Medications:

Levacetylleucine Gr Pk 18 – BID via gastrostomy tube

This patient also has a diagnosis of gangliosidosis, and this medication is being administered to help improve the neurological deficiencies caused by gangliosidosis.

Gabapentin (Neurontin) – oral solution, 1.5 mg, BID

This patient experiences seizures caused by their gangliosidosis diagnosis and gabapentin is being administered to help control these seizures and pain.

Albuterol HFA – 90 mcg, inhaler, 2 puffs, 4 hours PRN for shortness of breath

Rhinovirus causes airway inflammation. Albuterol is being administered to relieve this inflammation and help with airway clearance.

Sucrose 24% (sweet-ease) – oral solution as needed for pain

Sucrose 24% (sweet-ease) is normally given to infants younger than 12 months, however, this patient has severe developmental delays, and this is the best pain relief method when they undergo painful procedures such as a gastrostomy tube placement.

Lidocaine 4% LMX 4 – topical cream ONCE

This topical cream relieves pain during IV insertions and other painful procedures.

Cannabidol (Epidiolex) – oral solution, 120 mg

This medication is being administered to control seizures and neurological discomfort.

Clobazam (ONFI) – 2.5 mg/ml oral suspension 2 mg

Clobazam is an anticonvulsant that is being administered to the patient to help control their seizures.

Glycopyrrolate – oral pod NEON 300 mg, Q 12 hours

This medication helps reduce the excessive oral and respiratory secretions caused by the patient's gangliosidosis.

Levetiracetam (Keppra) – oral solution, 300 mg, via gastrostomy tube, Q 12 hours

This medication is being administered to help control the seizures caused by the patient’s gangliosidosis.

Polyethylene glycol oral powder packer (MiraLAX) – 17g , via gastrostomy tube, daily as needed

This medication is being administered to help control the seizures caused by the patient’s gangliosidosis.

Sennosides – oral syrup, 4.4 mg, via gastrostomy tube, daily as needed

This medication is being administered to help relieve the constipation that results from the decreased mobility this patient experiences due to their gangliosidosis diagnosis.

Relevant Lab Values/Diagnostics:

A respiratory pathogen panel was performed and yielded positive results for rhino enterovirus (human).

Demographic Data:

Admitting Diagnosis – rhino enterovirus

Age of Client – 2 years

Weight – 14.8 kg

Allergies – Atropine

Date of Admission – 10/23/2025

Psychosocial Development Stage – This patient should be entering into the Autonomy vs. Shame and Doubt developmental stage, but due to their developmental delays, they remain in the Trust vs. Mistrust stage and depend heavily on their primary caregiver to develop trust in their environment.

Cognitive Development Stage – This patient is in the sensorimotor stage and experiences the world through their senses of touch, smell, sight, taste and smell.

Admission History:

The patient was brought to the emergency room by their mother who was concerned about the symptoms of a now 3-day history of upper respiratory

infection symptoms including cough, congestion, and an O2 saturation of 88% on room air. This patient is also diagnosed with gangliosidosis which intensifies their upper respiratory symptoms and requires them to be closely monitored when experiencing upper respiratory infection symptoms.

Medical History:

Previous Medical History – allergic rhinitis, eczema, seizures (CMS-HCC), gangliosidosis (presumed type 2A), epilepsy, macrocephaly

Prior Hospitalizations: 8/18/2025, 08/25/2025, 09/11/2025, 10/14/2025

This patient has endured several prior hospitalizations due to their gangliosidosis diagnosis and the events that led to that diagnosis.

Past Surgical History: None

Social Needs: This patient will require the consistent presence of a loving caregiver to reduce their anxiety. They will also require a calm, low stimulation environment and a steady schedule to help them remain calm during their healthcare journey.

Pathophysiology:

Disease Process: Rhinovirus is a common viral pathogen and the top cause of the common cold in children. Rhinovirus is contracted when the virus enters the body through the inhalation of respiratory droplets or when the host encounters contaminated surfaces, after which the virus attaches itself to the epithelial cells in the host's nasal mucosa (Capriotti, 2020). After the virus attaches to the nasal epithelial cells it begins to replicate within them and causes cellular damage which triggers the release of inflammatory mediators like histamines (Capriotti, 2020). Rhinovirus poses a significant threat in children because of the smaller diameter of their airway which is more easily affected by the inflammation; this child is particularly susceptible to symptoms because of the neurological damage they experience from their gangliosidosis (Capriotti, 2020).

S/S of Disease: Rhinovirus causes nasal congestion, rhinorrhea, sore throat, cough, otitis media, sinusitis, asthma exacerbation and a low-grade fever in some cases (Capriotti, 2020).

Method of Diagnosis: Respiratory Pathogen Panel

Treatment of Disease – There is no specific cure for rhinovirus, and treatment focuses on relieving symptoms with adequate rest, hydration, and over the

counter medications (acetaminophen, ibuprofen, saline drops, decongestants, and cough suppressants) (Capriotti, 2020).

Active Orders:

Seizure precautions continuous.

This patient experiences seizures regularly.

Pediatric feeding Q3h, 3x a day via gastrostomy tube, 250 ml formula followed by water flush run at 590 ml/h

This patient is fed through a gastrostomy tube.

Vital signs Q4H

This patient must be monitored closely.

IV access- Insert peripheral IV, de-access prior to hospital discharge per protocol

This patient requires an IV to receive fluids and medications.

I &O per protocol

Rhinovirus causes fluid imbalances, and it is important to monitor this patient's I & O to assess the patient's hydration status.

Notify physician for a raise in temperature using following parameters unless otherwise specified by physician: First 48 hours post-op if 102F or higher or previously afebrile patients if 101F, or previously febrile patient temperature raised more than 2F from pervious temp.

These changes in the patient's vital signs can be dangerous, and the provider must remain informed.

Notify physician for pulse, respirations, blood pressure outside of normal parameters for patient's age/condition or per physician parameters, or if the patient is verbalizing or exhibiting psychological variances.

These changes in the patient's vital signs can be dangerous and the provider must remain informed.

NT suction until discontinued

This will help to keep the patient's airway clear.

Administer O2 to maintain pulse oximeter greater than 92% once per nasal canula

It is important to monitor this patient’s O2 saturation.

Assessment:

General – Patient is awake and responsive with no signs of distress.

Integument – Skin is warm, dry, and intact with no lesions, sores, or rashes noted.

HEENT – Nasal congestion noted upon observation; unable to examine the inner ears and throat.

Cardiovascular – Clear S1 and S2 present, no murmurs or defects noted.

Respiratory – Low lung volumes and coarse breath sounds noted bilaterally, no wheezing or stridor noted. Patient has a chronic, productive cough, bouts of coughing lead to accessory muscle use.

Genitourinary – Urine clear and yellow.

Gastrointestinal – Gastrostomy tube in place with infinity pump. Bowel sounds normo-reactive in all four quadrants. No distention, pain, or cramping noted.

Musculoskeletal – The patient can move all extremities well, however they are experiencing muscle tone loss leaving them unable to walk or hold a rattle on their own.

Neurological – The patient is awake and alert. Nonverbal. Developmental regression is present.

Most Recent Vital Signs –

BP: 119/75

RR: 24

O2: 100% on two liters of oxygen administered via nasal cannula

Temp: 36.2 C

Apical Pulse: 140

Peripheral Pulse: 140

Pain and Pain Scale Used – This patient is nonverbal, but no signs of pain (such as grimacing) were noted upon observation.

Nursing Diagnosis 1: Ineffective airway clearance related to increased mucus production as evidenced by chronic, productive cough and nasal flaring.

Rationale – This patient is experiencing a major increase in mucus production that they are sometimes struggling to clear their airway of.

Interventions –

1: Monitor oxygen saturation and provide oxygen as prescribed when necessary.

2: Asses respiratory rate, depth, and effort every 2-4 hours.

Evaluation of Interventions – The patient successfully maintains a clear airway.

Nursing Diagnosis 2: Disturbed Sleep Pattern related to fever and discomfort caused by rhinovirus infection as evidenced by frequent nighttime awakenings and irritability throughout the day.

Rationale – The increase in mucus production this patient is experiencing as a symptom of their rhinovirus makes it difficult for them to sleep through the night, which lowers their immune system and makes it more difficult for them to heal.

Interventions –

1: Encourage hydration throughout the day to keep secretions as thin a possible.

2: Establish a calming bedtime routine and a low stimulation sleeping environment to promote relaxation.

Evaluation of Interventions –

Nursing Diagnosis 3: Parental anxiety related to the child's diagnosis as evidenced by the mother's repeated questions, tone of verbal responses, and restlessness.

Rationale – This child has recently received a terminal diagnosis, and their mother is very anxious about their future.

Interventions –

1: Provide clear educational materials about the child's condition and what to expect.

2: Offer emotional support and reassurance.

Evaluation of Interventions – The mother felt well educated on her child's condition and is feeling prepared to handle the coming months.

References:

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Phelps, L.L. (2023) *Nursing Diagnosis Reference Manual.* Wolters Kluwer.