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Neuro *Images*









Figure. (A) Lateral X-ray of the neck shows numerous pellets. (B) Unenhanced transaxial CT shows an intracranial pellet without evidence of skull or parenchymal lesions to account for pellet entry pathway. The arrow points to the area of infarction, which extends superiorly. (C) Anteroposterior view of the cerebral angiogram shows a pellet (arrow) in the left middle cerebral artery. (D) Oblique lateral projection of the angiogram shows two small pseudoaneurysms (arrows) in proximal left internal carotid artery, indicative of pellet entry site.

Cerebral shotgun pellet embolism

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A 40-year-old man sustained a shotgun wound to the neck. The next day he was aphasic with right hemiparesis. A head CT showed a pellet in the left sylvian fissure without overlying bony defect. An angiogram confirmed the pellet in the left middle cerebral artery without contrast extravasation from the left cervical carotid artery. A repeat angiogram 12 days later showed a pseudoaneurysm in the left proximal internal carotid artery, indicative of a pellet entry site. The third angiogram 1 month later demonstrated an unchanged pseudoaneurysm. The right hemiparesis resolved; however, the aphasia remained.

Shotgun wounds with multiple metal pellets in the neck may result in a delayed pellet embolism to the intracranial vessels.1 Owing to the small size of these missiles, direct puncture through the cervical carotid artery wall may not result in angiographic dye leakage on initial evaluation. Follow-up angiogram may reveal a pseudoaneurysm in nearly 50% of cases.2 The majority of these pseudoaneurysms will heal spontaneously and are best managed by observation and serial angiograms if indicated.

^{1.} van As AB, Pillay R, Domingo Z. Shotgun pellet embolus to the anterior cerebral artery. Injury 1995;26:631-632.

^{2.} Stain SC, Yellin AE, Weaver FA, Pentecost MJ. Selective management of nonocclusive arterial injuries. Arch Surg 1989;124:1136-1141.



Cerebral shotgun pellet embolism

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