Recurrent Epistaxis: A Case Presentation

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Background

Epistaxis (nosebleed) is a common complaint in primary and acute care settings. Most episodes do not result in significant blood loss, are non life-threatening, and are usually controlled with simple intervention. A large percentage (90%) of nosebleeds arise from the anterior nasal septum (Kiesselbach's plexus), usually unilateral, and are most common in children <10 y/o and in patients >70 y/o. Anterior nosebleeds are often controlled with a topical vasoconstrictor such as oxymetazoline and application of pressure to the area for 15 minutes.

Causes of Epistaxis

Epistaxis may be caused by common or uncommon reasons. In many cases it is caused by a combination of factors arising to clinical presentation.

Common Causes	
Nasal desiccation	Trauma
Allergic rhinitis	Infection
Medication / Drugs	Hypertension
Deviated septum	Polyps
Foreign body	Nasal fracture

Uncommon Causes	
Neoplasm	Coagulopathy
Hereditary hemorrhagic telangiectasia	Granulomatosis with Polyangiitis
Aortic coarctation	Heart Failure

History of Present Illness

Mr. E. is a 72 y/o white male with a chief complaint of recurrent nosebleeds. He states that he has had nosebleeds his entire life but they have been worse after starting a blood thinner last month for atrial fibrillation. He has had 2-3 nosebleeds daily over the past 2 weeks, each one lasting from 10 to 60 minutes. He is able to stop them with pressure and holding ice over his nose. He has had nasal packing 5 times over the past 2 years. He is a seasonal resident, spending winters in Florida and summers in the mountains of North Carolina. His past medical history is significant for sleep apnea, which is well controlled on CPAP, a 10 pack per year history of smoking when he was in his late-teens and early twenties, and recently diagnosed atrial fibrillation. His current medications include Coumadin (he is unsure of his dose), ASA 325mg daily, metoprolol 50mg daily, and a multivitamin.

Physical Exam and Course

His physical exam was significant for left anterior nasal septal crusting and dried blood, diffuse nasal dryness, and a mild septal deviation to the left. The left septum was cauterized with silver nitrate and some basic labs were drawn including a CBC, CMP, and INR. CBC and CMP were within normal limits and INR was 2.0. ASA was discontinued. His follow up is scheduled in 1 week. The next morning the patient calls and states he had another nosebleed the previous night lasting 2 hours. Given his extensive nosebleed history a biopsy of the left septum is performed and his nose is packed with an anterior nasal packing and scheduled to return in 5 days. The pathology reveals Granulomatosis with polyangiitis.
C-ANCA bloodwork was drawn with a positive result. Mr. E. returned for packing removal and was referred to rheumatology for further evaluation and management.

Discussion

Granulomatosis with polyangiitis, also known as Wegener's Granulomatosis, is an uncommon disease involving a classic triad of upper and lower respiratory disease along with glomerulonephritis. Prevalence is estimated at 3 per 100,000, more common in whites, and has a 1:1 male-to-female ratio. The mean age of onset is 40 years old, however it is not uncommon to have a diagnosis in the 6th and 7th decade of life. Histopathologic process of the disease involves small artery and vein vasculitis contributing to granuloma formation in the lungs. Involvement of the upper airway involves 95% of patients, commonly paranasal sinus pain and bloody or purulent nasal discharge. Nasal mucosal ulceration may be present, which can lead to septal perforation and a classic "saddle nose" deformity seen on physical exam. Pulmonary involvement is present in 85-90% of patients and can range from cough, dyspnea, hemoptysis, or chest pain.

Granulomatosis with polyangiitis, although uncommon, should be considered in the case of recurrent nosebleeds despite when other risk factors may be present such as blood thinners, nasal dryness, or trauma. Prior to effective therapy with immunomodulating agents, the disease was universally fatal within a few months of diagnosis. Although total remission is associated with a 50-70% risk of relapse, early identification can reduce systemic involvement and improve long term outcomes.

References

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