

# Giant Cell Arteritis and the Imposters

## 1 hour

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### Course Description:

Giant cell arteritis is a life-threatening condition that requires a prompt diagnosis. It is a unique entity in that it often requires treatment before the condition is ultimately diagnosed. As steroids are the first-line treatment, it is essential to not miss an underlying infectious etiology which could put the patient at further risk. This lecture will discuss giant cell arteritis and its infectious, vascular and inflammatory mimics.

### Objectives:

- Identify signs and symptoms of giant cell arteritis
- Apply proper work-up for a patient with suspected giant cell arteritis
- Differentiate giant cell arteritis from other infectious, vascular and inflammatory disorders

### OUTLINE

#### I. Giant Cell Arteritis

- A. Granulomatous medium and large vessel vasculitis
- B. Most common vasculitis in the US
- C. Most common arteries affected:
  1. Temporal – where we biopsy
  2. Ophthalmic- choroidal ischemia – AION +CRAO
  3. Posterior ciliary arteries – AION
  4. Vertebral arteries – stroke
- D. Systemic features:
  1. Headache, malaise, scalp tenderness, jaw claudication, fever, fatigue, weight loss, polymyalgia
  2. Visual features: temporary or permanent
    - a) Double vision
    - b) Amaurosis fugax
    - c) AION
    - d) Ophthalmic artery occlusion
- E. Demographics:
  1. Females>males
  2. More common in Caucasian population over 50 years of age
  3. Profound visual loss typically hand motion or worse
- F. Work-up
  1. If suspicion is high send to ER for evaluation and treatment
    - a) Clinical diagnosis = treat before diagnosis

- b) Bloodwork:
    - (1) ESR, CRP, platelets
    - (2) Rule out infection: CBC, syphilis, TB, etc.
  - c) Imaging – cranial ultrasound
  - d) Temporal artery biopsy – gold standard
- G. Treatment
- 1. Vision loss = IV steroids
  - 2. No vision loss = oral steroids
  - 3. Tocilizumab
    - a) More effective than prednisone alone at sustaining glucocorticoid-free remission in GCA
  - 4. Risk to fellow eye
    - a) 9% on treatment and 20-62% in untreated patients

## II. Imposters

### A. Infection

- 1. Disorders caused by organisms – bacteria, viruses, fungi and/or parasites
- 2. Occurring more frequently in the population
  - a) Increase in lifespan = larger elderly population
  - b) Improvement in health care = more immunodeficient individuals
    - (1) Cancer survivors
    - (2) Transplant patients
    - (3) Autoimmune diseases
    - (4) Immunosuppressive medications
- 3. Broad category but major players include:
  - a) Syphilis
  - b) TB
  - c) Fungal

### B. Vascular

#### 1. NA-AION

- a) Swollen optic disc with painless vision loss
- b) Similar age and race profile as GCA
- c) Optic disc swelling
  - (1) typically more hyperemic with 'disc at risk' in the fellow eye
- d) No known beneficial treatment
  - (1) treatment with steroids is considered controversial

#### 2. Amyloidosis

- a) Systemic or local disorder caused by deposition of fibrils made up of proteins throughout the body.
- b) Can affect any organ system and/or can circulate in the blood and deposit in vessels
  - (1) Abnormal ESR/CRP

- (2) Temporal headache
- (3) TAB shows giant cells
  - (a) (+)Congo red stain

**C. Inflammatory**

- 1. Less of a concern here as IV steroids may benefit the patient
- 2. Conditions to consider:
  - a) Granulomatosis with polyangiitis
  - b) Lupus
  - c) Sarcoidosis

**III. Cases to be discussed**

- A. GCA case causing ischemic optic neuropathy
- B. GCA case causing diplopia with transient visual loss
- C. Temporal headache and optic atrophy from systemic amyloidosis
- D. Compressive optic neuropathy from invasive fungal sinusitis initially diagnosed as GCA

**IV. Q&A / Discussion**