

TREATMENT OF EQUINE UROLITHIASIS WITH EXTRACORPOREAL SHOCK WAVE THERAPY (ESWT) - CASE REPORT

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CASE

A horse Mangalarga Marchador, male, with 3 years of age, was assisted after an episode of hematuria. Normal clinical examination, no expressions of pain. There was laboratory tests and diagnostic aids.

The results of urinalysis(Fig.1), with animal at rest, showed pH = 5.0, bilirubin, erythrocytes, leukocytes, bacteria and crystals of mainly amorphous urate contents in large quantities. Were isolated *Staphylococcus sp*, *Klebsiella ozanae* and *Enterobacter sp*, sensitive to enrofloxacin.

Fig.1. Urinalysis



The ultrasound examination (Fig.2) revealed a hyperechogenic line, approximately 5 mm, producing acoustic shadow in the hilar region of the right kidney (suggestive of kidney stone), bladder filled with anechoic fluid containing numerous heterogeneous formations of multiple forms (suggestive of blood clots). In urethroscopia, besides the presence of blood and clot, no changes were found throughout urethral tract and bladder.

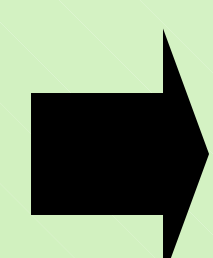


Fig.4.Returned.



Keywords: Calculi-Horse-Shock wave- Urolithiasis.

METHODS

Was conducted then, ESWT with a **Swiss Dolorclast®**, with a eletro-pneumatic system for the production of radial shockwaves, used in treatment of skeletal muscle changes. With the animal standing, after sedation and location of the point of application of ultrasound, 3000 pulses were applied at 10 Hz frequency according to the manufacturers table and depth of the structure is estimated from a pressure pulse of approximately 10Mpa.

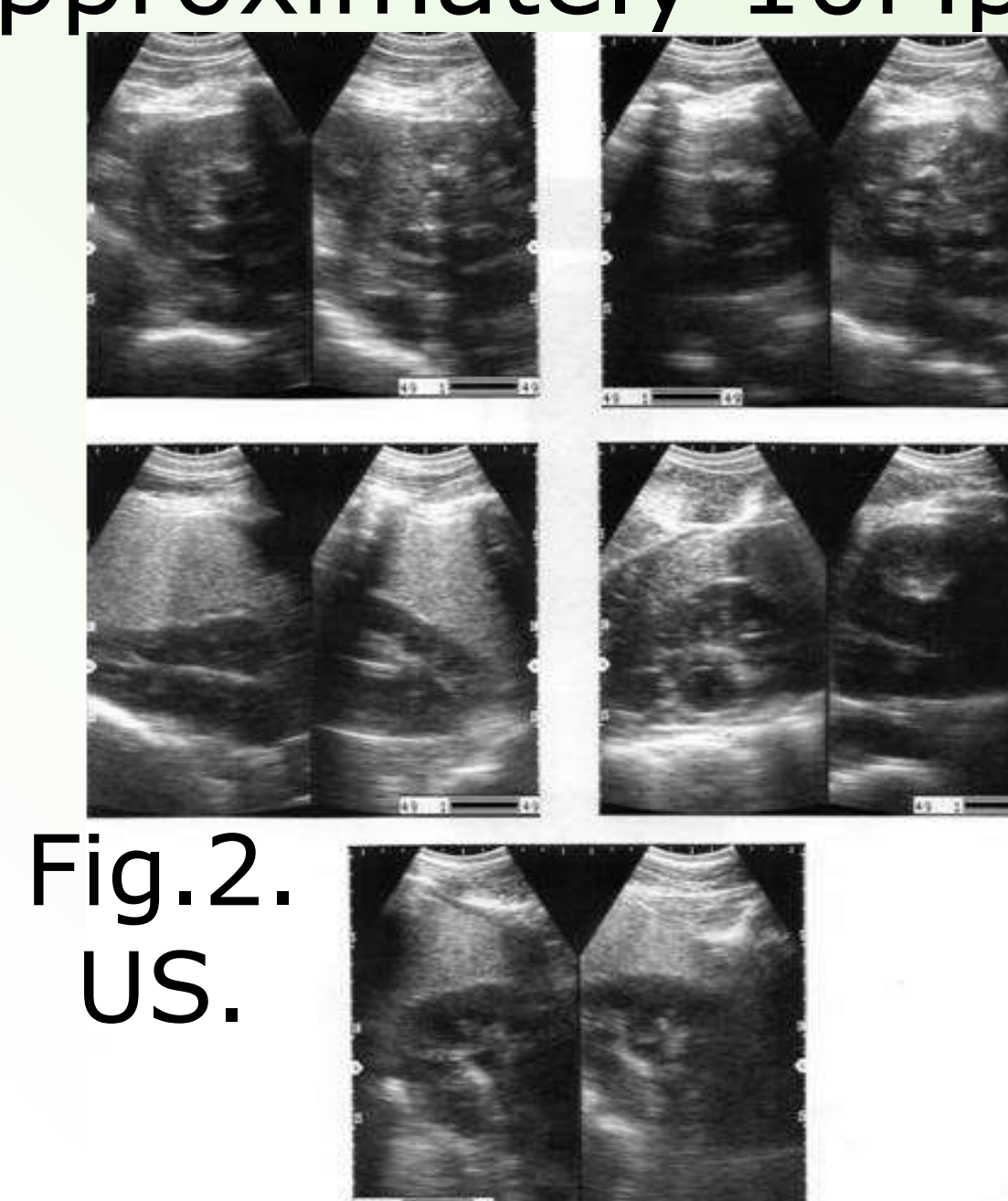


Fig.2. US.

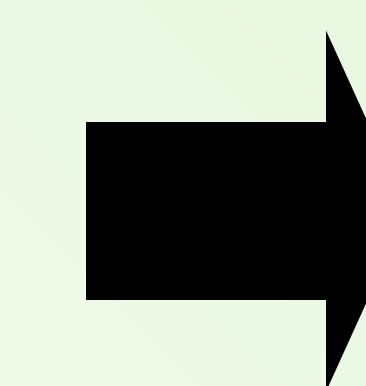
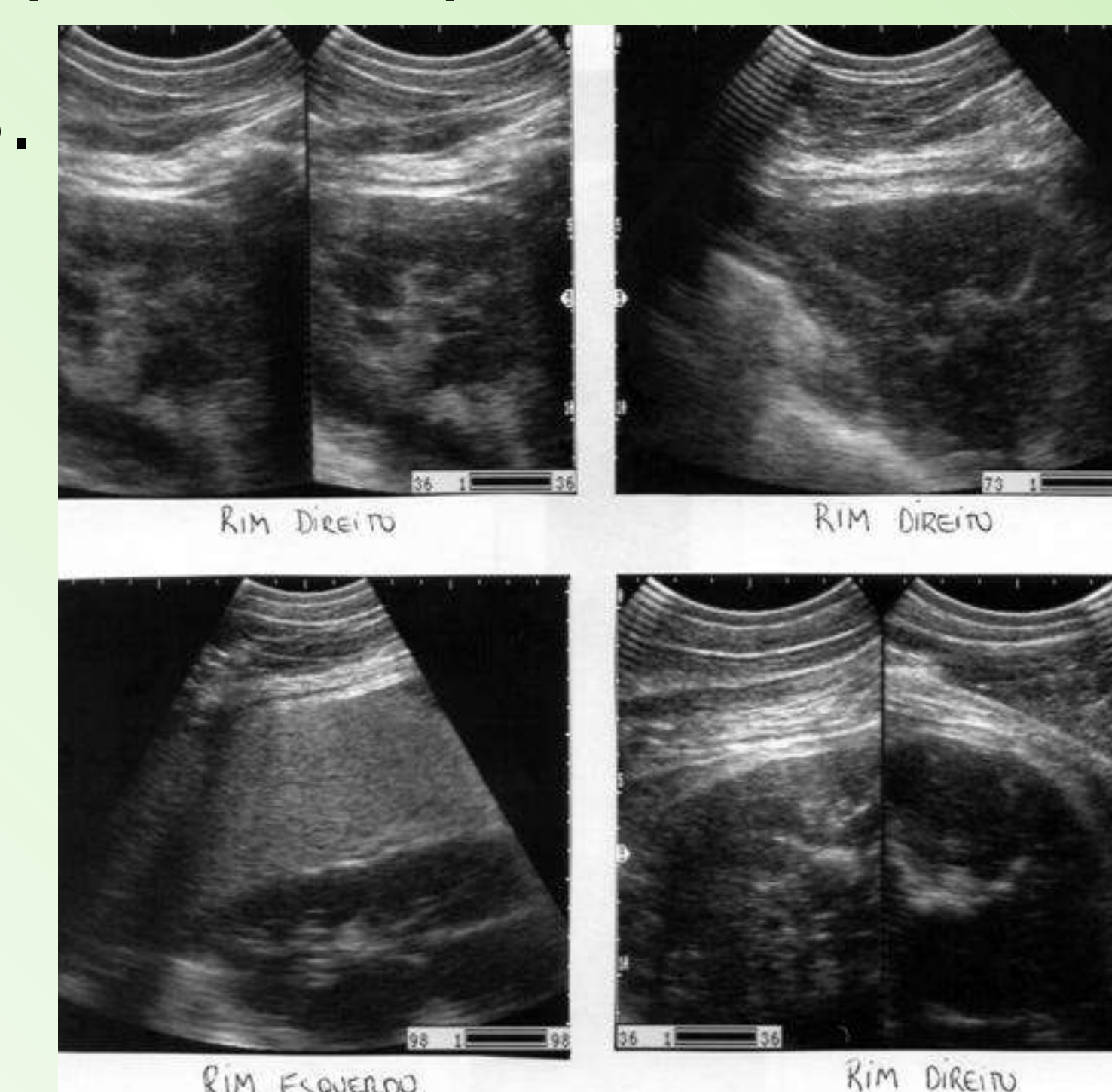


Fig.3. US.



RESULTS

One week after application of shock waves, the ultrasound examination (Fig.3) showed an increase in the thickness of the cortical and medullary layers, discrete heterogeneity in both the cortical and hypoechoic with loss of cortical medullary demarcation. Unable to identify the focus hyperechogenic in hilar region. A urinalysis showed pH = 8.5, clear amber color, low blood cell and peel.

CONCLUSIONS

One month after the shock wave therapy, the right kidney was normal ultrasound image. Residual fragments were not identified until now. The animal returned sports with excellent performance (Fig.4), without recurrence of hematuria (8 months). The use of ESWT is safe and useful alternative to the treatment of equine urolithiasis.



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