Cryoanalgesia of 6.5cm Desmoid Tumour

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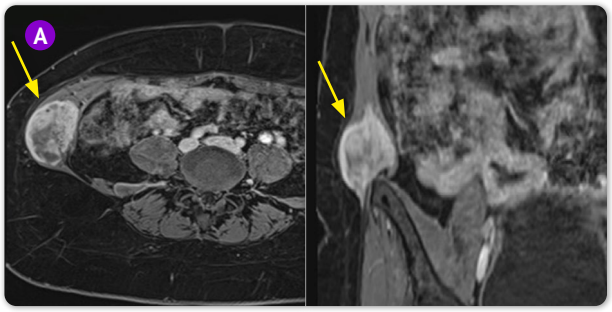
> *"Cryoablation offered complete and durable tumour destruction, without damaging surrounding organs."*

PRESENTATION

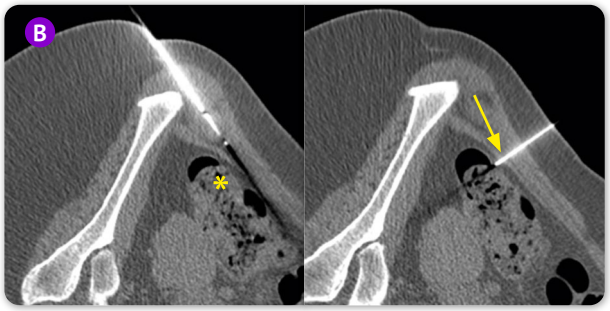
- 43-year-old female
- 6.5cm desmoid tumour in the right abdominal wall (A)
  - Refractory to medical treatment (COX-2 inhibitor and Tamoxifen)
  - Tumour still growing and painful
- Cryotherapy proposed by the soft-tissue tumour board



Presentation: MRI T1-weighted sequences in axial (left) and coronal (right) views show a 6.5cm tumour involving the right abdominal wall (arrows)

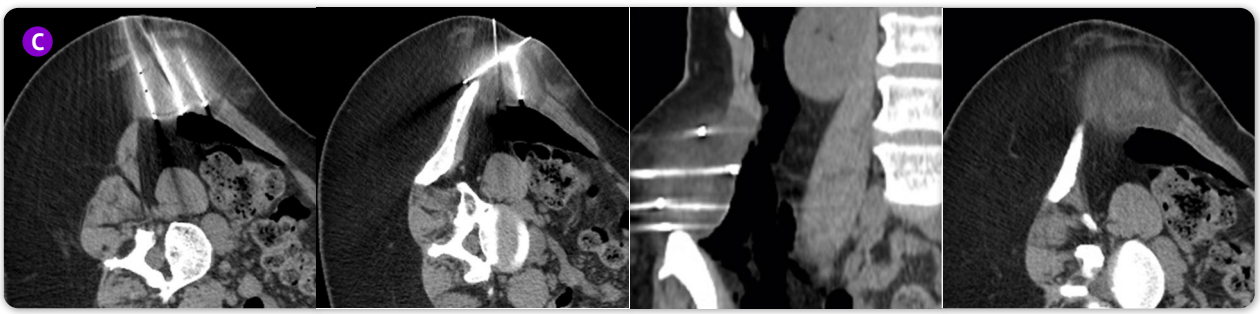
TREATMENT

- Cryoablation was performed under general anaesthesia with CT guidance
- The patient was placed in the left lateral decubitus position to displace the bowel
- Eight IceRod™ 1.5mm needles were inserted into the tumour with a maximum 2cm gap between the needles
- Due to the proximity of the caecum to the lowest needle, an intra-abdominal CO_2 dissection via a 22-gauge spinal needle was performed to protect the bowel (B)
- Saline was injected subcutaneously to protect the skin. Cryoablation was then performed (C)



Cryoablation: Due to proximity of lowest IceRod™ needle to the caecum (left, asterisk), intra-abdominal CO_2 dissection was performed via 22-gauge spinal needle (right, arrow)

Freeze 10 min → Passive Thaw 9 min → Active Thaw 1 min → Freeze* 10 min → Active Thaw Remove Needles



Cryoablation: CT images with axial and coronal views show eight IceRod 1.5mm needles with ice ball encompassing the tumour. Note the intra-abdominal CO_2 dissection to protect the bowel

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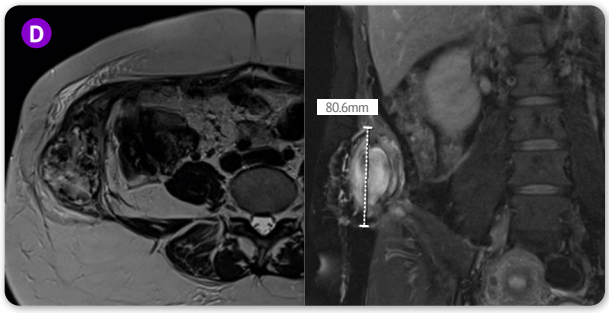
OUTCOME

- MRI scans at one-month follow-up show cryolesion and complete necrosis of the tumour D E
- MRI scans 18 months post cryoablation show an avascular fibrous scar and absence of tumour recurrence F
- Patient was asymptomatic



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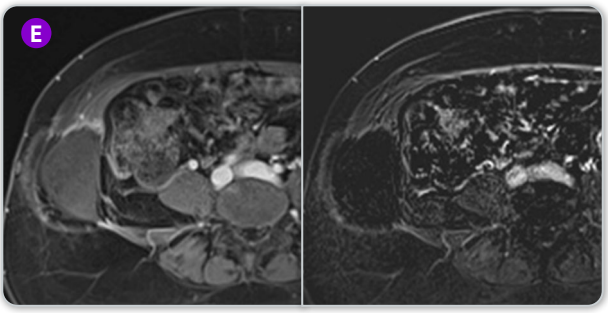
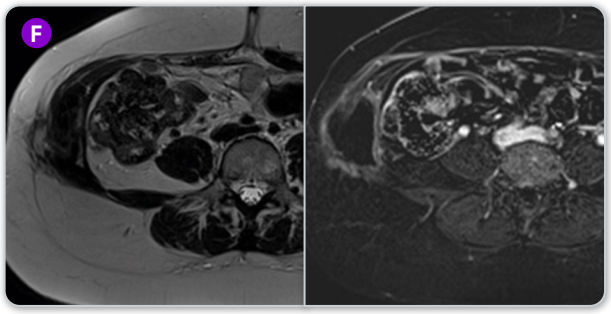
One month post cryoablation: Axial MRI T2 blade sequence without fat saturation (left) and coronal T2 blade sequence with fat saturation (right) show cryolesion with heterogeneous central signal due to blood clots



One month post cryoablation: Fat-saturated T1-weighted MRI sequence after gadolinium injection (left) and subtraction (right) shows complete necrosis



18 months post cryoablation: T2-weighted MRI (left) with subtraction after gadolinium injection (right) shows evidence of avascular fibrous residual scar and complete absence of tumour recurrence

CONCLUSION

- Cryoablation offered complete and durable tumour destruction, without damaging surrounding organs. Residual scar tissue was minor and asymptomatic

COX-2: Cyclooxygenase-2
CT: Computed tomography
MRI: Magnetic resonance imaging
T1W: T1-weighted

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