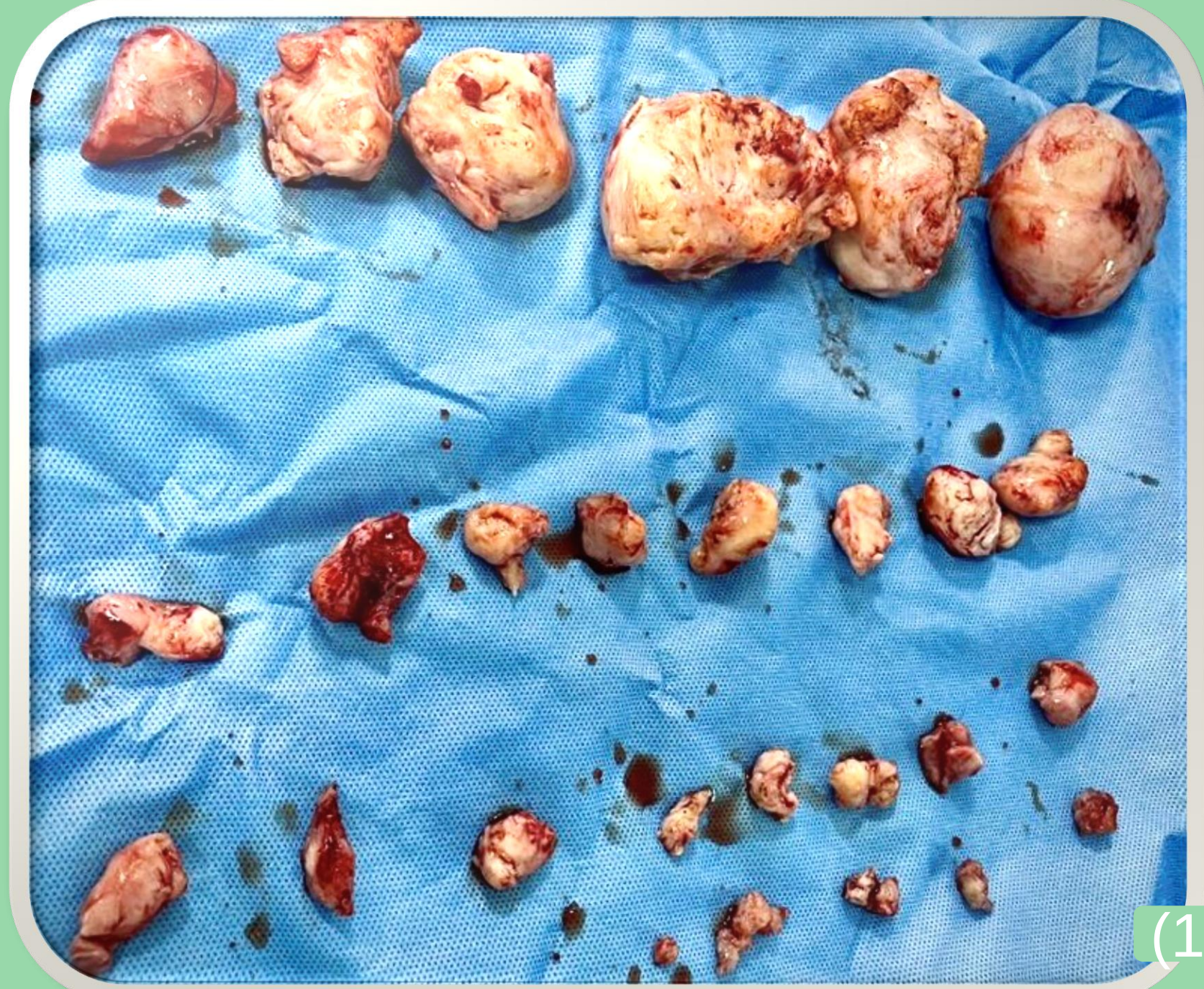
Introduction

- Leiomyomas are common in gynaecological practice as a benign well circumscribed smooth muscle tumour. Diffuse Uterine Leiomyomatosis (DUL) on the other hand is a different entity.
- It is a **rare, benign** condition where there is **symmetrical enlargement of the uterus** due to **multiple poorly defined confluent smooth muscle tumours** replacing the myometrium.
- There have been less than **50 incidences** of this condition reported in literature up till now.

Case Report

- In June 2021 a 23-year-old female presented with **lower abdominal swelling**. On examination, uterus was of **24 weeks size**. The patient had no complaints of menorrhagia or dysmenorrhea.
- Imaging was done which showed **multiple leiomyomata and an enlarged uterus**.
- Options were discussed and she agreed on **Abdominal Myomectomy**. During the surgery it was found that she had **multiple fibroids ranging from 0.5cm to 5 cm** (as seen in image 1) as well as diffuse symmetrical enlargement of the uterus. Multiple leiomyomas were removed.
- The **histopathological findings** revealed **benign tumours** characterised by **intersecting fascicles** of monotonous **spindle cells of smooth muscle** with **cigar-shaped nuclei**, **tapering ends**, and **eosinophilic cytoplasm** (as seen in images 3a and 3b).
- She was then started on **GnRH analogues for 6 months**. During this the **uterus reduced to regular size**.
- Post discontinuation, in January 2023 she presented with **abdominal swelling** and **uterus the size of 24 weeks** for which she was referred to a higher centre for further management. **MRI** findings showed an **enlarged uterus** 21 x 16.5 x 6.8 cm with **heterogeneous signal intensity** and **multiple hypointense lesions** signifying recurrence of DUL (as seen in images 2a,2b,2c).
- She then underwent **B/L Internal Iliac Artery Ligation** and **Laparoscopic Myomectomy with Hysteroplasty**.

Fibroids removed in January 2021 during Abdominal Myomectomy



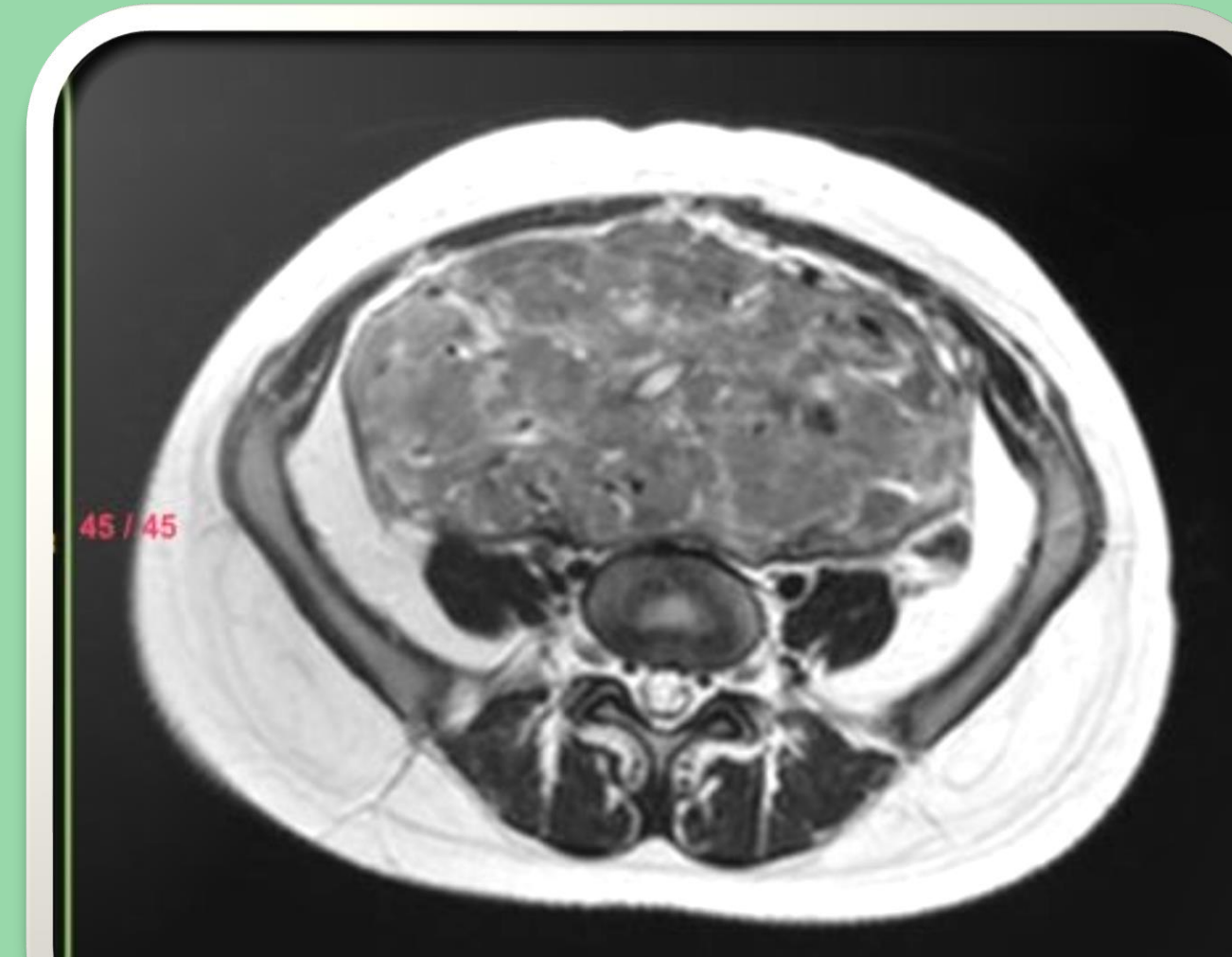
(1)

MRIs from January 2023



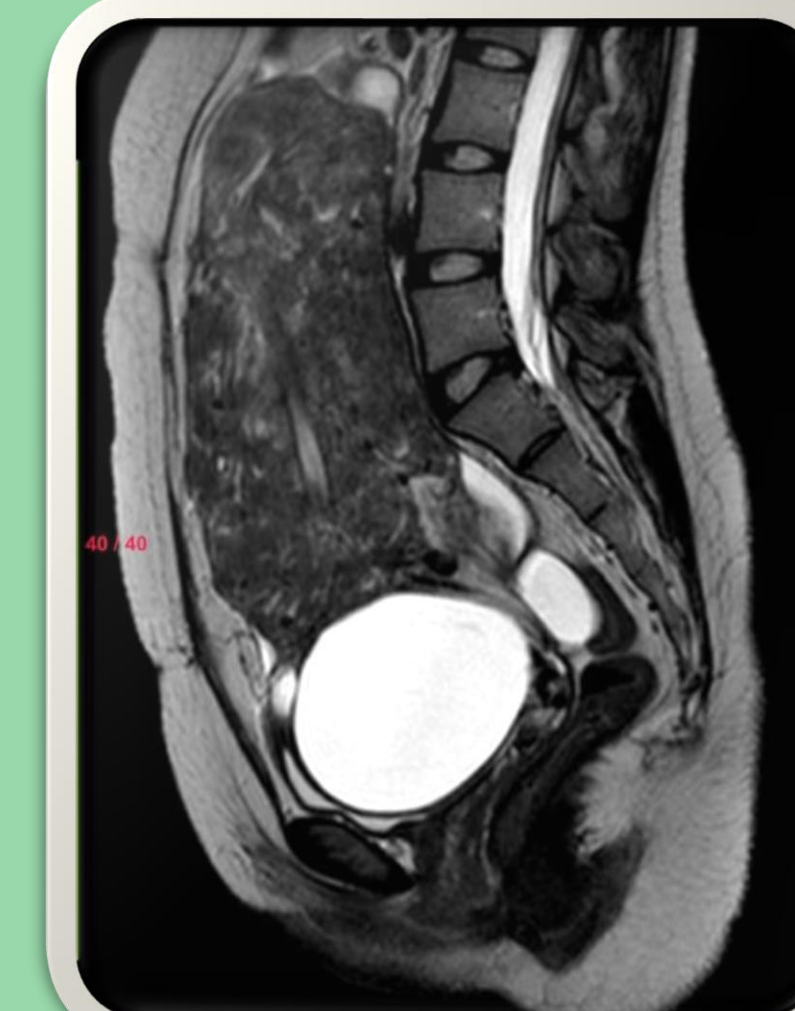
(2a)

Coronal view



Axial view

(2b)

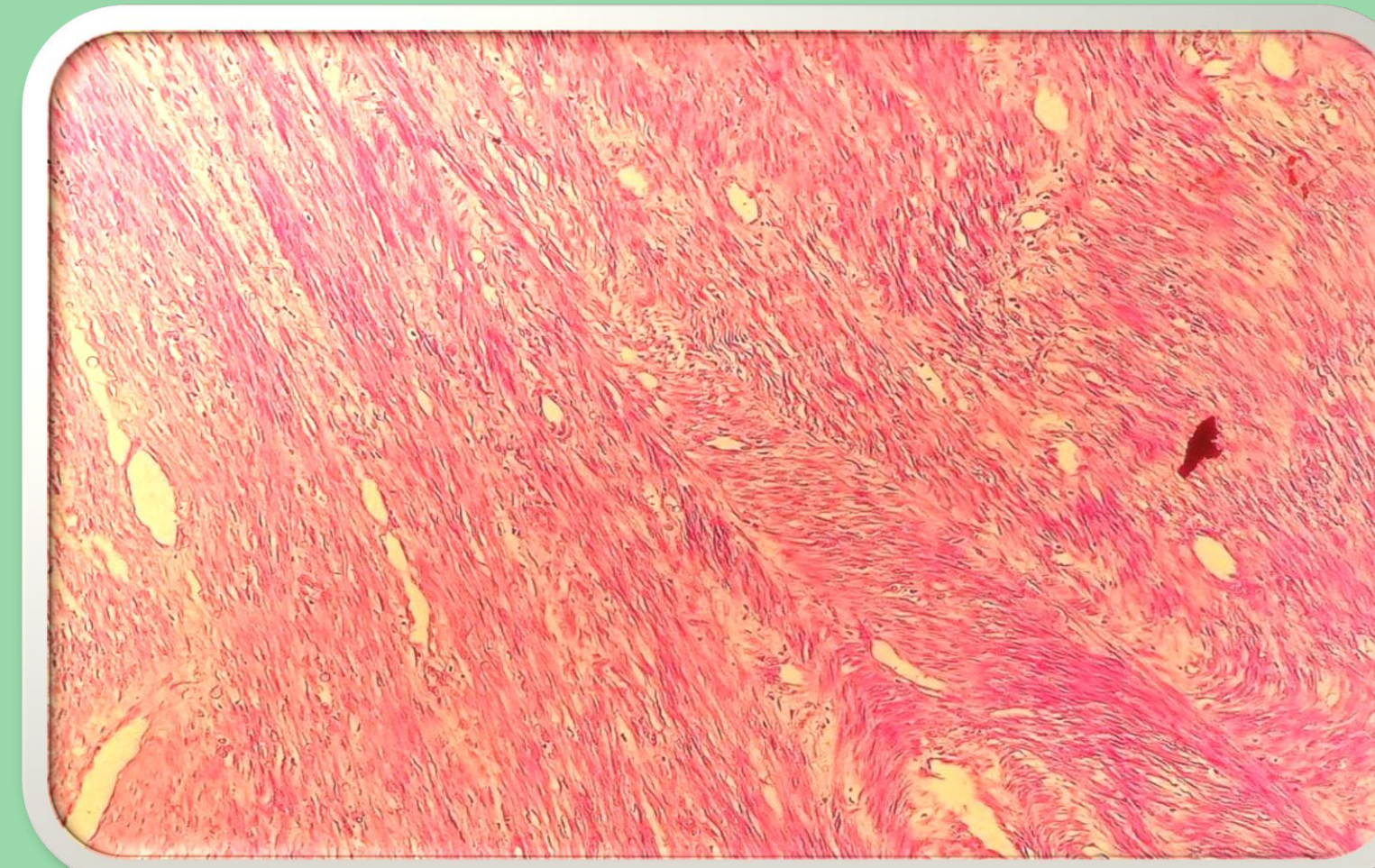


Sagittal view

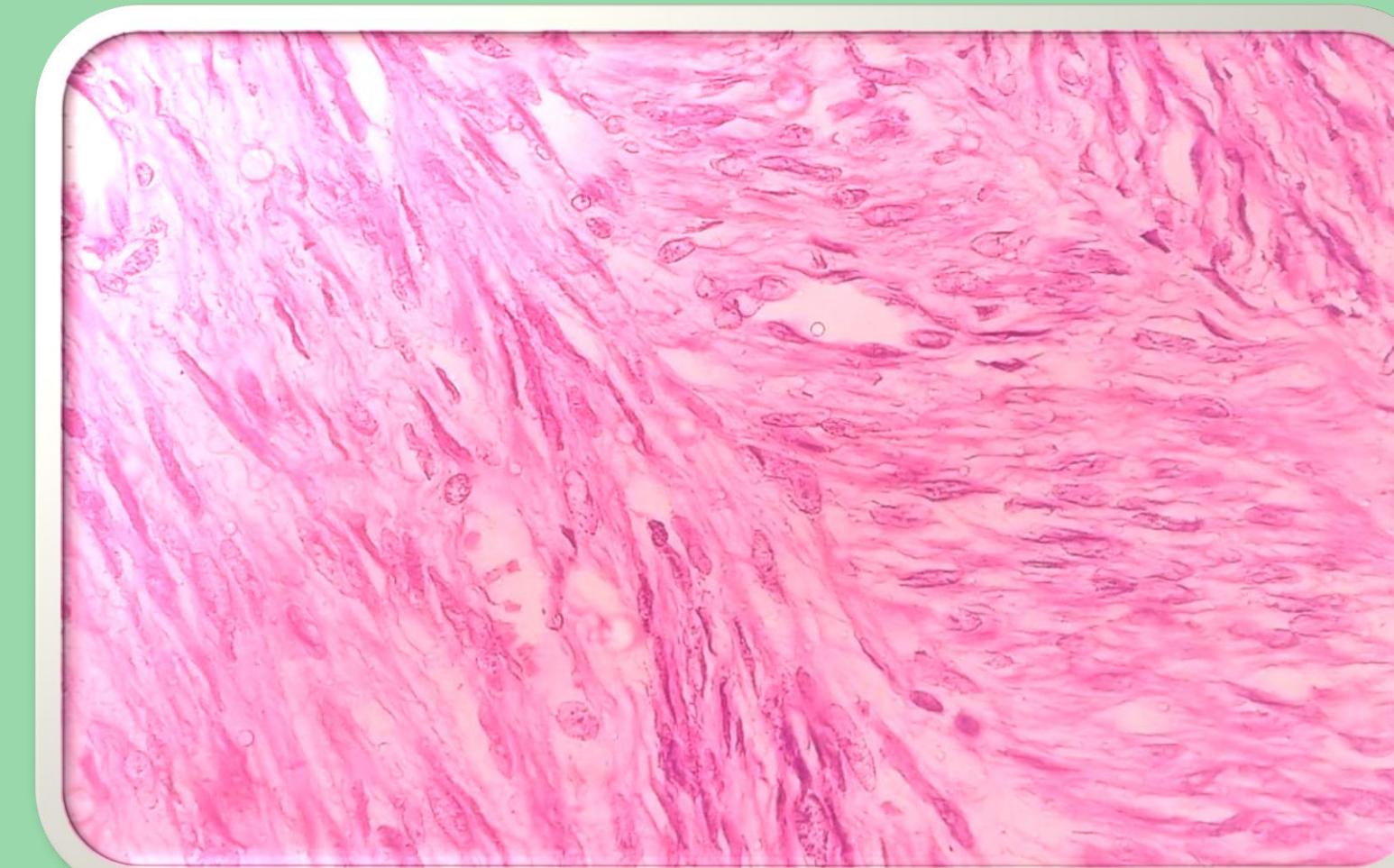
(2c)

T2 weighted axial, sagittal, and coronal views show a grossly enlarged uterus with multiple intramural T2 hypointense lesions.

10x (3a) HPE slides from January 2021 40x (3b)



Cigar shaped nuclei, spindle cells with tapering ends and eosinophilic cytoplasm



Intersecting fascicles of monotonous spindle cells

Discussion

- Aetiology** of Diffuse Uterine Leiomyomatosis is not fully understood owing to the **rare** nature of the condition.
- Diagnosis** is typically based on imaging studies like **MRI** and confirmed through **histopathological examination**.
- Clinical presentation** may vary but common symptoms include **abdominal distension, infertility, abnormal uterine bleeding, menorrhagia, dysmenorrhea, and pelvic pressure**.
- Histopathological examination is crucial for confirming the diagnosis, showing spindle-shaped smooth muscle cells with interlacing fascicular arrangement, ill-defined cell borders, eosinophilic cytoplasm, cigar-shaped nuclei, small nucleoli, and low mitotic activity.
- Treatment** options depend on fertility desires. **Hysterectomy is a permanent solution**, while **conservative** options include **hormonal therapy** and minimally invasive **laparoscopic myomectomy**. **Uterine Artery Embolisation** is also an option.
- Uterine leiomyomatosis can be associated with renal cell carcinoma in an Autosomal Dominant condition called HLRCC (**Hereditary Leiomyomatosis Renal Cell Carcinoma**).
- Screening for renal cell carcinoma is important in all cases of uterine leiomyomatosis.

Conclusion

Diagnosing and managing uterine leiomyomatosis are crucial to make informed decisions regarding patient care. This case underscores the challenging dilemma faced by a young patient desiring fertility preservation despite the absence of immediate pregnancy prospects. Both medical and surgical interventions were implemented to preserve fertility.

References

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