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# Clinical Image A Hydropneumothorax Captured by M-mode Ultrasonography

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**Fig. 1.** Panel A: chest computed tomography scan showing bilateral partially loculated pleural effusions. Panel B: top half: B-mode image of pleural effusion, underlying consolidated lung and an A-type artefact; bottom half: M-mode image showing rapid and irregular alternation between short runs of barcode sign (yellow arrows) and regions of blackness representing a hydropneumothorax. Panel C: top half: B-mode image of pleural effusion, underlying consolidated lung and an A-type artefact; bottom half: M-mode image of pleural effusion, underlying consolidated lung and an A-type artefact; bottom half: M-mode image showing regular alternation between the seashore sign (yellow arrowheads) with black effusion representing the expanding and receding aerated upper lobe. Panel D: chest radiograph shows right partially loculated hydropneumothorax and left partially loculated pleural effusion.

A 36 year-old male patient was admitted with bilateral pleural effusions (Fig. 1 panel A) and symptoms of chest pain, fever and night sweating. Right-side thoracentesis yielded a straw-coloured aspirate with pH 7.41. He was started on intravenous ampicillinsulbactam and subsequent fluid results revealed LDH 1006 IU/L, glucose 71 g/dL and cultures growing *Staphylococcus aureus* and *Klebsiella* species. Ultrasound was done on both sides to evaluate the need for chest tube drainage. On the right-side just above the effusion, the 'lung artefact' appeared to move erratically and asynchronously relative to patient's breathing (supplementary video). This was shown using M-mode ultrasonography (panel B). In contrast, the lung artefact overlying the left effusion moved regularly and synchronously with breathing as demonstrated by M-mode (panel C). These findings suggested a right hydrop-neumothorax which was confirmed on chest radiography (panel D).

The case depicts the hydro-point,<sup>1</sup> which is a sign described in B-mode ultrasound examination of hydropneumothorax where an A-type artefact (which could be mistaken for the lung) moves in a way that simulates the movement of liquid in partially filled glass that is shaken. To our knowledge, this is the first report to demonstrate the M-mode appearance of the sign by highlighting the rapid and erratic alternation between barcodes<sup>2</sup> (representing air) and blackness (representing fluid) at the air-fluid level. This is in stark contrast to the regular alternation between the seashore sign(of sliding lung)<sup>2</sup> and effusion.

#### Informed consent

Written informed consent was provided by the person subject of the report.

# **Conflict of interest**

No conflict of interest to declare.

# Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at doi:10.1016/j.arbres.2021.07.012.

### References

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