



Gastroschisis Bundle Quality Improvement Protocol

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32.1%

Mortality
(2000 – 2014)

Incidence

- 4.01 / 10 000
- 2018 → 2,162,535 births
 - » 870 Px
 - » 278 deaths



Health Challenges

- **Infections (70%)** *Line Sepsis, MV Pneumonia, SSIs*
- Prenatal Diagnosis (52%)
- Pretransport management
 - Fluid overload
 - Gauze coverage
- General anesthesia (limited OR availability)
- Vascular Access issues

Outborn patients



Variables	2014 – 2020 (N=102)
Prenatal Diagnosis % (n)	53.9 (55)
C-Section % (n)	63.7 (65)
Weight (gr)	2,242.5 (1,400 – 3,260)
Age at arrival (hours)	9 (0 - 87)
High Risk GPS (>2) % (n)*	20.5 (21)
Severe bowel matting % (n) ⁺	15.6 (16)
Complex gastroschisis % (n)	9.8 (10)

- Median (range)
- * GPS score (CAPSNET)
- + Bowel injury Score (CAPSNET)

A Gastroschisis bundle: effects of a quality improvement protocol on morbidity and mortality ☆☆☆☆☆

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Components of the Quality Improvement Protocol.

Pre-transport management	<ul style="list-style-type: none"> • IV fluids 100–120 cm³/kg/day • Plastic coverage of the bowel
Surgical treatment on arrival	<ul style="list-style-type: none"> • Ward reduction without anesthesia • Use of PFS (Alexis retractor XS®) • Sutureless closure
Mechanical ventilation	<ul style="list-style-type: none"> • Only in case of ventilatory distress
PICC lines	<ul style="list-style-type: none"> • On arrival
Standardized nutrition	<ul style="list-style-type: none"> • Early TPN • Progressive OGT clamping if drainage is ≤40 ml/day • Bilious drainage is not relevant • Progressive enteral feeding

Outcomes

Variables	Historial Controls (N=46)	2014 – 2020 (N=102)
Mortality % (n)	22 (10)	5.8 (6)
TPN Days*	27 (7 - 142)	23 (7 - 187)
Full Enteral Feeds *(>120mgkgdía)	25 (12 - 200)	21 (9 - 118)
LOS *	41 (1 - 493)	33 (14-260)
HAI % (n)	70 (32)	52.9 (54)
Septic shock % (n)	41 (19)	15.6 (16)
Mechanical ventilation % (n)	100 (46)	59.8 (61)
Ventilator days	14 (1 - 56)	4 (1 - 53)
<ul style="list-style-type: none"> • Median (range) • HAI = Healthcare-associated infection 		

Lessons Learned

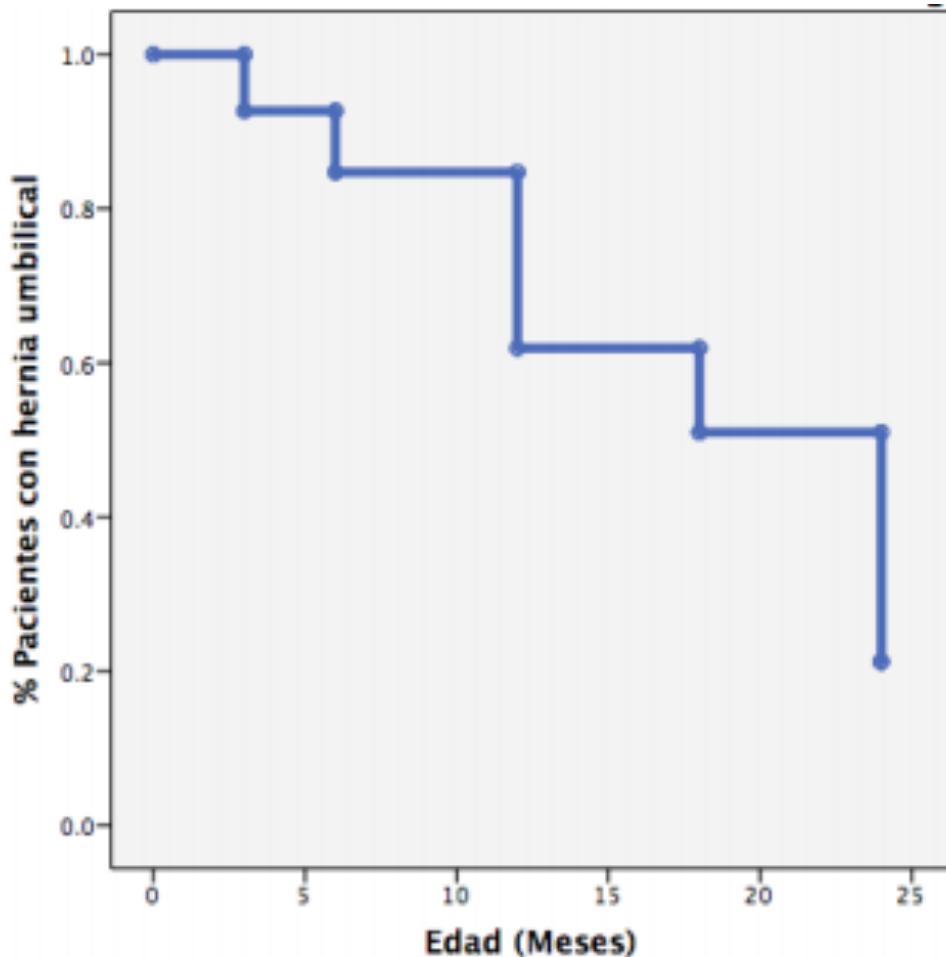


9 days on silo



2 years follow up

Umbilical Hernias



Sutureless closure Hernia
Follow up
41 patients

Follow up	Umbilical hernia (%)
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3 months	92.6
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6 months	85.7
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12 months	65
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18 months	55.5
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24 months	25
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Future Changes

- More Aggressive Feeding protocol
- Diminished use of mechanical ventilation
 - Less opioids
 - No intubation for central lines
- Infectious bundle?
- Continued follow up of umbilical hernias

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