



“Manual pressure (the modified peace sign) as an aid to aortic visualization – a PoCUS pilot study

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Background:

Point-of-care-ultrasound is an established tool in the early diagnosis of abdominal aortic aneurysm (AAA), with a reported pooled sensitivity of 97.5% and pooled specificity 98.9%. Despite these impressive numbers, body habitus and bowel gas often render emergency department (ED) PoCUS for AAA inconclusive. We devised a manual aid “the modified peace sign technique” to improve visualization of the aorta, consisting of placing the divided fingers of the free hand of the sonographer around the probe to increase gas dispersion and improve the view of the obscured aorta. We tested the technique on volunteers during a training course when the initial scan was indeterminate due to inability to view the aorta from sub-xiphoid to bifurcation.

Methods:

In our pilot study, 7 physicians were asked to make a best attempt to perform an aortic scan. If they were unable to visualize the aorta, they were asked to use the modified peace sign technique. Participants recorded the number of times which they used the technique and the frequency that the technique allowed for a complete aortic scan, previously unobtainable. All scans were supervised by certified PoCUS physicians.

Results:

The technique was used a total of 25 times. Following failure to complete an aortic scan using their best attempt, participants were subsequently able to obtain a complete aortic scan 70% (95% CI 48 to 83%) of the time using the modified peace sign technique.

Conclusion:

In our pilot study, the modified peace sign technique had an estimated effect size of 70% improvement for visualization of the aorta in volunteers. Further studies are required to validate the technique in clinical practice.



The Technique:

When obtaining the transverse view, place the divided fingers of the free hand (second or third web space) around the probe to disperse gas and visualize the aorta.

