Health supervision and prevention of complications in the child with IBD

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Health Supervision Document

- A document intended to provide recommendations about the clinical care and monitoring of a chronic illness
- More general than a focused “practice guideline”
- Incorporates evidence, expert opinion, and benefit/risk ratio in making recommendation
- Focuses not on specific drug treatment, but on outpatient screening.
  - Whether to use biologics vs immunomodulators – NO
  - Monitoring disease activity - YES
Examples of health supervision

- Down syndrome
  - Cervical Spine Screening
  - Thyroid function test monitoring
- Celiac disease
  - Screening of siblings
  - Monitoring of antibody levels
- Cystic fibrosis
  - Monitoring of pulmonary function
  - Indications for hospitalization

Why create a health supervision document?

- Provide education to physicians less well versed in caring for IBD patients
- Reduce variation in care
- Raise the standard of care
- Physician (not insurance) based guide for “benchmarking”
- TRANSLATE RESEARCH PROGRESS INTO PRACTICE

Kappelman et al 2007; Variation in Care in Pediatric Crohn Dz Immunomodulator use by center
Who is the audience?

• General internists
• General pediatricians
• Pediatric gastroenterologists
• Adult gastroenterologists
• IBD experts

Content

• How often should children and adolescents with IBD be seen?
• What monitoring should be performed during office visits?
• How should disease activity be assessed?
• How should radiation exposure be monitored in IBD patients?
• What immunizations should be performed?
• Screening for:
  – Osteopenia
  – Depression
  – Noncompliance
Grading of evidence

• Oxford Evidence Grading (May 2001)
  – 1. Large randomized controlled trials
  – 2. Small RCT’s with Systematic Review
  – 3. Outcomes research, case control
  – 4. Case series
  – 5. Expert Opinion

GRADE (Grades of Recommendation, Assessment, Development, and Evaluation)

• Strength of the recommendation comes first, based on four factors
  – Evidence (e.g. RCT vs. Observational)
  – Benefit
  – Risks
  – Costs

• Recommendations may be FOR or AGAINST a specific intervention

American Thoracic Society 2006; Am. J. Resp. Care Medicine 174:605
**Protocol for development of clinical report or guideline (NASPghan)**

- Expert panel from IBD committee reviews evidence and makes recommendations
- Manuscript prepared
- Review by Clinical Care and Quality committee
- Manuscript revised
- Manuscript revision posted for review by greater NASPghan membership
- Final publication
Pending recommendations

• Using disease activity indices in clinical practice
• Immunizations in immune compromised hosts
• Screening for hypovitaminosis D and osteopenia
• Screening and intervention for adolescent depression

Rationale for Using Disease Activity Indices in Clinical Practice

• Standardizes the gathering of clinical data at initial and follow-up visits
• Allows more objective assessment of disease activity
• Allows more objective assessment of response to drug therapy (response vs. remission)
• Facilitates clearer communication between physicians caring for the patient
• Facilitates quality improvement comparisons
• Facilitates a clinician’s participation in multicenter retrospective clinical studies (e.g. RESEAT)
• PUCAI in UC, full or abbreviated PCDAI in Crohn’s disease
PUCAI Parameters

Max Point Value

- Abdominal pain 10
- Rectal bleeding 30
- Stool consistency 10
- Number of Stools 15
- Nocturnal Stools 10
- Activity level 10

Inactive 0-10, Mild 10-34, Moderate 35-64, Severe 65-85

Turner, Gastroenterology 2007

Inpatient practice guideline using PUCAI, Children’s Hospital Boston

Change in PUCAI Score from Admission to Discharge

c/o Jenifer Lightdale
Immunizations in children with IBD

- Good evidence that children with IBD respond to inactivated vaccines, even if they are receiving immunosuppressives
- Patients with IBD are often underimmunized
  - Patients think vaccine may not work
  - Patients forget
  - Patients afraid vaccines may cause flare of IBD
  - Patients afraid of vaccine associated adverse events

Inflammatory bowel disease (seroprotection)

<table>
<thead>
<tr>
<th>Strain</th>
<th>PERCENT SEROPROTECTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>(HAI&gt;=40)</td>
</tr>
<tr>
<td>A</td>
<td>B</td>
</tr>
</tbody>
</table>

Mamula et al - 2002-2004 (n=50)
- Antiinflammatory (14) 86 86
- Immunomodulatory (20) 85 70
- Immuno + anti-TNF (16) 63 38

Lu et al - 2007-2008 (n=146)
- Antiinflammatory (n=19) 100 42
- Tacrolimus (n=10) 90 60
- Immunomodulator (n=56) 98 41
- Anti-TNF (n=42) 93 21
- CDC controls 85 57

Conclusions: Most IBD patients are seroprotected despite immune suppression, patients with biologics may have a decreased response.
**Recommendations**

- Immunize IBD patients annually against influenza
- Immunize patients for pneumococcus and meningococcus as clinically indicated
- Avoid live vaccines in immune compromised hosts
  - Varicella remains controversial

**Skeletal Health in IBD**

- Osteopenia and osteoporosis are common in children with IBD
- Hypovitaminosis D is prevalent (approximately 30% of patients with IBD)
- Fractures have been reported
- Lack of consensus exists on:
  - Optimal screening methodology
  - How to interpret results
  - How and when to intervene
Recommendations (tentative)

• Children with IBD should be periodically screened for osteopenia and osteoporosis
• DEXA is currently the screening test of choice (not qCT), because of its lower cost and greater availability
  – Patients with Z score < -2 S.D. and growth failure or fracture should be evaluated by endocrinologist or skeletal health expert
• 25 hydroxy vitamin D levels should be monitored at least annually
  – Therapy for hypovitaminosis D (level <30 ng/mL)
  – 50,000 units once/week for 6 weeks

Adolescent Depression and Anxiety

• Depression and anxiety are common disorders in both healthy adolescents and in adolescents with IBD
  – Risk factors include family history, more severe disease activity, and corticosteroid use
• The symptoms of depression and anxiety may be unappreciated both by the patient’s family and by the health care providers
• Effective therapy (cognitive behavioral therapy) can be implemented if the diagnosis of anxiety or depression is made.
Childhood Depression Inventory

“Kids sometimes have different feelings and ideas. This form lists the feelings and ideas in groups. From each group of three sentences, pick one sentence that describes you **best** for the past two weeks. After you pick a sentence from the first group, go on to the next group.

There is no right or wrong answer. Just pick the sentence that best describes the way you have been recently. Put the mark in the box next to the sentence that you pick.”

**CDI – Sample items**

**Item 1:**
- □ I am sad once in a while.
- □ I am sad many times.
- □ I am sad all the time.
**Item 2:**
- □ Nothing will ever work out for me.
- □ I am not sure if things will work out for me.
- □ Things will work out for me O.K.
**Item 3:**
- □ I do most things O.K.
- □ I do many things wrong.
- □ I do everything wrong.
**Item 4:**
- □ I have fun in many things.
- □ I have fun in some things.
- □ Nothing is fun at all.
Conclusion

• The NAPSGHAN health supervision document will provide a useful guidebook for both the pediatric IBD expert and the physician who does not specialize in pediatric IBD
• The document will need to be modified periodically to reflect the rapid changes in diagnosis and therapy.
• The manuscript is in preparation, and will be published in the Journal of Pediatric Gastroenterology and Nutrition in 2010.