Approach to Pediatric Uveitis

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OPHTHALMICA – Vitreoretinal & Uveitis Service
Epidemiology

• Uveitis is the 3rd leading cause of blindness in USA
• 5-10% of uveitis cases involve children <16 yrs
• 3-6 cases per 100.000 children
• Worse prognosis in children
• Importance of annual vision screening for all children

Clinical presentation

- Red eye
- Lacrimation
- Photophobia
- Floaters
- Loss of vision
Clinical presentation

ASYMPTOMATIC
Classification

- Anterior
  - non granulomatous
  - granulomatous

- Intermediate

- Posterior
  - with vasculitis
  - without vasculitis
Differential Diagnosis

Anterior non granulomatous uveitis

Idiopathic

HLA-B27 associated

Ankylosing Spondylitis
Reactive arthritis
Psoriasis
Inflammatory bowel disease

Juvenile Idiopathic Arthritis
Nephritis
Systemic lupus erythematosus
Herpes Simplex virus
Lyme disease
Leukemia
Drug-induced
Differential Diagnosis

Anterior granulomatous uveitis

- Sarcoidosis
- Tuberculosis
- Bechet's disease
- Multiple Sclerosis
- Inflammatory bowel disease
- Herpes simplex virus
- Fungal disease
- Syphilis
- Whipple's disease
Differential Diagnosis

Intermediate uveitis

- Pars Planitis
- JIA
- Multiple Sclerosis
- Lyme disease
- Cat-scratch disease
- Sarcoidosis
Differential Diagnosis

Posterior uveitis/Panuveitis

Toxocariasis
TORCH
- Toxoplasmosis
- Syphilis
- Rubella
- Cytomegalovirus
- HSV/VZV

Vogt-Koyanagi Harada Syndrome

Bechet's disease
Leukemia
Tuberculosis
Inflammatory bowel disease
Systemic lupus erythematosus
Diagnostic tests

- Recurrent Anterior non granulomatous
- Anterior granulomatous
- Intermediate
- Posterior

- FBC, Urine analysis, ANA testing, HLA-B27 testing, systemic evaluation
- FBC, Urine analysis, FTA-ABS, ANA, Lyme disease testing, PPD analysis, CXR, sACE, Chest CT*, Gallium*, Audiogram*, Lumbar puncture*, systemic evaluation
Juvenile Idiopathic Arthritis (JIA)

• Arthritis > 6 weeks duration without any other identifiable cause in children <16 years of age

• 7 subtypes

• Uveitis more common in oligoarticular (<5 joints involved)

• Risk factors for development of uveitis
  Young onset
  Female gender
  ANA +ve
  oligoarticular
  RF-ve

<table>
<thead>
<tr>
<th>JIA UVEITIS</th>
<th>JUVENILE HLA B27</th>
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<tbody>
<tr>
<td>Chronic anterior uveitis band keratopathy</td>
<td>Acute recurrent uveitis</td>
</tr>
<tr>
<td></td>
<td>May have hypopyon</td>
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<tr>
<td></td>
<td>positive family history</td>
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<tr>
<td></td>
<td>RF negative</td>
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<table>
<thead>
<tr>
<th>WHITE EYE</th>
<th>RED EYE</th>
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<tbody>
<tr>
<td>Frequent</td>
<td>uveitis common</td>
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<tr>
<td>Uveitis about 20%</td>
<td></td>
</tr>
<tr>
<td>RF –ve, HLA B27 -ve, ANA +ve</td>
<td>HLA B27 +ve</td>
</tr>
<tr>
<td></td>
<td>ANA -ve</td>
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</tbody>
</table>
Complications

• More common compared to adults
• Children with JIA at greater risk
• Presence of complications at baseline is important risk factor

Complications

• More common compared to adults
• Children with JIA at greater risk
• Presence of complications at baseline is important risk factor
• The most common include:
  - post. Synechiae
  - band keratopathy
  - cataract
  - glaucoma
  - CME
  - hypotony

Myths in pediatric uveitis

• “The kid will outgrow uveitis”
• “The drops will get him through it”
• “It is just the eye. Systemic treatment is not necessary”
Treatment

• Treat the cause

• Control the inflammation
Treatment

- Step ladder approach
- Steroids
  - Topical
  - Regional
  - Systemic
- Methotrexate
- Cyclosporin, Mucophenolate mofetil
- Biologicals (Adalimumab)

Thank you