Necrotizing Enterocolitis: (Role of Surgery)

An Essay

Submitted for partial fulfillment of
The Master degree in ***General Surgery***

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M.B.BCH 2008
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2014

بسم الله الرحمن الرحيم

قالوا سبحانك لا علم لنا إلا ما علمتنا إنك أنت العليم الحكيم

صدق الله العظيم

سورة البقرة، الآية الثانية والثلاثين

Acknowledgement

Alhamdull' Allah, ***all*** thanks are due to **Allah**, whom without his support and blessing, this work would never be completed.

I would like to express my profound gratitude to ***Prof. Dr. Ayman Ahmed Albaghdady,*** Professor of Pediatric Surgery, Ain Shams University, for his continuous support and precious advices.

I shall always be indebted to ***Dr.Hesham Mohammed Abdlkader,*** Assistant Professor of Pediatric Surgery, Ain Shams University, for his valuable remarks and kind guidance.

I would like to extend my thanks and deep appreciation to ***Dr. Ahmed Bassiouny Arafa,*** Lecturer of Pediatric Surgery, Ain Shams University, for his tremendous assistance and energetic help.

At last but not least, my deepest thanks and gratitude are due to ***my family*** for the considerable patience they have shown and the great care they have given so as to smooth the rough edge of this work.

Wishing this work be ***beneficial*** in the medical field, I hope it will satisfy you all.

Thanks

Karim Ibrahim Mohammed

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Introduction

Necrotizing enterocolitis (NEC) is the most common gastrointestinal emergency in the preterm infant.Necrotizing enterocolitis initially was described in case reports of Gastro-Intestinal (GI) perforations as early as 1825 **(Hughes et al., 2009)**.

NEC affects 5–15% of all infants born at less than 30 weeks gestational age or <1500 g birth weight. However, up to 10% of all neonates who develop NEC are born at term **(Giannoneetal., 2008)**.

The pathogenesis of necrotizing enterocolitis (NEC) is poorly understood, but appears to be multi-factorial and highly associated with immaturity of the gastrointestinal tract, colonization of the intestinal microbiota, and immature innate immune system **(Neu, 2005)**.

Premature infants are at high risk for NEC because of developmental immaturity of key functions in particular gastrointestinal motility, digestive ability, circulatory regulation intestinal barrier function. Preterm infants also have immature mucin expression by goblet cells and decreased paneth cell number **(Lin and Stoll, 2006)**.

The risk of NEC in neonates with congenital heart disease is substantial. Factors associated with an elevated risk of NEC in infants with heart disease include premature birth, hypo plastic left heart syndrome, truncusarteriosus,

and episodes of poor systemic perfusion or shock **(McElhinney et al., 2000)**.

Newborn infants of mothers with pregnancy-induced hypertension present with intrauterine growth retardation, prematurity, dysmaturity and necrotizing enterocolitis **(Grujićand Milasinović, 2006)**.

Neonates commonly present with feeding intolerance, delayed gastric emptying, abdominal distension or tenderness (or both in severe cases of diseases, there is intestinal perforation, peritonitis, and profound shock **(Lin and Stoll, 2006)**.

The diagnosis is suspected from clinical presentation but must be confirmed by diagnostic radiograph surgery or autopsy. No laboratory tests are specific for NEC. Thrombocytopenia, persistence metabolic acidosis and severe refractory hyponatremia are the most common triad of signs that help to confirm diagnosis **(Eichenwald, 2008)**.

Treatment options are limited to gut rest, parenteral nutrition, broad-spectrum antibiotics, and surgical interventions for enteral perforation. Two commonly used methods for NEC with intestinal perforation are laparotomy or primary peritoneal drainage **(Yurdakok, 2008)**.

The mortality rate ranges from 10% to more than 50% in infants who weigh less than 1500 g, depending on the severity of disease, compared with a mortality rate of 0-20% in babies who weigh more than 2500 g.

Extremely premature infants (1000 g) are particularly vulnerable, with reported mortality rates of 40-100% **(Springer and Annibale, 2007)**.

Aim of the work

This study aimed to highlight the role of surgery in managing necrotizing enterocolitis with its new trends.