

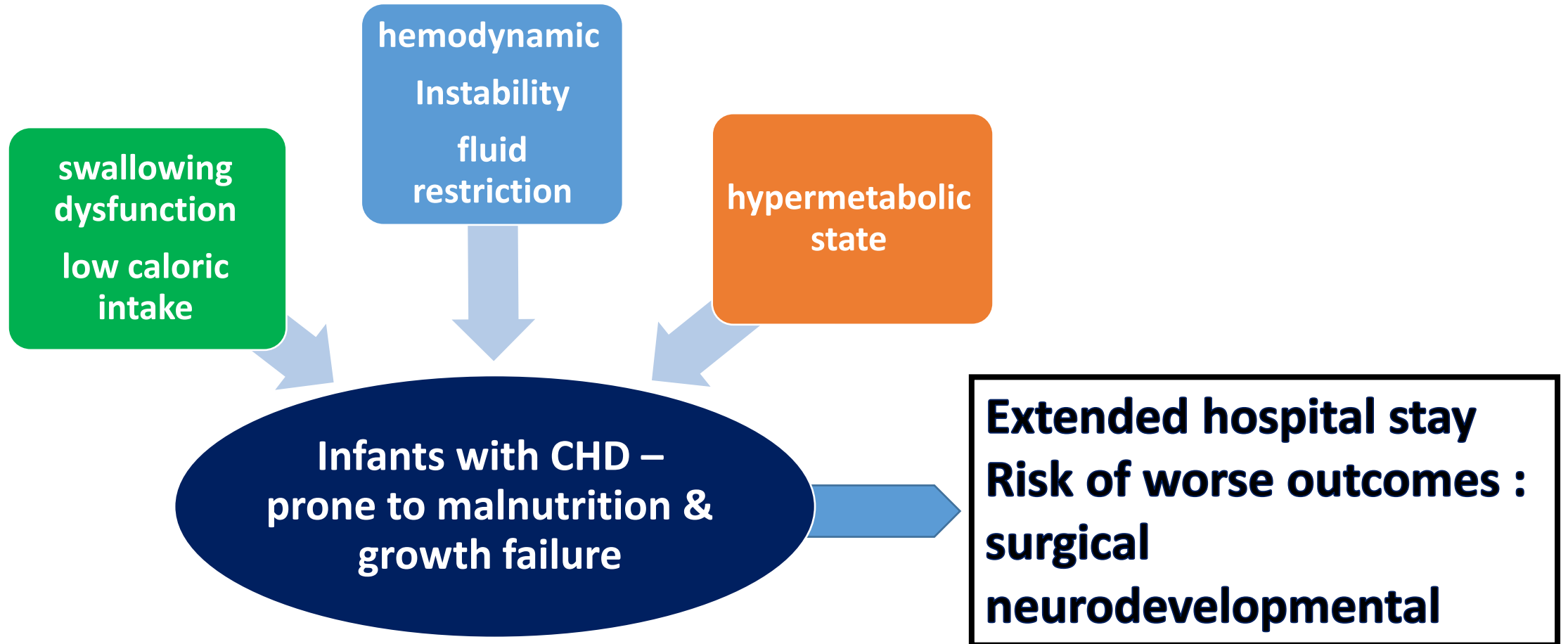
Implementation of a nutritional protocol in the pediatric cardiac intensive care unit (CICU)

Dr. Batia Weiss, Pediatric Gastroenterology Unit
Idan Tamir, TAU

Congenital Heart Disease (CDH)

- Incidence - 8/1000 births
- 50% of children - will be operated during their first years of life
- Mean hospitalization time at the “Safrá” CICU is 6 days
- Overall mortality during hospitalization is 5%

Rationale



Goals of Nutritional therapy

- To provide adequate nutrition for age appropriate growth & development
- To ensure timely, preventative, and corrective nutritional intervention tailored to the individual needs of the patient
- Early detection of patients at high risk of malnutrition and prevention of complications

Study Aim

To evaluate the nutritional state and length of hospitalization in the CICU before and after implementation of a nutritional protocol

Primary objective - Reduction of 1 day of hospital stay

Secondary objective – Reduction in overall mortality and improved nutritional state at discharge

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graph LR; A[Data collection of pre-protocol hospitalized CICU pts. 2014-2016] --> B[Implementation of nutritional protocol]; B --> C[Data collection after protocol implementation – 500 pts.]; A --> D[Completed- 1200 pts.];
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**Data collection of pre-protocol hospitalized CICU pts.
2014-2016**

**Implementation
of nutritional
protocol**

**Data collection after
protocol
implementation –
500 pts.**

Completed- 1200 pts.

Methods

Inclusion Criteria - Patients 0-24 months of age operated for CHD

Exclusion Criteria - Short bowel syndrome, GIT anomalies, GA <36 w

Data Collected -

Demographics, Type of CHD and operation

Anthropometric data: weight, height, BMI

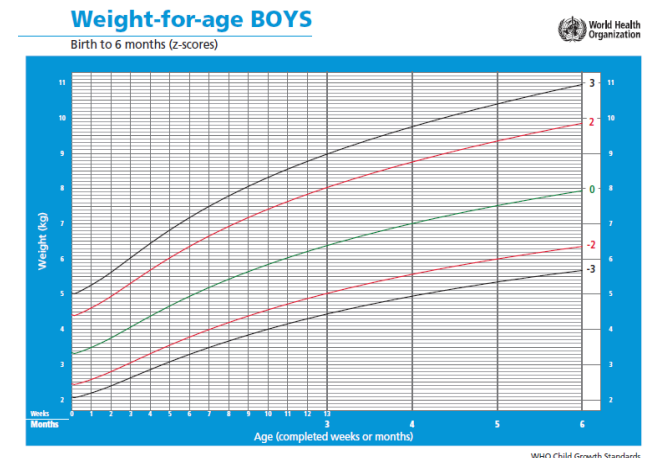
Blood tests values

Nutritional interventions

Hospital length of stay and complications

Nutritional assessment & intervention

- On admission- assessment malnutrition risk by the “WHO” Child growth charts (weight Z-score), type of CHD (cyanotic or not), presence of congestive heart failure, additional anomalies
- Classification of risk – Mild, Moderate-Severe
- Daily nutritionist consult and choice of formula and/or TPN, maximize calories/protein
- Computerized nutritional data



Nutritional Algorithm

- Modified Boston Cardiovascular Program Enteral Feeding Algorithm
- Nutritional options:
 - < 12 months- standard/high calorie formula/special formula (chylothorax) /breast milk
 - >12 months- high calorie formula/special formula/solids
- Feeding method- PO/PZ/TPN- or combination
- Calculation of daily energy intake, protein, lipids, carbohydrates

Student's Role

- Establishment of computerized database of pre-protocol implementation data
- Establishment of computerized nutritional data and algorithm
- Post protocol implementation data collection
- Data analysis

