

USCOM in the Emergency Department: Clinical Case 3 Trauma? Internal Bleeding










The measure of life.

Rapid evaluation of haemodynamics is carried out in every emergency department in the world every single day. In the main however, this usually consists of looking at some general parameters such as blood pressure, pulse rate and perhaps oxygen saturation. Some clinical evaluation of perfusion may also be made, but how much better would it be if we knew exactly what the haemodynamics were doing. Because of the non-invasive nature of the USCOM, and the speed with which such data can be acquired, the USCOM is beautifully suited to the emergency environment. Let's take a look at a case that was presented in our own emergency department and see just how the USCOM improves clinical management of the patient.

Male 38 years. Assaulted. Blunt abdominal trauma (was kicked several times)

On admission; fully conscious, complaining of pain in lower left chest and upper quadrant of abdomen.

-  BP 135/70
-  Pulse 90
-  Resps 18/min
-  SpO₂ 98% on air
-  Warm and well perfused
-  Capillary refill time ~2seconds
-  Abdomen tender in Left Upper Quadrant, no peritonism

Haemodynamics assessed with USCOM.

Initially quite stable then abdominal pain increased.



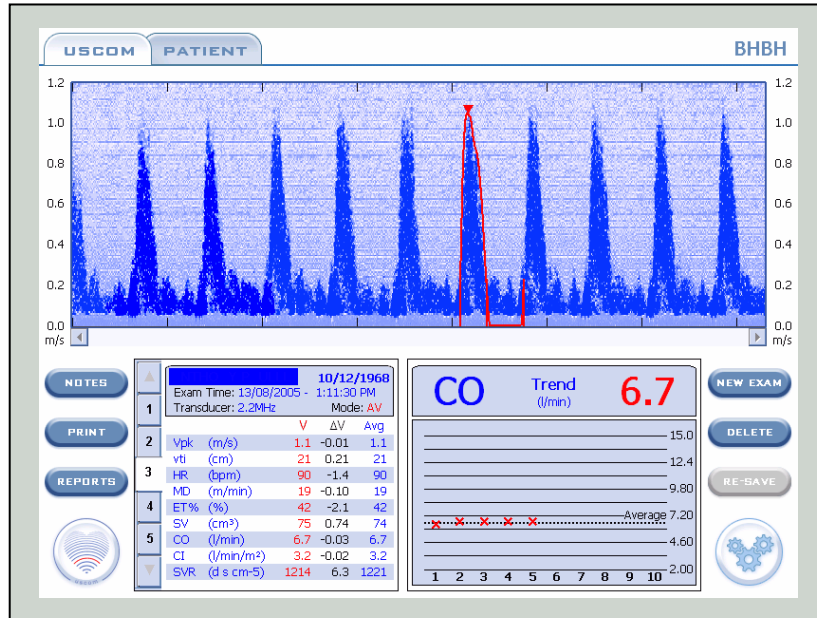
Uscom Limited
ABN 35 091 026 090
Level 7, 10 Loftus Street
Sydney NSW 2000 Australia
T +612 9247 4144 F +612 9247 8157
www.uscom.com.au

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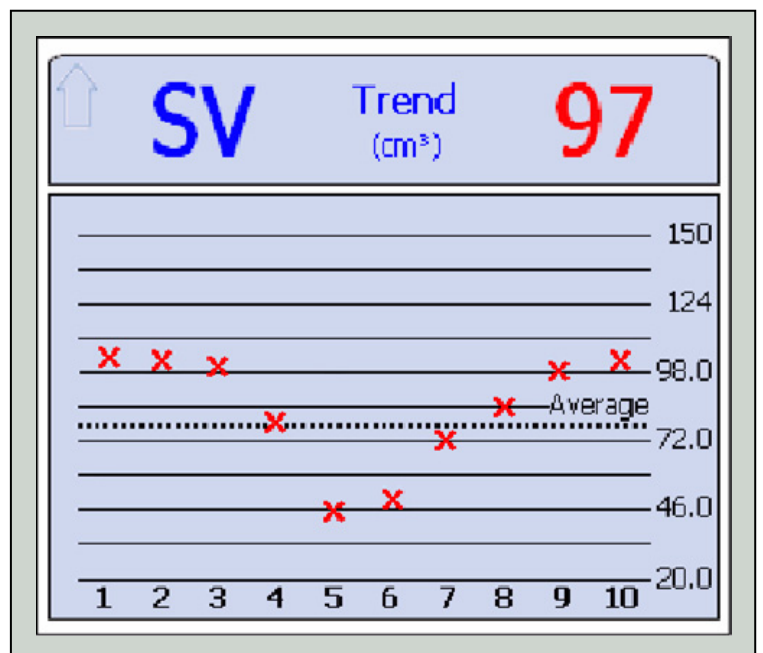


Serial stroke volume measurements showed abrupt fall after 4.5 hours. Responded to rapid IV fluid, 2.5 l. Diagnosis? Management?

Urgent CT scan showed free fluid ++ in peritoneum.

Emergency laparotomy revealed 5 cm laceration in left lobe of the liver. Just over 2 l of blood in abdomen.

USCOM detected bleeding immediately and guided volume replacement therapy accurately.



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Page 2 of 2

Associate Professor, Brendan Smith
 Specialist in Anaesthetics and Intensive Care,
 Bathurst Base Hospital, Bathurst