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Intussusception

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Intussusception

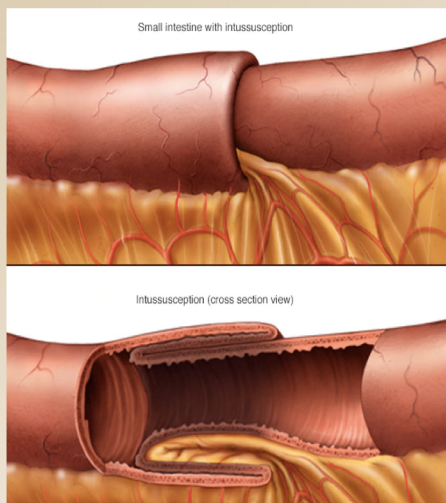
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Introduction

Intussusception is a condition prevalent in newborns and infants. The condition is considered rare, but with the severity that can dispose if acquired, research is still being performed. Cleveland Clinic defines the condition as “a condition in which one segment of intestine ‘telescopes’ inside of another, causing an intestinal obstruction” (2020). Causes for this condition are unknown and continue to be researched. Understanding the pathophysiology surrounding the condition aids in understanding appropriate treatment modalities dependent upon symptoms present.

Figure 1: Intussusception of the Bowel



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<https://mayoclinic.org/diseases-conditions/intussusception/symptoms-causes/syc-20351452>

Signs and Symptoms

Common signs and symptoms include:

- Abdominal swelling (Laquerre, 2020)
- Appear lethargic (Laquerre, 2020)
- Stool changes such as blood in stool or currant jelly like stools (Casas-Melley, 2020)
- Drawing knees upward (Laquerre, 2020)
- Vomiting (Laquerre, 2020)
- Vomiting up bile (Casas-Melley, 2020)
- Cry intermittently (Laquerre, 2020)

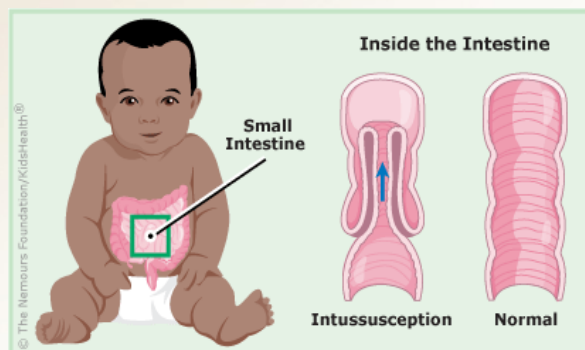
If left untreated, the illness will progress and may show the following signs and symptoms:

- Get weaker (Casas-Melley, 2020)
- Develop a fever (Casas-Melley, 2020)

Underlying Pathophysiology

The cause of intussusception remains a phenomenon amongst healthcare professionals regarding the specific mechanism that contributes to the cause. Contributing factors have been identified through different research over recent years which includes, “During viral or bacterial infection of the gastrointestinal tract, lymph tissue that works to fight infection begins to swell, thus creating pressure that pulls 1 portion of the intestine into another. In addition, enlarged lymph nodes, blood-vessel abnormalities, and tumors can act as lead points, or areas in which the bowel catches, increasing the probability of intussusception” (Laquerre, 2020). The pathophysiology of abdominal functions seen during digestion play a role in the understanding of intussusception as well. Laquerre states, “during digestion, peristalsis (ie, wavelike contractions and relaxation) propels contents through the gastrointestinal tract. When contractions occur in the presence of a lead point, tissue can catch and pull intestinal lining into the proximal segment of the bowel” (2020). Basic understanding of the pathophysiology of digestion is significant in how the bowels should work, contrary to complications seen in the illness of intussusception.

Figure 2: Representation of Intussusception



<https://kidshealth.org/en/parents/intussusception.html>

Significance of Pathophysiology

Recognizing the pathophysiology of intussusception can contribute to prompt treatment and better outcomes for individuals that experience this condition. Given that initial cause remains unknown, research has been conducted to understand if location in the bowels makes a difference in success rate.

- “Ileocolic intussusception lengths are relatively uniform regardless of location along the course of the colon where they present” (Binkovitz et al., 2019).
- “Most of the apparent distal propagation of ileocolic intussusceptions is not caused by increasing telescoping of small bowel across the ileocecal valve but rather by foreshortening of the right colon” (Binkovitz et al., 2019).
- “Little literature comparing the safety and efficacy of air reduction without or with a rectal balloon. Use of a balloon in younger infants is associated with a higher risk of iatrogenic bowel injury” (Golriz et al., 2018).

Implications of Nursing Care

- It is imperative for the nurse practitioner to provide education in the signs and symptoms of intussusception, especially in cases that infants are at high risk for developing the condition.
- Infants typically receive the rotavirus vaccine at 2 months, 4 months, and again at 6 months.
- The vaccine is now given orally after intussusception was a common side effect from the vaccine “RotaShield” in the past. “Although clinical trials did not find a risk, the results of postlicensure studies have indicated that both rotavirus vaccines are associated with a temporarily limited increase in the risk of intussusception, especially in the first week after vaccination” (Burke et al., 2020).
- After administering the vaccine or if any bacterial or viral gastrointestinal infection is suspected, education to parents regarding signs of intussusception is crucial. Understanding of the emergent need for treatment if symptoms arise is another implication the nurse practitioner should stress to the population.
- Parents should be directed to seek care at an Emergency Department if symptoms such as drawing knees towards their chest, intermittent crying, vomiting, or bloody stools is present.

Figure 3: Radiologic Picture of Intussusception



<https://radiopaedia.org/cases/intussusception-15>

Conclusion

With intussusception being the most common abdominal emergency amongst infants, the condition remains prevalent amongst individuals. Due to this, it's crucial APRN's can identify the symptoms and provide proper recommendations. Education given by APRN's could make the difference of an infant experiencing ischemic bowel and avoid developing septic shock from intussusception.

References



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Topic Relevance

Intussusception is a medical emergency and requires prompt treatment. With the prevalence of the condition, education of symptoms to parents of children in this affected age group is critical. “This is the most common abdominal emergency seen in children under the age of 2” (Casas-Melley, 2020).