March Clinical Pearl

Jugular Venous Distention

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Fluid status can be difficult to assess in patients with heart failure. Patients may have venous insufficiency or immobility interfering with determination of the significance of lower extremity edema. COPD or bronchial airway exacerbations may exclude the clinician from identifying the presence of rales or S3 heart sounds. Body habitus may limit clinical assessment. A critical and often missed or underappreciated area of the clinical assessment is the presence and documentation of neck vein distention.[1]

Jugular venous distention (JVD) has been shown to be a specific indicator of elevated cardiac filling pressures.[2] Proper evaluation of neck veins, however, can be difficult at times. The following clinical pearl is intended to improve JVD assessment skills for clinicians.

Position the patient at 45 degrees and if the neck veins cannot be seen, gentle repositioning of the head and neck may improve visualization of venous pulsation. Side lighting to create a shadow may be needed. If the neck veins still are not visible, put the head of the bed up or down depending on whether the patient is grossly fluid overloaded or not. As the head of the bed is lowered, venous pulsations will appear just above the clavicle in dry patients. Patients with significant fluid overload may need to be sitting fully in the upright position.

To determine venous from arterial pulsations the following guidelines can help.

1. Venous, but not arterial pulsations are subject to respiratory variability.
2. Venous pulsations can be occluded at the base of the neck with pressure
3. Venous pulsations will change with positioning of the patient
4. Abdominal compression may change venous pulsations but won't affect arterial

Assessing JVD in patients is an integral part of the heart failure assessment and can provide a wealth of information. Although patients do not have to be at 45 degrees to assess neck veins, there should be consistency with measurement. Therefore, it is important to document position and level of JVD for future comparison. JVD provides an additional source of vital information to the puzzle when fluid status is uncertain or difficult to determine due to underlying comorbidities. With practice, clinicians can become more comfortable with neck vein assessment and include this vital piece of information in all clinical documentation.

1. Ewy, G.A. Clinical Skills Exchange: Evaluation of the Neck Veins. Hospital Practice. March 30, 1987: 72-80.

References

2. Daley, R. P. (2009). Heart Failure with Preserved Left Ventricular Ejection Fraction. In Griffin B.P. & Topol, E. J. (Eds). Manual of Cardiovascular Medicine, 3rd Ed.: (pp-122-137). Philadelphia, Ill: Wolters Kluwer/Lippincott Williams & Wilkins.