ULTRASONOGRAPHIC AND COMPUTED TOMOGRAPHIC ASSESSMENT OF A GRASS AWN FOREIGN BODY IN THE RENAL PELVIS OF A DOG

S. Manfredi[1], M. Fumeo[1], E. Daga[1], F. Miduri[1], F. Fidanzio[1], S. Paviolo[1], G. Mattioli[1], M. Bonazzi[2], A. Volta[1]

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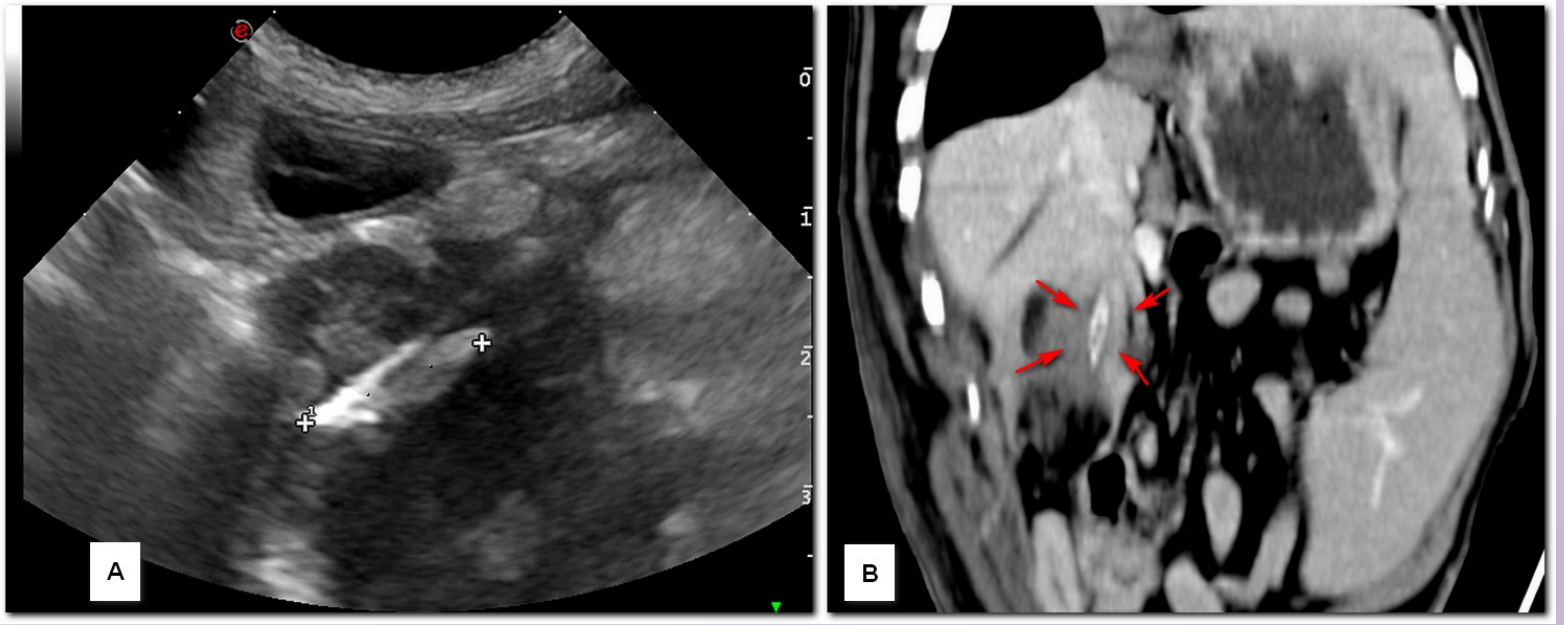
Introduction

Vegetal foreign bodies (FBs) are common causes of infection in dogs. In human medicine kidney FBs occur rarely, and they can reach the renal parenchyma or pelvis in three ways: (1) by trauma (most commonly), (2) from the gastro-intestinal tract, or (3) ascending the urinary tract. Two cases of ascending origin involving vegetal FBs similar to grass awns are reported in human medicine.[1] Our report describes the finding of a grass awn FB in the renal pelvis of a dog.



Methods

An 8-year-old male Jack Russel Pearson Terrier was examined for vomit, diarrhea and anorexia, with pyrexia and abdominal pain on clinical examination. The patient had a history of FB intestinal obstruction two years before; contextually, ultrasonography had revealed cystitis and a severely altered architecture and reduced volume of the right kidney.

Results

At present ultrasound examination, retroperitonitis was found and a hyperechoic triple band linear structure forming acoustic shadowing of 1,5cm in length was identified supposedly in the pelvis of the right kidney, compatible with a grass awn FB. Computed tomography confirmed the localization of the FB in the pelvis and gave information on the surrounding structures, identifying ureteritis, peritonitis extension and lymph nodes involvement. The patient died during surgery, and the autoptic examination confirmed our findings.

Conclusion

To our knowledge, this report may be the first to describe the migration of a grass awn FB to the renal pelvis ascending the urinary tract, given the dog clinical history. Computed tomography was fundamental to confirm and better characterize the diagnosis.

(A) Longitudinal scan of the right kidney: note the distorted morphology of the organ and a echogenic structure located in the pelvis (between callipers).
(B) CT longitudinal scan after contrast medium injection: a hyperattenuated structure between callipers can be seen in the right kidney pelvis.

References

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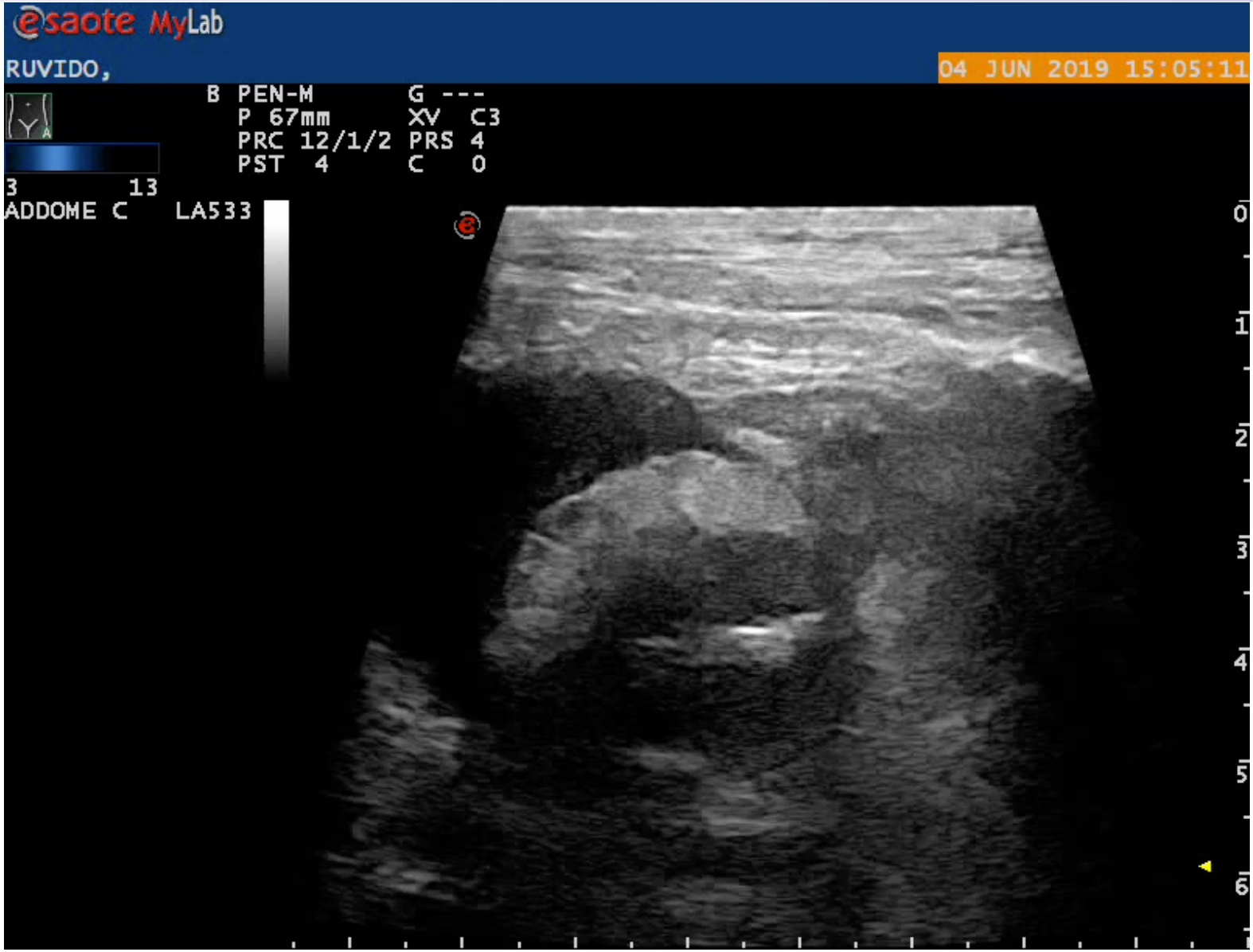

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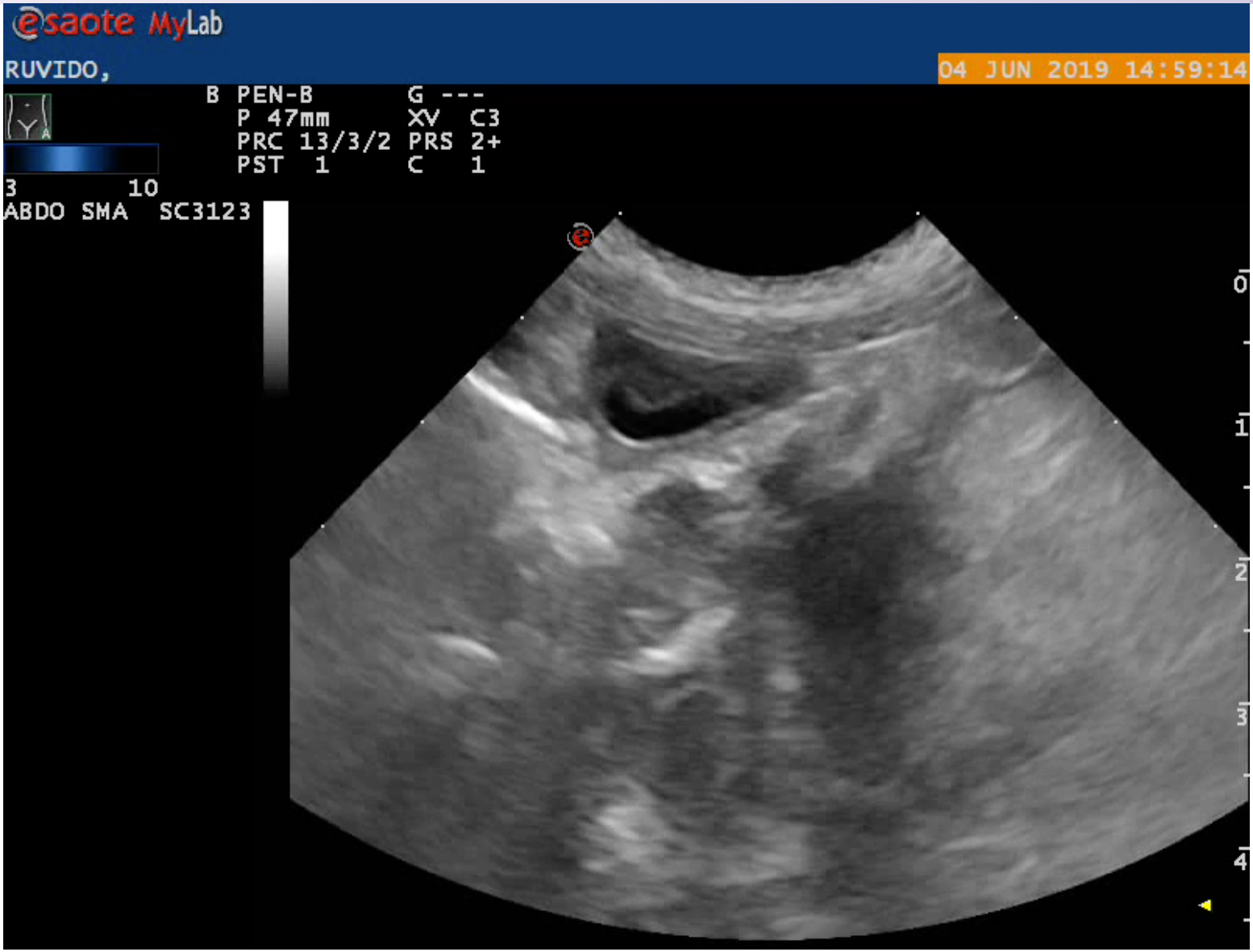

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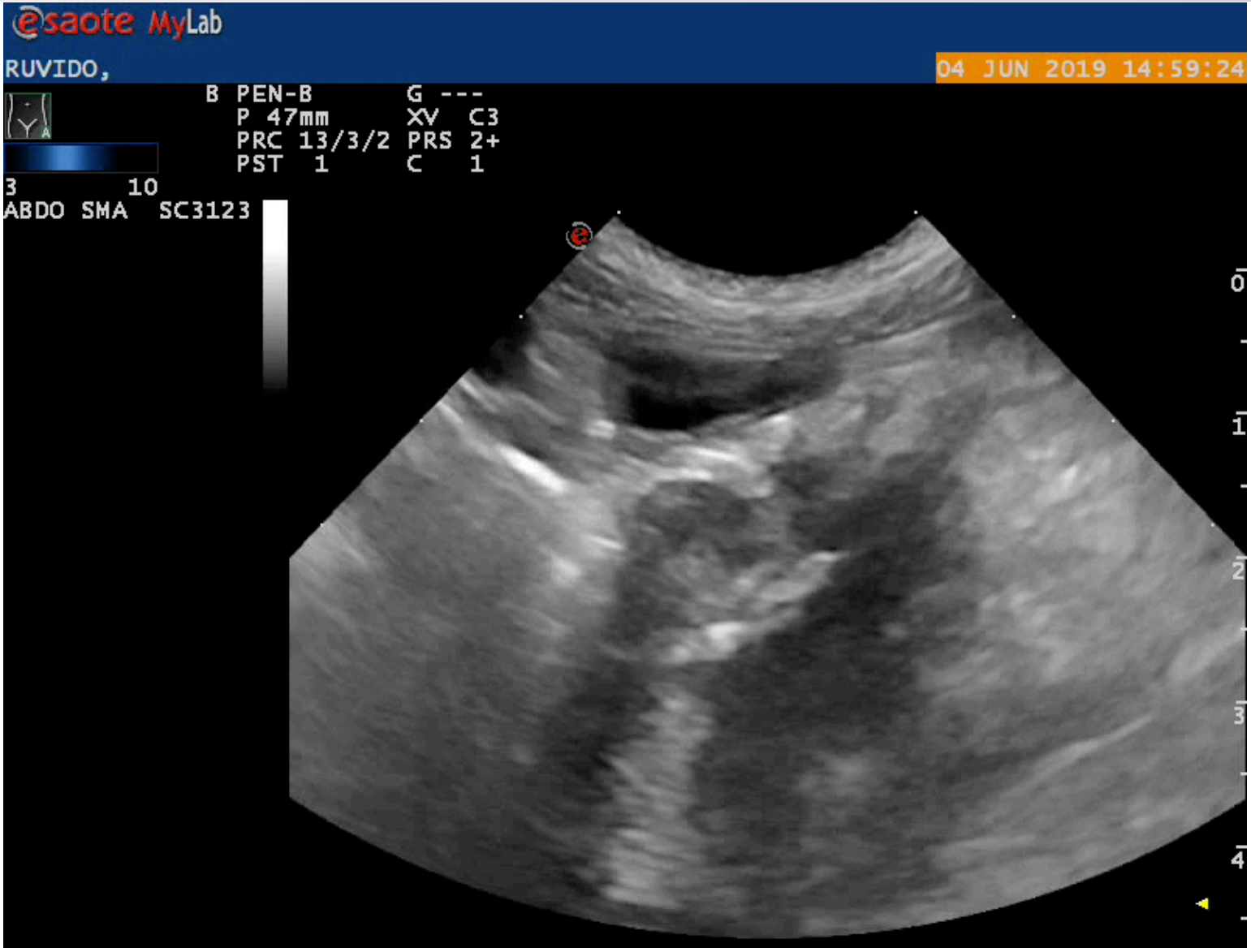

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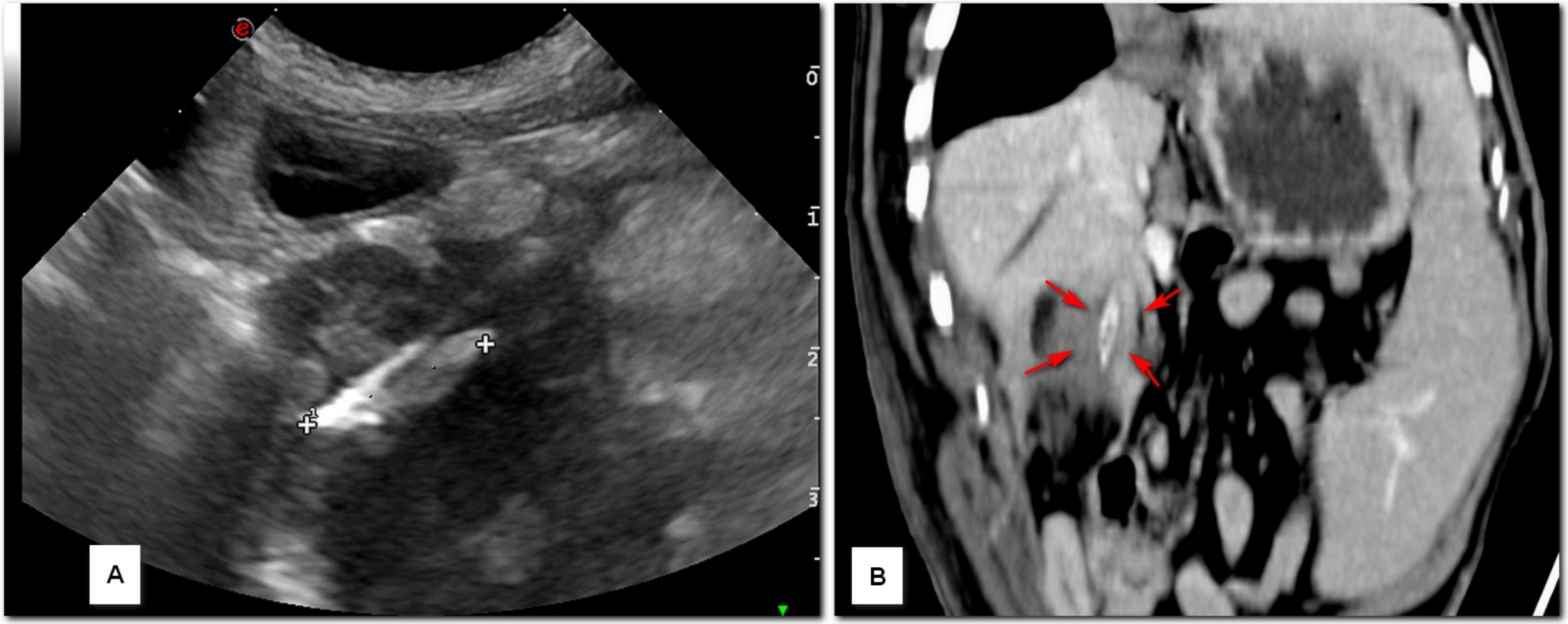

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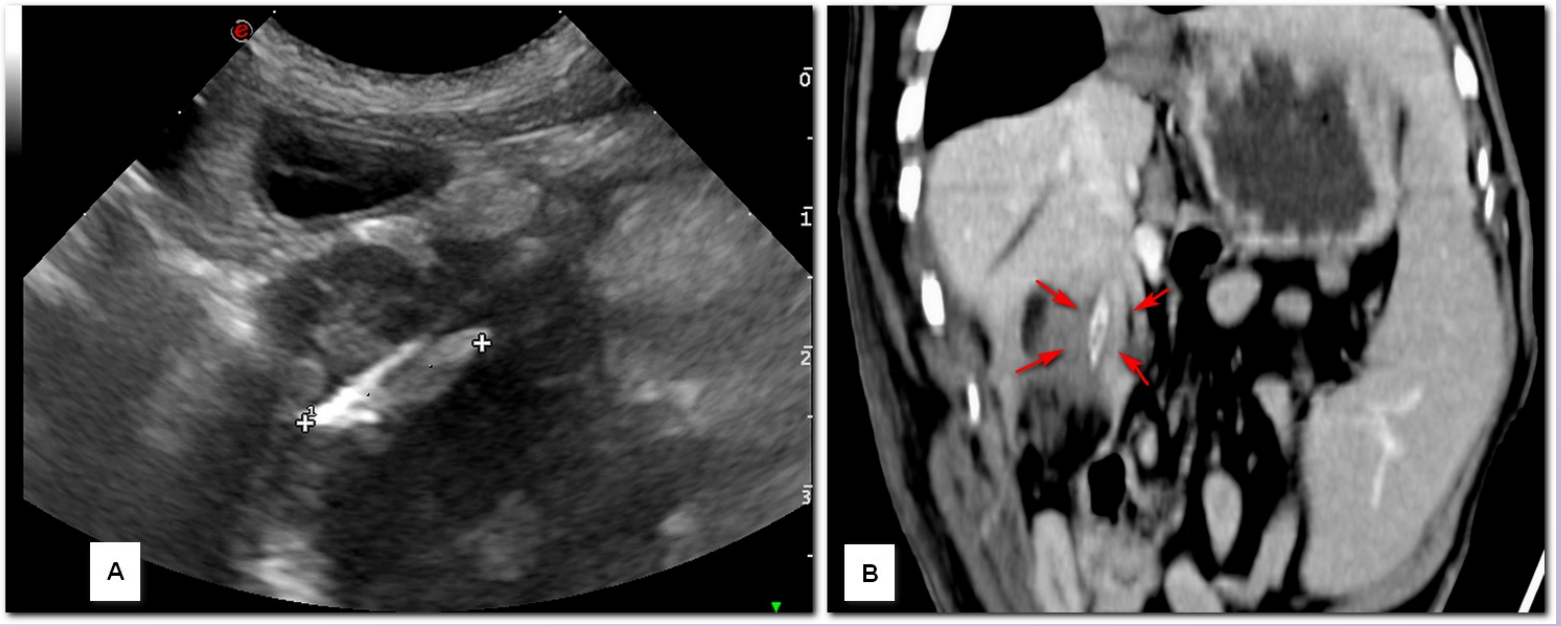

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