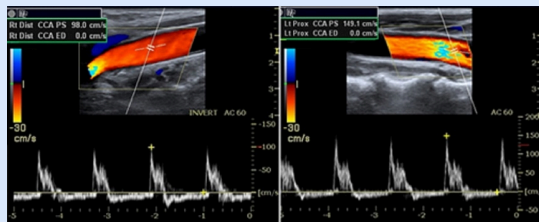


**Dataset:** MedXpertQA-MM



**Question:** You are shown images of the right and left distal common carotid arteries, respectively. Which of the following is the MOST likely diagnosis?

**Options:** A. Intra-aortic balloon pump; B. Carotid artery dissection; C. Mitral insufficiency; D. Subclavian steal; E. Aortic insufficiency

<think> To determine the most likely diagnosis, let's analyze the provided images and the options: 1. **Images Analysis:** The left image shows the right distal common carotid artery (CCA) with a velocity of 98.0 cm/s in the proximal segment (PS) and 0.0 cm/s in the distal segment (ED). This suggests a significant reduction or absence of flow in the distal segment. The right image shows the left distal common carotid artery (CCA) with a velocity of 149.1 cm/s in the proximal segment (PS) and 0.0 cm/s in the distal segment (ED). This also indicates a significant reduction or absence of flow in the distal segment. 2. **Key Observations:** The absence of flow in the distal segments of both carotid arteries is a critical finding. The presence of a "reversed" flow pattern in the distal segments (indicated by the color inversion in the images) suggests retrograde flow, which is often associated with conditions that cause a pressure gradient or flow reversal. 3. **Diagnosis Consideration:** This condition causes a diastolic runoff of blood from the aorta back into the left ventricle, leading to a characteristic diastolic flow reversal in the carotid arteries. The images show a significant reduction or absence of flow in the distal segments, which is consistent with aortic insufficiency. 4. **Conclusion:** The most likely diagnosis is **Aortic insufficiency** because it explains the flow reversal and the significant reduction in flow in the distal segments of both carotid arteries. </think> <answer>E. Aortic insufficiency</answer>