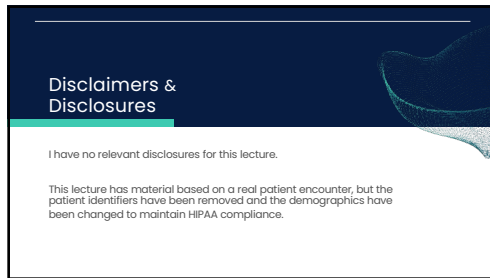
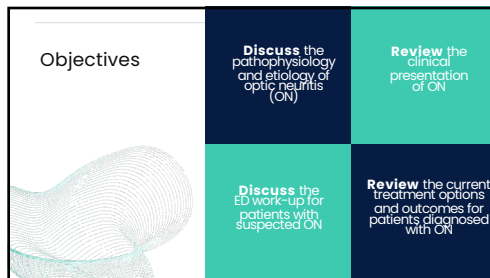


1



2



3


Case:
Change in Vision

HPI
26 yo female with no PMH presents with eye pain and blurry vision

Triage Visual Acuity

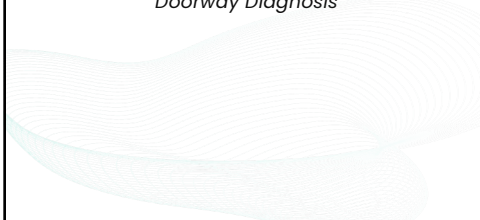
- OD: 20/80
- OS: 20/20

Vitals & General Physical Exam



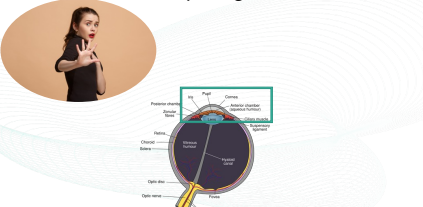
4

An Approach to Eye Complaints:
Doorway Diagnosis

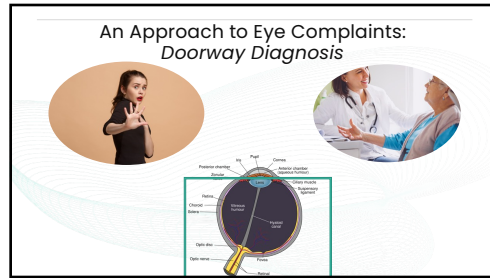


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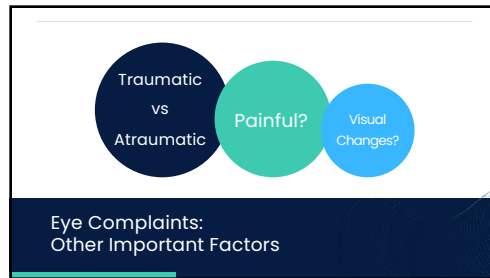
An Approach to Eye Complaints:
Doorway Diagnosis



6



7



8



9


OPTIC NEURITIS

What is it?

- Inflammation of the optic nerve

How does it happen?

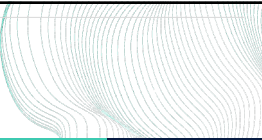
- Two forms:
 - **Typical:** demyelinating process
 - **Atypical:** due to diseases not resulting in demyelination



10

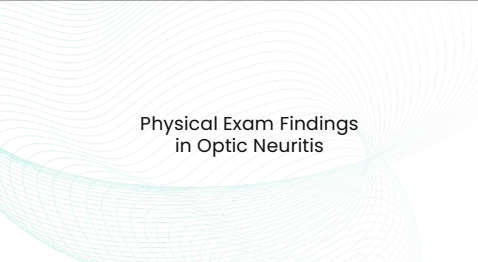
Historical Features of Optic Neuritis

Acute to Subacute Onset of Symptoms	Vision Changes	Pain
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11

Physical Exam Findings in Optic Neuritis



12



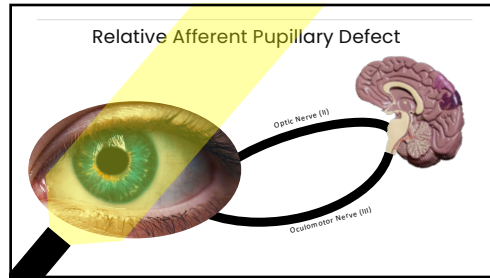
13



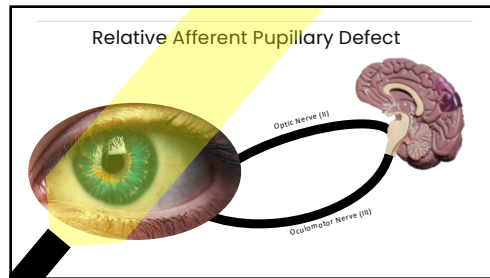
14

Relative Afferent Pupillary Defect

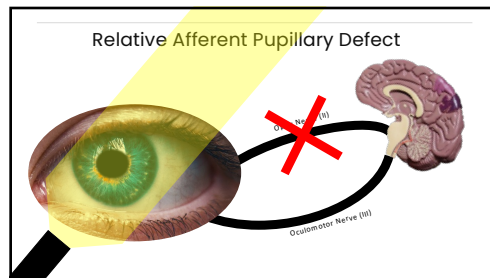
15



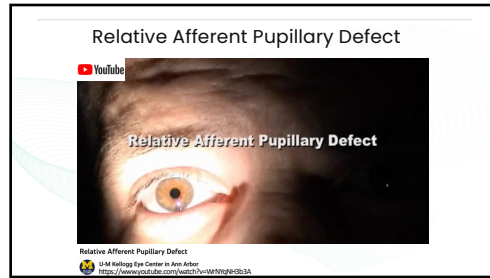
16



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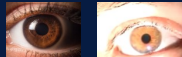
HPI
26 yo female with no PMH presents with eye pain and blurry vision

Triage Visual Acuity

- OD: 20/80
- OS: 20/20

Case Continued:
Change in Vision

Eye Exam



20



Diagnostic confirmation in the emergency department?

Clinical Diagnosis

21

Case	Case #1	Case #2	Case #3	Case #4
Age (years)	35	48	34	28
Sex	Male	Male	Female	Female
OD Ultrasound image				
OS Ultrasound image				
Intraocular Pressure	OD - 18mm Hg OS - 17mm Hg	OD - 17mm Hg OS - 16mm Hg	OD - 16mm Hg OS - 17mm Hg	OD - 12mm Hg OS - 13mm Hg

Ultrasound

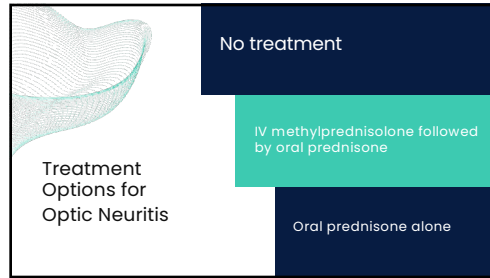
22

MRI

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Treatment of ON
Who will benefit?

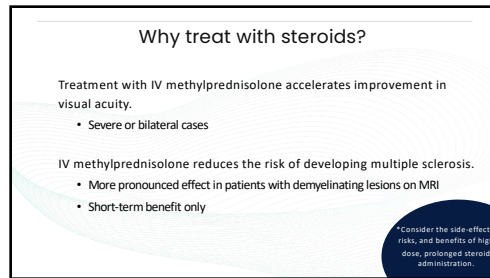
24



Treatment Options for Optic Neuritis

- No treatment
- IV methylprednisolone followed by oral prednisone
- Oral prednisone alone

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Why treat with steroids?

Treatment with IV methylprednisolone accelerates improvement in visual acuity.

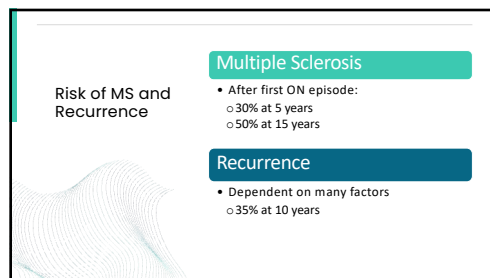
- Severe or bilateral cases

IV methylprednisolone reduces the risk of developing multiple sclerosis.

- More pronounced effect in patients with demyelinating lesions on MRI
- Short-term benefit only

*Consider the side-effects, risks, and benefits of high dose, prolonged steroid administration.

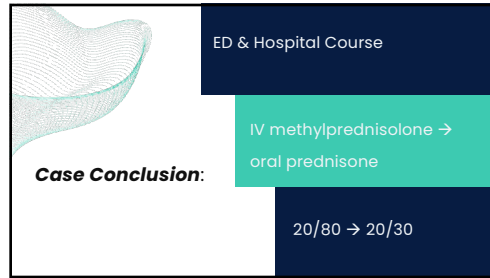
26



Risk of MS and Recurrence

- Multiple Sclerosis**
 - After first ON episode:
 - 30% at 5 years
 - 50% at 15 years
- Recurrence**
 - Dependent on many factors
 - 35% at 10 years

27

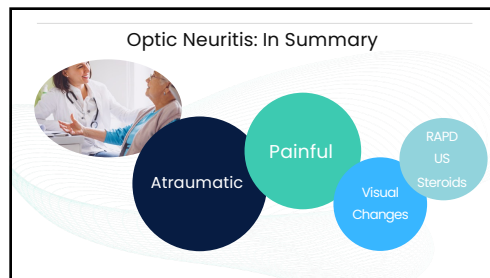


ED & Hospital Course

Case Conclusion: IV methylprednisolone → oral prednisone

20/80 → 20/30

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Optic Neuritis: In Summary

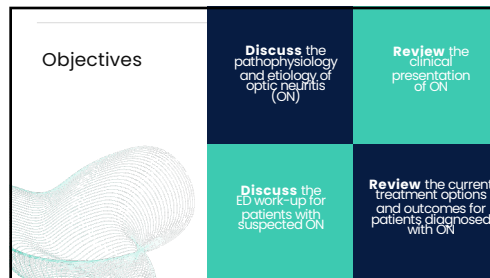
Atraumatic

Painful

Visual Changes

RAPD
US
Steroids

29



Objectives

Discuss the pathophysiology and etiology of optic neuritis (ON)

Review the clinical presentation of ON

Discuss the ED work-up for patients with suspected ON

Review the current treatment options and outcomes for patients diagnosed with ON

30

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