

Temporal Arteritis^{1,2}

Narrative Section

HISTORICAL VIGNETTE - Almost 500 years before Hutchinson provided the first medical description of temporal arteritis (of a man with “red streaks on his head” that “prevented him from wearing his hat”), Flemish Renaissance master Jan van Eyck portrayed similar physical manifestations of his artistic patron. In his 1434 oil-on-oak panel painting, van Eyck portrayed the aged Canon van der Paele. Historical records confirm the wealthy but elder clergyman’s decline, allowing that he was excused from his early morning duties. The painter shows the beaded and prominent temporal arteries plus an abnormal pattern of hair loss and eyebrow thinning. In combination, this tableau tips its hat to what’s now recognized as temporal arteritis (with probable polymyalgia rheumatica). The question that remains across a half a millennia, though, is what physical features lead us closer to that diagnosis? And how do those exam features enhance our pre-test probability of that disease?



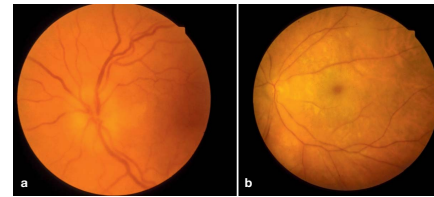
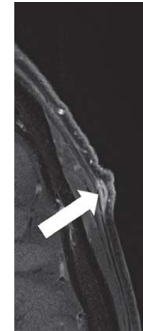
CONTEXT AND USEFULNESS - Timely recognition of temporal arteritis prevents vision loss by offering anti-inflammatory treatment to the patient with arterial inflammation of the temporal branches of the external carotid artery. With headache being a cardinal but nonspecific historical feature of this condition, heightened clinical suspicion—informed by the physical exam—can lead to a more definitive pathologic diagnosis.

¹ Chi J *et. al.* “The Five Minute Moment.” *Am J Med.* 2016 Aug; 129 (8): 792-795.

² Smetana GW and Shmerling RH. “Does This Patient Have Temporal Arteritis?” *JAMA.* 2002 Jan; 287 (1): 92-101.

Physical Maneuver

Model Proper (And Improper) Technique³ - Make sure to note the patient’s temperature and general appearance; those with TA may be febrile or systemically ill. Next, lightly palpate the bilateral temporal arteries starting just anterior and superior to the ear. Compare pulsations on each side. Do you feel beading or nodularity? Is tenderness present? What about erythema? Follow the path of the temporal artery, noting any necrotic or ischemic changes along the way. Rarely, cranial imaging performed to evaluate the headache can secondarily demonstrate inflammation of the temporal arteries.



Next, perform a fundoscopic exam. While the most frequent eye manifestation in TA is the swollen and pale optic nerve of anterior ischemic optic neuropathy (a), patients with TA may rarely present with central artery occlusion (b).

INTERPRETATION - An elderly patient with a headache has an increased likelihood of TA when also reporting diplopia (LR = 3.4) or jaw claudication (LR = 4.2). While the exam of patients with TA is often *normal*, combining the historical features above with physical exam findings of temporal artery beading (LR = 4.6) or arterial prominence (LR = 4.3) raises the probability of an abnormal temporary artery biopsy.

CAVEAT AND COMMON ERRORS - While the findings of the temporal artery examination are more likely to influence the results of the biopsy than the patient’s history, two features make a positive biopsy *less* likely: the presence of synovitis on exam or the finding of a *normal* sedimentation rate. If either is present, re-consider your clinical diagnosis of TA.

³ Ness T. *et. al.* “The Diagnosis and Treatment of Giant Cell Arteritis.” *Dtsch Arztebl Int.* 2013; 110 (21): 76-86. [images above]