Medications

Rufinamide (Banzel)
PO, 100 mg, Daily, Triazole derivative, Anticonvulsant
Adjunct treatment of seizures associated with Lennox-Gastaut Syndrome.
Key nursing assessment: Watch closely for multiorgan hypersensitivity, especially if patient develops a rash. Administer with food to increase absorption. (Jones & Bartlett, 2019)

Glycopyrrolate (Cuvposa)
G-Tube, 200 mcg TID Anticholinergic (Reduce saliva/drooling)
Key nursing assessment: Monitor closely for hypersensitivity reaction such as difficulty breathing, rash, or swelling of the face or lips. Check doses closely. Even a slight overdose can lead to toxicity. (Jones & Bartlett, 2019)

Hydrocortisone (SOLUCORTEF)
IM, 25 mg PRN, Glucocorticoid (Severe illness/injury)
Key nursing assessment: Inject IM form deep into gluteal muscle and rotate injection sites to prevent muscle atrophy. Shake vigorously for 5-10 seconds before drawing up solution. (Jones & Bartlett, 2019)

Demographic Data

Admitting diagnosis:

Failure to thrive

Psychosocial\ Developmental Stage: Trust vs. Mistrust (Ricci et al., 2020)

Age of client: 2

Sex: M

Weight in kgs: 10 KG

Cognitive Development Stage: Sensorimotor (Ricci et al., 2020)

Admission History

Patient was seen on 10/10 in convenient care (CC) for vomiting and weight loss. CC recommended the patient be taken to the emergency room for possible pneumonia. Patient's mother stated she wanted to take her son to St. Louis instead of Sarah Bush. CC called in details to St. Louis Children's Hospital and patient never arrived. On 10/12, mother brought child into CC again for same symptoms. CC again recommend he be taken to the ER. Mother never brought him in. On 10/12, Patient's mother called again and was advised to have him admitting. Mother did not bring him in until the afternoon. Stated she needed finish what she was doing first.

Pathophysiology

Disease process: Failure to thrive is a diagnosis given when a pediatric patient fails to gain adequate weight (Smith, 2021). This is defined by a patient in the less than fifth percentile for his or her height and weight (Smith, 2021). Organic causes of failure to thrive include physical issues such as chronic diarrhea, swallowing abnormalities, and malabsorption (Smith, 2021) Inorganic causes include improper formula mixing, feeding refusal, and parental neglect (Smith, 2021). These all lead to a deficient number of calories required for growth (Smith, 2021).

S/S of disease:
Signs and symptoms of failure to thrive include feeding refusal, texture preferences, difficulty swallowing, frequent emesis, tachypnea, fatigue, low weight, and weight loss (Smith, 2021).

Method of Diagnosis: Diagnosis is based upon the child's poor weight gain over time (Smith, 2020). Lab work such as a CBC, ESR, metabolic panel, and TSH may also be completed to rule out organic causes (Smith, 2021). Urinalysis may be performed to assess kidney function (Smith, 2021). Stool samples, chloride sweat test, pancreatic functioning test, chest x ray, endoscopy, and ECG are additional labs that are less common, but may still be performed (Smith, 2021).

Treatment of disease: Treatment is dependent on the reason for the patient's failure to thrive (Smith, 2021). Making changes such as educating parents on proper feeding positions and formula preparation are a couple examples of correcting the issue (Smith, 2021). Increasing calories, parenteral nutrition, nasogastric tubes, and gastrostomy tubes (G-tube) are used if the issue is calorie based (Smith, 2021)

Relevant Lab Values/Diagnostics

11/1/21

Creatinine (0.47 mg/dL) LOW
normal: 0.55-1.30 mg/dL
This value may be low due to decreased muscle mass (Pagana et al., 2020).

Sodium: (147mmol/L) HIGH
normal: 136-145 mmol/L
This value may be low due to patient's recent episodes of emesis (Pagana et al., 2020).

Chloride: (110 mmol/L) HIGH
normal: 98-107 mmol/L
This value may be dehydrated due to dehydration. Patient has been having frequent emesis (Pagana et al., 2020).

10/22/21
RBC: 3.54 LOW
normal: 3.89-4.97
This value may be low related to dietary deficiency, anemia, and chronic illness (Pagana et al., 2020).

11/1/21
XR KUB: Mild to moderate gastric distention to moderate dilation of both large and small bowel obstruction. Probable Ileus

10/28/21
CT brain w/o contrast: Ventriculomegaly presents w/emesis. Irregularly enlarged ventricular system and large right porencephalic cysts appear grossly stable in their responsiveness and configurations. Brain parenchyma appears grossly staple w/o interval change in gray-white evidence for acute intravenous hemorrhage.

XR KUB: Frequent emesis: non obstructive bowel gas pattern. No free air identified. Mild lucency seen along the abdominal wall is most suggestive of soft tissue fold. Presumed gastrostomy tube projects in the central abdomen.

10/22/21
XR: KUB: Vomiting: Gas filled stomach. Non=specific bowel gas pattern. G-tube w/ gas filled stomach. Bowel gas pattern is otherwise nonspecific.

Medical History

Previous Medical History: Infantile spasms, adrenal insufficiency, corpus callosal hypo genesis, Lennox-Gastaut, G-tube dependence on ketogenic diet, hypothyroidism, hypopituitarism, epilepsy, optic nerve hypoplasia, hydrocephalous, global developmental delay.

Prior Hospitalizations:

9/26/21: St. Louis Children's Hospital: acute hypoxemia, respiratory failure secondary to viral infection and aspiration pneumonia.
8/21/21: Respiratory distress
1/31/21: Vomiting for over 1 week
9/8/20: panhypopituitarism
8/11/20: vomiting 20+ times
12/9/19: increased seizure activity
11/8/19: Infantile spasms
8/21/19: hypothermia
7/1/19: evaluation and treatment. Congenital hydrocephalus.

Chronic Medical Issues: Infantile spasms, adrenal insufficiency, corpus callosal hypo genesis, Lennox-Gastaut, G-tube dependence on ketogenic diet, hypothyroidism, hypopituitarism, epilepsy, optic nerve hypoplasia, hydrocephalous, global developmental delay.

Social needs: Patient will need appointments with speech therapy, occupational therapy, and the Department of Children Services (DCFS)

Active Orders

Daily Weights BID. Patient has this order due to frequent emesis and difficulty gaining weight.

Tube feedings: 45 mL/continuous. Patient is unable to keep down foods through his mouth without episodes of emesis. Patient is also at risk for aspiration, related to his neurological deficits.

Keep on side (avoid back). Patient is having an increase in mucus and secretions. Keeping patient on his side prevents mucus and saliva from pooling in the back of the throat.

Ketogenic Diet. Patient is on a ketogenic diet to help reduce seizures.

NPO. Patient is NPO due to his G-tube placement and risk for aspiration.

Hold granulation medicated lotion application around G-tube. Skin is looking great. Patient is having a GJ-tube placed on Monday morning pending consent is signed by mother. She has not been in during rotation.

Seizure precautions. Patient has history of seizure activity.

Strict I/O. Helps compare the amount of fluids the patient is eliminating to those being administered.

Assessment										
General	**Integument**	**HEENT**	**Cardiovascular**	**Respiratory**	**Genitourinary**	**Gastrointestinal**	**Musculoskeletal**	**Neurological**	**Most recent VS (highlight if abnormal)**	**Pain and Pain Scale Used**
Child appears distressed in bed and prefers to be held. While being held, he is calm. Child is not alert to person, time, or place.	Skin is brown, warm, dry. Skin turgor 2+. No rashes or bruises. Scratch present on L shoulder. Nails are without clubbing or cyanosis. Patient has a G-tube for feedings. No irritation of the skin surrounding the G-tube. Braden Scale: 10 high risk	Head and neck: symmetric, free of lesions. Trachea is midline without deviation. Teeth erupting accordingly. Mucosa is pink and moist. Lips are dry and peeling. Hair is of normal quantity, texture, and distribution for age. Ears are symmetric and dry around auricles with no drainage. Eyes are symmetric, sclera white, cornea clear, and conjunctiva pink. Right upper and lower eyelid presents with slight inflammation. Pupils take approximately 3-5 seconds to react. This is expected due the patient's neurological deficits. Pupils are round, equal. Septum is midline, turbinates pink bilaterally with no visible polyps.	Clear s1/s2 sounds w/o murmurs, gallops, or rubs. Peripheral pulses: bilateral radial pulses 2+ and bilateral dorsalis pedis 1+. Capillary refill fingers and toes bilaterally 3+. No edema present.	Patient has unusually respiratory rhythm. Will take several breaths and then stop for approximately 5-8 seconds causing respiration count to vary. Patient's respirations were recorded at 22 per minute at 0900. Lung sounds are somewhat raspy to clear anteriorly and posteriorly bilaterally. Breathing is unlabored.	No genital abnormalities observed. Patient had 1 diaper change during rotation with a total of 211 mL. Urine was slightly yellow with no odor.	Patient is on a ketogenic diet at home and currently. Weight is 10 kg. Bowel sounds are normoactive in all 4 quadrants. Abdomen is soft, rounded, nontender, no organomegaly or masses noted. Patient has a G-tube for feedings. Last bowel movement was 10/12/21. Patient has a Cummings fall score of 4 due to his developmental delay and G-tube.	Child does not have full range of motion in all extremities. Extremities are stiff. Unable to assess bilaterally strength. Patient is unable to stand on his own, so gait cannot be assessed.	Child is unable to move all extremities well without assistance. Extremities are somewhat stiff. Patient's pupils take approximately 3-5 seconds to react. Pupils are round, equal, and do not accommodate.	**Time:0900** **Temperature: 99.2** **Route: Axillary** **RR: 22** **HR: 120** **BP and MAP: 127/73** **Oxygen saturation: 98** **Oxygen needs:** Room air	FLACC Scale Face: The child did not make any facial expressions that would express he was in pain. Score: 0 Leg: The child's legs were relaxed. Score: 0 Activity: The child was sleeping and comfortable throughout most of the clinical. Score: 0 Consolability: The child would occasionally moan or whimper but would immediately stop when picked up. Score: 1 Cry: The child was easily reassured by touching and holding. Score: 1 According to the criteria of the FLACC scale, the patients score of 2 places him in the category of mild discomfort (Ricci et al., 2021)

Nursing Diagnosis 1	Nursing Diagnosis 2	Nursing Diagnosis 3
Rationale Imbalance nutrition related to administration of g-tube feedings as evidence by patient's lack of weight gain since January (Swearingen & Wright, 2019).	**Rationale** Risk for aspiration related to continuous G-tube feedings and emesis (Swearingen & Wright, 2019).	**Rationale** Risk for impaired skin integrity related to immobility.
Interventions **Intervention 1:** Educate mother on the correct administration of patient's G-tube feedings. Intervention 2: Have mother record time and amount administered at time of feedings.	**Interventions** **Intervention 1:** Keep patient on side during feedings to prevent aspiration of emesis. **Intervention 2**: Keep patient elevated to at least 30 degrees during feedings to help prevent emesis.	**Interventions** **Intervention 1:** Frequently reposition patient. **Intervention 2:** Changed soiled diapers promptly.
Evaluation of Interventions I was unable to observe these demonstrations as the mother was not present during rotation.	**Evaluation of Interventions** I was able to hold the patient during most of his feeding. He did not have any episodes of emesis during that time.	**Evaluation of Interventions** Patient's position was changed numerous times during rotation. Diaper was changed 1x after becoming soiled.

References

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