Apparent optic nerve head swelling in childhood

Three causes of apparent swelling of pediatric ONH

Optic Neuritis
-- Often follows...viral illness, immunization
-- HPI may be suggestive of CNS involvement w/ c/o...HA, lethargy, N/V
-- VA loss often...severe -- Frequently...bilateral-- Disc swelling...common, extensive-- Relationship to MS...unclear-- Treat with...IV steroids--

Neuroretinitis
-- DFE: Disc swelling + macular star
-- Star is due to edema of...Henle's layer
-- Associated with B. henslae infection or Leber's idiopathic neuroretinitis

Apparent optic nerve head swelling in childhood
-- By definition, 2o to...increased ICP
-- Common causes:
-- Tumor-- Hydrocephalus-- Pseudotumor cerebri
-- Most common cause:
Optic disc drusen
-- Inherited (check parents)-- DFE: Disc elevated with irregular border; vessels not obscured
-- VF defects? Common-- Decreased acuity? Uncommon

???

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Optic Neuritis

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Apparent optic nerve head swelling in childhood

Papilledema

-- By definition, 2o to... increased ICP
-- Common causes:
  -- Tumor
  -- Hydrocephalus
  -- Pseudotumor cerebri

Pseudopapilledema

-- Most common cause:
  -- Optic disc drusen
  -- Inherited (check parents)
  -- DFE: Disc elevated with irregular border; vessels not obscured
  -- VF defects? Common
  -- Decreased acuity? Uncommon

Three causes of apparent swelling of pediatric ONH
Apparent optic nerve head swelling in childhood

Optic Neuritis
--Often follows…non-ocular prodrome(s)

Neuroretinitis
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Three causes of apparent swelling of pediatric ONH

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Optic Neuritis
--Often follows…viral illness, immunization

Three causes of apparent swelling of pediatric ONH

Papilledema

Pseudopapilledema
Apparent optic nerve head swelling in childhood

**Optic Neuritis**
--Often follows...viral illness, immunization

*Which three viral illnesses in particular?*

**Papilledema**
--By definition, 2o to...increased ICP
--Common causes:
--Tumor
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or Leber's idiopathic neuroretinitis

Three causes of apparent swelling of pediatric ONH
Optic Neuritis
--Often follows...viral illness, immunization

Which three viral illnesses in particular?
Mumps, measles, chicken pox

Three causes of apparent swelling of pediatric ONH

Papilledema

Pseudopapilledema
Apparent optic nerve head swelling in childhood

**Optic Neuritis**
--Often follows...viral illness, immunization
--HPI may be suggestive of CNS involvement w/ c/o...3 HPI/ROS positives

**Three causes of apparent swelling of pediatric ONH**

**Papilledema**

**Pseudopapilledema**
Optic Neuritis
--Often follows...viral illness, immunization
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Three causes of apparent swelling of pediatric ONH

Papilledema

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Apparent optic nerve head swelling in childhood

**Optic Neuritis**
--Often follows...viral illness, immunization
--HPI may be suggestive of CNS involvement w/ c/o...HA, lethargy, N/V
--VA loss often...how bad?

**Neuroretinitis**
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Three causes of apparent swelling of pediatric ONH

**Papilledema**

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Apparent optic nerve head swelling in childhood

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--Often follows...**viral illness, immunization**
--HPI may be suggestive of CNS involvement w/ c/o...HA, lethargy, N/V
--VA loss often...**severe**

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**Optic Neuritis**
--Often follows…viral illness, immunization
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--VA loss often…severe
--Frequently…unilateral vs bilateral

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- Frequently...bilateral
- Disc swelling...how common? How severe?

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Three causes of apparent swelling of pediatric ONH

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--Relationship to MS...how well established?

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--Treat with...

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Three causes of apparent swelling of pediatric ONH

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*Three causes of apparent swelling of pediatric ONH*
Apparent optic nerve head swelling in childhood

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Three causes of apparent swelling of pediatric ONH

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  --Star is due to edema of... *(specific retinal layer)*

**Three causes of apparent swelling of pediatric ONH**

**Papilledema**

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Apparent optic nerve head swelling in childhood

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**Three causes of apparent swelling of pediatric ONH**

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**Neuroretinitis**
--DFE: Disc swelling + macular star
--Star is due to edema of...**Henle's layer**
--Associated with *B. henslae* infection or Leber's idiopathic neuroretinitis

---

Three causes of apparent swelling of pediatric ONH

**Papilledema**
--By definition, 2o to...increased ICP
--Common causes:
  --Tumor
  --Hydrocephalus
  --Pseudotumor cerebri

**Pseudopapilledema**
--Most common cause:
  --Optic disc drusen
  --Inherited (check parents)
  --DFE: Disc elevated with irregular border; vessels not obscured
  --VF defects? Common
  --Decreased acuity? Uncommon

---

Which retinal layer is aka Henle's layer?
Optic Neuritis
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Three causes of apparent swelling of pediatric ONH

Papilledema

Pseudopapilledema

Which retinal layer is aka Henle’s layer? The outer vs inner plexiform layer
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--HPI may be suggestive of CNS involvement w/ c/o…HA, lethargy, N/V
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Three causes of apparent swelling of pediatric ONH

Papilledema

Pseudopapilledema

Which retinal layer is aka Henle’s layer?
The outer plexiform layer
Apparent optic nerve head swelling in childhood

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**Papilledema**
**Pseudopapilledema**

**Three causes of apparent swelling of pediatric ONH**

[Diagram showing the relationships between different conditions]
Apparent optic nerve head swelling in childhood

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Three causes of apparent swelling of pediatric ONH

**Papillededema**

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Apparent optic nerve head swelling in childhood

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- Disc swelling...common, extensive
- Relationship to MS...unclear
- Treat with...IV steroids

*What other ocular disease is B. henslæe commonly associated with?*

- Associated with **B. henslæe infection**
  - or Leber’s idiopathic neuroretinitis

Three causes of apparent swelling of pediatric ONH

**Papilledema**

**Pseudopapilledema**
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--Often follows…viral illness, immunization
--HPI may be suggestive of CNS
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Apparent optic nerve head swelling in childhood

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**Papilledema**

**Pseudopapilledema**

**What other ocular disease is B. henslae commonly associated with?**

Parinaud’s oculoglandular syndrome

---
Apparent optic nerve head swelling in childhood

**Optic Neuritis**
-- Often follows...) viral illness, immunization
-- HPI may be suggestive of CNS involvement w/ c/o... HA, lethargy, N/V
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**Papilledema**
-- By definition, 2° to...

**Pseudopapilledema**

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Apparent optic nerve head swelling in childhood

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Apparent optic nerve head swelling in childhood

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-- Common causes:
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**Apparent optic nerve head swelling in childhood**

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  - Hydrocephalus
  - Pseudotumor cerebri

**Pseudopapilledema**

Three causes of apparent swelling of pediatric ONH
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Pseudopapilledema
--Most common cause:

Three causes of apparent swelling of pediatric ONH
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Pseudopapilledema
--Most common cause: Optic disc drusen

Three causes of apparent swelling of pediatric ONH
Apparent optic nerve head swelling in childhood

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**Pseudopapilledema**
--Most common cause: *Optic disc drusen*
  --Inherited (check parents)

*Three causes of apparent swelling of pediatric ONH*
Apparent optic nerve head swelling in childhood

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**Pseudopapilledema**
--Most common cause: **Optic disc drusen**
  --Inherited (check parents)

What tests can be used to confirm the presence of disc drusen?
--

Three causes of apparent swelling of pediatric ONH
Apparent optic nerve head swelling in childhood

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**Pseudopapilledema**
- Most common cause: Optic disc drusen
  - Inherited (check parents)

*What tests can be used to confirm the presence of disc drusen?*
- b-scan
- CT
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**Pseudopapilledema**
--Most common
--Inherited or acquired

*Which is preferred?*
--b-scan
--CT

Three causes of apparent swelling of pediatric ONH
Apparent optic nerve head swelling in childhood

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  --Pseudotumor cerebri

**Pseudopapilledema**
--Most common
--Inherited

---Which is preferred?---b-scan, hands down
---Why?---Because CT involves giving a big dose of radiation to a developing child’s head—something to be avoided whenever possible

Three causes of apparent swelling of pediatric ONH

---What tests can be used to confirm the presence of disc drusen?---b-scan, CT
Apparent optic nerve head swelling in childhood

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Which is preferred?
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Why?
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--DFE: Disc swelling + macular star
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