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Gastroschisis in Nigeria

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Challenges

- Incidence varies across country
- BASELINE DATA (Zaria, 2000: 14 infants)
 - Age presenting: 7hrs – 5days (median 24hrs)
 - All delivered at home, unsupervised
 - Primary fascial /skin only closure: 10
 - Improvised (surgical silo): 3
 - Limited NICU
 - No TPN
 - Mortality: 10 /14 (71%)

Pediatr Surg Int (2000) 16: 23–25

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ORIGINAL ARTICLE

Emmanuel A. Ameh · Lohfa B. Chirdan

Ruptured exomphalos and gastroschisis: a retrospective analysis of morbidity and mortality in Nigerian children

Accepted: 14 May 1999

Abstract The survival of infants with major abdominal-wall defects (AWD) has improved over the years in developed countries. In Zaria, northern Nigeria, survival from intact exomphalos (EX), has improved with the adoption of non-operative management. Ruptured EX (REX) and gastroschisis (GS), however, remain problematic. This is a report of the mortality in REX and GS in a retrospective review of 16 infants with REX and 14 with GS managed over 10 years at the Ahmadu Bello University Teaching Hospital, Zaria. The median age at

Introduction

Major abdominal-wall defects (AWD) in newborns posed considerable challenges to surgeons in times past due to difficulty in closure as a result of viscerobdominal disproportion. Developments in neonatal intensive care and total parenteral nutrition (TPN) have now improved the survival of patients with exomphalos (EX) and gastroschisis (GS) in developed countries [1–4]. In Zaria, northern Nigeria, mortality from EX was as high



Challenges

Key challenges have always centred around:

- Home delivery
- Delayed presentation
- Lack of appropriate silo material
- Anaesthesia challenges
- Lack of NICU facilities
- Limited parenteral nutrition
- infection

Challenges

Okoro and Ngaikedi *Annals of Pediatric Surgery* (2020) 16:5
<https://doi.org/10.1186/s43159-019-0012-x>

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ORIGINAL RESEARCH

Open Access

Outcome of management of gastroschisis: comparison of improvised surgical silo and extended right hemicolectomy



Philemon E. Okoro^{1,2*} and Charles Ngaikedi²

Abstract

Background: Gastroschisis is one of the major abdominal wall defects encountered commonly in pediatric surgery. Whereas complete reduction and abdominal closure is achieved easily sometimes, a daunting situation arises when the eviscerated bowel loops and other viscera cannot be returned immediately into the abdominal cavity. This situation is a major contributor to the outcome of the treatment of gastroschisis in our region. In our efforts to improve our outcome, we have adopted the technique of extended right hemicolectomy for cases where complete reduction and primary abdominal wall closure is otherwise not possible. This study compared the management outcome of gastroschisis using our improvised silo, and performing an extended right hemicolectomy.

39 infants (2006 – 2013)

- ✓ Primary closure: 8 (mortality 25%)
- ✓ Surgical silo: 16 (mortality 94%)
- ✓ Right hemicolectomy: 12 (mortality 33%)

Challenges and Outcome of Management of Gastroschisis at a Tertiary Institution in North-Eastern Nigeria

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Introduction: Gastroschisis is a congenital anterior abdominal wall defect characterized by herniation of abdominal contents through a defect usually located to the right side of the umbilical cord. It occurs in about 1 in 2,000-4,000 live births and is slightly commoner in males. Management has remained challenging in the low and middle-income countries (LMICS), with high mortality rates. This study highlights the clinical presentation, treatment, outcomes, and challenges in the management of gastroschisis at a tertiary healthcare center in a resource-limited setting.

OPEN ACCESS

Edited by:
Augusto Zani,

Methods: This was a retrospective review of the records of all patients with gastroschisis

18 infants (2016 – 2018)

- ✓ One death before treatment
- ✓ Primary closure: 2 (mortality 25%)
- ✓ Surgical silo: 15 (mortality 94%)
- ✓ Mortality: 14 (78%)

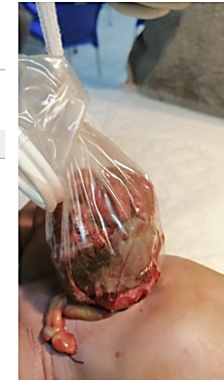
Measures Taken to Address Challenges

- Avoiding/minimising surgery as much as possible
- Using various types/modifications of preformed silo
 - Kano silo
 - Alexis retractor (expensive, recent cheaper version from China: \$91 vs \$12)
- Nutrition
 - Partial parenteral nutrition (Trophamine, Freamine, Astymin)
 - Early trophic enteral feeding
 - Tailored enteral feeding schedule

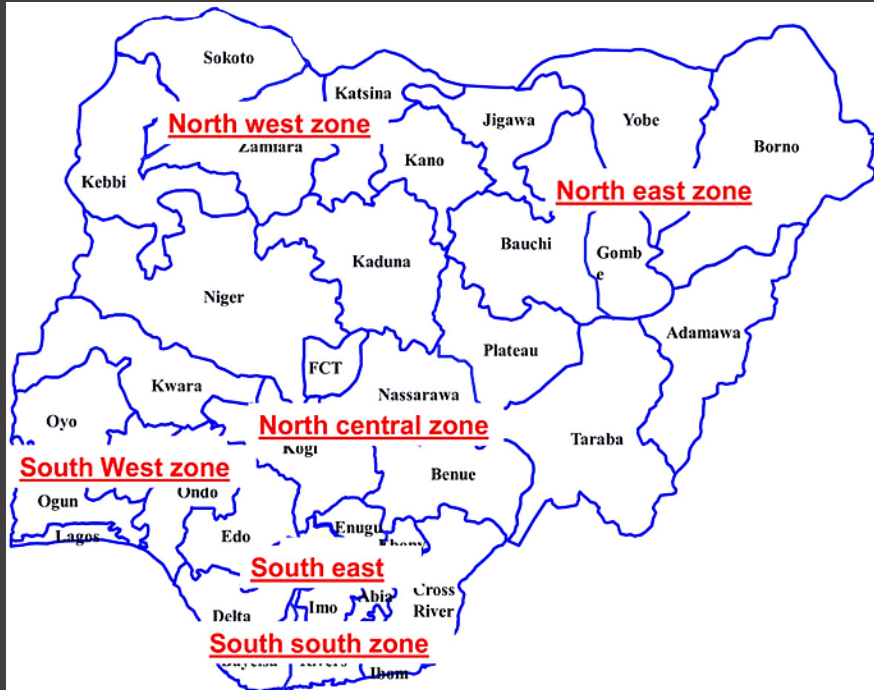


Alexis O Wound Protector/Retractor
Featuring a rigid retraction ring for maximum exposure

Reorder No.	Size	Sheath Length	Incision Range
C8401	Small	18cm	2.5-6cm



Current Data (2018)



REGION	NO.	MORTALITY (%)
North East	34	32 (94.1)
North West	117	63 (53.8)
North Central	29	25 (86.2)
South East	16	12 (75)
South West	28	20 (71.4)
South South	21	13 (61.9)
TOTAL	243	165 (67.9)

How Measures Have Improved Outcomes



Improved survival

Less infection rates
Survival improving



Less feeling of helplessness from providers



No published data yet



We are hopeful that outcomes would continue to improve progressively

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