

Difference Between Carotid Artery Pulsation and Jugular Vein Pulsation

www.differencebetween.com

Key Difference - Carotid Artery Pulsation vs Jugular Vein Pulsation

Pulse in general terms can be defined as the transfer of pressure waves inside blood vessels. Carotid pulse is when these pressure waves are moving across the carotid artery. Similarly when the pressure waves move through the internal jugular vein that is known as the jugular venous pulse (JVP). **Carotid pulse is an arterial pulse whereas JVP is a venous pulse.** This is the **key difference** between carotid pulse and JVP.

What is Carotid Artery Pulsation?

The carotid artery is one of the major arteries which branches off from the aorta. Assessment of carotid pulse is a part of the routine examination. But some of the clinicians oppose the assessment of carotid pulse based on the possibility of having complications such as transient ischemic attacks, induce reflex and vagally mediated bradycardia. Carotid pulse is the pulse of choice in examining a patient who has had a cardiac arrest.



Figure 01: Feeling the Carotid Pulse

Surface marking,

- At the angle of the jaw anterior to the sternocleidomastoid [muscle](#).

Examination sequence,

- Carotid pulse on both sides should never be assessed simultaneously.
- The procedure should be explained to the patient.
- Ask the patient to lie in a semirecumbent position.
- Place the tip of the fingers between larynx and the anterior border of sternocleidomastoid and feel the pulse.
- Listen for bruits over the carotid pulse using the stethoscope.

What is Jugular Vein Pulsation?

The pressure inside the jugular vein can be approximated by the assessment of jugular vein pulsation (JVP). The normal waveform produces two peaks per minute. JVP reflects the right atrial pressure. The sternal angle is about 5 cm above the right [atrium](#). Therefore when the patient lies at an angle of 45 to the horizontal JVP should be checked roughly 4cm above the sternal angle. When the JVP is low patient has to lie flat for it to be seen, and when the JVP is high patient should sit upright.

Examination sequence,

- JVP is best observed on the right side
- Position the patient supine, reclined at 45 and place a pillow underneath to relax the sternocleidomastoid muscles.
- Observe the patient's neck and identify JVP either in the suprasternal notch or behind the sternocleidomastoid.
- Vertical height between the upper end of the pulse and sternal angle is taken as the JVP

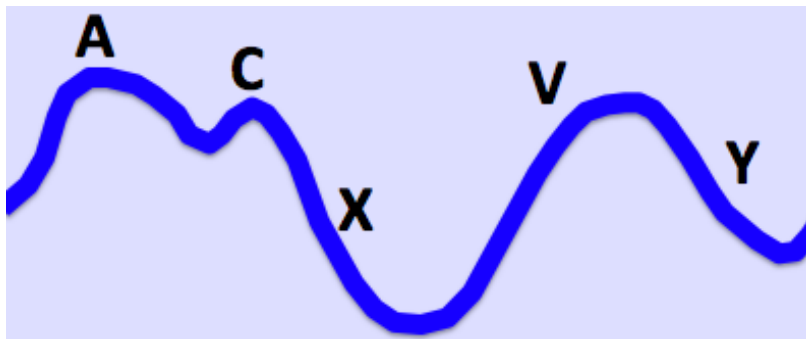


Figure 02: Waveform in the Jugular Venous Pulse

A normal JVP wave has 2 peaks per cardiac cycle. The 'a' wave corresponds to the atrial constriction and occurs just before the first heart sound. The other peak which is known as the 'v' wave occurs during the ventricular systole when the ventricular filling happens.

What is the Difference Between Carotid Artery Pulsation and Jugular Vein Pulsation?

Carotid Artery Pulsation vs Jugular Vein Pulsation	
Carotid pulsation is an arterial pulse.	Jugular vein pulsation is a venous pulse.
Number of Peaks	
There is only one peak per cardiac cycle.	There are two peaks per cardiac cycle.
Palpability	
Carotid pulse is palpable.	JVP is impalpable.
Impact of the Pressure	
Pulsation is not affected by the pressure at the root of the neck.	Pulse is reduced by an increase in the pressure at the root of the neck.
Respiration	
Carotid pulse does not depend on respiration.	JVP varies with respiration.
Impact of Position	
Pulse does not change the position of the patient	Pulse changes with the position of the patient.
Abdominal Pressure	
Pulse is independent of the abdominal pressure.	Pulse increases with an increase in the abdominal pressure.

Summary - Carotid Artery Pulsation vs Jugular Vein Pulsation

The transfer of pressure waves across carotid artery and the internal jugular vein is respectively known as the carotid pulse and JVP. Carotid pulse is an arterial pulse whereas JVP is a venous pulse. This is the major difference between these two terms.

Reference:

1. Douglas, Graham, et al., editors. *Macleod's Clinical Examination*. 2013.

Image Courtesy:

1. 'Carotidian pulse' By Rama, ([CC BY-SA 3.0](#)) via [Commons Wikimedia](#)
2. 'Jugular Venous Pulse' By Ecgtocardiology - Own work, ([CC BY-SA 3.0](#)) via [Commons Wikimedia](#)

How to Cite this Article?

APA: Difference Between Carotid Artery Pulsation and Jugular Vein Pulsation.(2017 December 04). Retrieved (date), from <http://differencebetween.com/difference-between-carotid-artery-pulsation-and-vs-jugular-vein-pulsation/>

MLA: "Difference Between Carotid Artery Pulsation and Jugular Vein Pulsation" Difference Between.Com. 04 December 2017. Web.

Chicago: "Difference Between Carotid Artery Pulsation and Jugular Vein Pulsation." Difference Between.Com. <http://differencebetween.com/difference-between-carotid-artery-pulsation-and-vs-jugular-vein-pulsation/> accessed (accessed [date]).



Copyright © 2010-2017 Difference Between. All rights reserved