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Intravenous leiomyomatosis of the uterus: link with new fertilisation methods?

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A 41-year-old woman with a medical history of hormonal treatment for primary infertility eight years earlier and three subsequent operations for “recurrent uterine leiomyomas”, was admitted to our hospital with suspected iliac vein thrombosis extending to the inferior vena cava in CT. Hysterectomy had been performed two weeks earlier for an enlarged heterogeneous uterus on MRI that raised the possibility of leiomyosarcoma. Indeed, although some MRI features can suggest malignancy, there are no specific imaging criteria differentiating leiomyosarcoma from other uterine tumours.

The histopathological result of the hysterectomy specimen revealed uterine intravascular leiomyomatosis (IVL). The clinical picture pointed to the diagnosis of intravascular extension of the uterine IVL into the iliac vein and inferior vena cava (IVC). Excision of the intravascular mass was performed. The surgical specimen exactly fitted with the CT images (fig. 1a, b). There was no thrombotic component to the mass. Differential diagnosis of this IVC mass includes primary leiomyosarcoma or extension of adjacent tumours such as adenocortical tumours, renal cell or hepatocellular carcinoma. In this case, the diagnosis of IVL was confirmed histopathologically, with characteristic smooth muscle spindle-shaped cells within a heterogeneous hyaline structure invading the vascular lumen without any atypical cellular signs. Immunohistochemical analysis was positive for smooth muscle actin. Interestingly, 80% of the cell nuclei were positive for smooth muscle spindle-shaped cells within a heterogeneous hyaline structure invading the vascular lumen without any atypical cellular signs, pathologically, with characteristic smooth muscle spindle-shaped cells within a heterogeneous hyaline structure invading the vascular lumen without any atypical cellular signs.


There seems to be an increased number of IVL cases reported over the last few years, which could possibly be due to an increased incidence of this rare tumour. One hypothesis could be that the now widespread use of fertilisation methods may trigger tumour growth in hormone-sensitive tumours in reproductive women. Fertil Steril. 2001;76(1):38–43.

For treatment of IVL, the aromatase inhibitor letrozole has also been used for treatment of IVL. The aromatase inhibitor letrozole has also been used for treatment of IVL.

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References

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