Carotid sinus baroreceptor reflex

Syncope may be caused by involvement of the carotid sinus. see Carotid sinus syncope.

Hypersensitive carotid sinus may cause dizziness.

If the Carotid Sinus senses high blood pressure, it stimulates the corresponding brain canter to slow the heart down, at least until the blood pressure comes down.

Hypertension: may develop 5–7 days carotid endarterectomy post-op. Longstanding HTN may occur as a result of the loss of the carotid sinus baroreceptor reflex

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The carotid sinus reflex (CSR) is a rare complication of the Pipeline Embolization Device (PED) deployment. No study has assessed the potential risk factors in a case series. The purpose of this study was to examine CSR triggering during PED deployment. Thirty-seven consecutive patients who underwent PED deployment were included. All procedures were performed under local anesthesia with mild sedation. We retrospectively analyzed patient characteristics, PED deployment time, and vital signs during the procedure. The vital signs included the pulse rate (PR) and systolic blood pressure (SBP) obtained at three timepoints (pre-deployment, during deployment, post-deployment). We examined the triggering of the CSR during PED deployment by comparing the vital signs at the three timepoints. Moreover, risk factors for CSR were analyzed with univariate analysis. The patients' average age was 66.3 years. The average size of the aneurysm was 18.0 mm. Six patients (16.2%) showed a decline in the SBP or PR defined as CSR. One patient had a transient cardiac arrest and two had severe transient bradycardia. Deployment into the ophthalmic segment of the internal carotid artery C6 segment aneurysm ($p = 0.022$), prolonged PED deployment time more than 14.5 minutes ($p = 0.005$), and an acute angle of the anterior genu less than 51.5 degrees ($p = 0.005$) were risk factors in triggering CSR. CSR may be triggered during PED deployment under local anesthesia with mild sedation. Deployment to the Internal carotid artery C6 segment aneurysm, prolonged PED deployment time, and an acute angle of the anterior genu were associated with CSR triggering [1)]

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Goto S, Izumi T, Nishihori M, Tsukada T, Araki Y, Uda K, Yokoyama K, Saito R. Triggering of Carotid Sinus Reflex during Deployment of the Flow-diverter Device. Neurol Med Chir (Tokyo). 2021 Jul 7. doi: 10.2176/nmc.oa.2021-0049. Epub ahead of print. PMID: 34234082.