STROKE COMPLICATING CENTRAL VENOUS LINE

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- A patient with community acquired pneumonia and septic shock had an inadvertent right carotid artery placement of a multi-lumen central venous line.
- The patient subsequently developed a large right sided cerebral infarct.

B

- The line was inserted under ultrasound guidance
- On connection to pressure transducer, a waveform could not be obtained and chest X-ray was performed. This was interpreted as showing correct placement and noradrenaline infusion commenced.
- 2 hours later a pressure waveform was obtained by changing the monitor scale (from maximum of 20 mmHg to 200 mmHg) which revealed an arterial trace.
- The line was promptly removed and local pressure applied until bleeding controlled.

A

- Technical error with inadvertent passage of guide-wire through vein into artery with failure to identify malposition before proceeding to dilatation and large gauge line insertion.
- Misinterpretation of cause of failure to obtain venous waveform (incorrect scale)
- Removal of large gauge line without referral to vascular surgery or interventional radiology.

R

- Venous placement of guidewire must be confirmed before dilatation.
- Consider routinely transducing BEFORE dilatation.
- Highlight potential for misinterpreting a flat CVC trace
- Ensure all clinical members of team are trained in troubleshooting invasive pressure transducers
- Do not ‘remove and press’ following Inadvertent arterial cannulation with a large bore line but get urgent vascular surgery/interventional radiology advice.