

Nursing Care Plan of Child with Diabetes

Diabetes Mellitus: A chronic disorder involving primarily carbohydrate metabolism and characterized by partial and /or complete insulin inefficiency. The following are the two major types of diabetes:

- a. Type 1: Destruction of pancreatic beta cells which produce insulin; this leads to insulin deficiency
 - i. Called insulin-dependent diabetes mellitus or juvenile-onset diabetes
 - ii. Usually strikes children and young adults, although disease onset can occur at any age
 - iii. Accounts for 5% to 10% of all diagnosed cases of diabetes
- b. Type 2: Arises secondary to insulin resistance. The body fails to use insulin properly in conjunction with some insulin deficiency.
 - i. Called non-insulin-dependent diabetes mellitus
 - ii. Associated with older age, obesity, family history of diabetes, history of gestational diabetes, impaired glucose metabolism, physical inactivity, and race/ethnicity
 - iii. Increasingly being diagnosed in children and adolescents

Assessment of Diabetic Client

- Obtain a family history, especially regarding other family members who have diabetes.
- Obtain a health history especially in regard to weight loss, frequency of drinking and voiding, increased appetite, loss of energy, behavior changes.
- Other symptoms of Type 1 diabetes are:
 - The three polys which are the cardinal signs of diabetes
 - Polyphagia
 - Polyuria
 - Polydipsia
 - Weight loss
 - Child may have started wetting the bed
 - Irritability and not acting like themselves
 - Shortened attention span
 - Dry skin
 - Blurred vision
 - Poor wound healing
 - Flushed skin
 - Headache
 - Frequent infections – including yeast infections
 - Symptoms of hyperglycemia
 - Symptoms of hypoglycemia
 - Symptoms of Diabetic Ketoacidosis

Diagnosis based on blood glucose tests:

- Fasting Blood Glucose – > 126 mg/dl on two separate occasions & presenting clinical symptoms
- Glucose Tolerance Test (GTT) – concentration >200 mg/dl considered positive

Medical Interventions – Type 1 Diabetes Mellitus

- Insulin administration
 - Replace insulin the body is not producing
 - Rotation of sites
 - Mix insulin from clear to cloudy
 - Inject in subcutaneous tissue
 - Do not premix any insulin unless advised
 - Timing of injections in relation to meals
 - Insulin can be stored at room temperature
- Ensure normal growth & development through metabolic control
- Enable child to cope with chronic illness: happy, active childhood, & integrated in family
- Prevent complications by maintaining normal levels of blood glucose consistently

Developmental Concerns in Diabetes Mellitus

Developmental Stage	Developmental Task	Behavior/situations
Toddler	Autonomy; exploring their world Mastery of new skills	Putting things in mouth Decreased appetite Picky eater Difficult to distinguish temper tantrum from hypoglycemia Day care
Preschooler	Initiative: Imagination and creativity; want to imitate parents	May want same food as parents and peers Very energetic – manage hypoglycemia Foods at preschool
School aged	Industry, socialization, Exposure to outside influences	Tests independent decision making Most time spent away from home Doesn't want to be different Sports events Sleepovers
Adolescent	Identity; Identification with their peers; do not want to be different	Testing limits/breaking rules Rebellion, Risky behavior Rapid growth – difficult to regulate Challenge authority Social activities not predictable

Comparison of Hypoglycemia, Hyperglycemia and Ketoacidosis

Descriptor	Hypoglycemia	Hyperglycemia	Ketoacidosis
Onset	Rapid	Slow	Slow
Symptoms	Trembling Sweating Tachycardia Pallor Clammy Skin	Increased Urination Increased Thirst Fatigue Weight loss-gradual Blurred Vision	<u>Hyperglycemia signs plus:</u> Chest pain Abdominal pain Kussmaul Respirations Nausea / Vomiting Acetone-fruity breath <u>Symptoms of dehydration</u> Dry lips a & mucous membranes Sunken eyes Sudden weight loss Decreased urination
Alterations / sensorium	Personality change Irritable Drunken behavior Slurred Speech Gradual loss of consciousness	Emotionally labile Headache Hunger	Increasing lethargy Decreasing level of consciousness Coma
Laboratory Data	Blood glucose < 70mg/dL	Blood glucose > 160 mg/dL	Blood Glucose > 300 mg/dL Urinary ketones positive Serum pH < 7.25 Serum ketones are positive
Causes	Too much insulin Increased activity without eating extra carbs Missed or delayed meal	Increased carb. Intake Little or no exercise Inadequate amt. of insulin Increased physical or emotional stress	Inadequate amount of insulin Excessive stress
Treatment	15 g of carbohydrate for loss of consciousness or seizure activity	Insulin Exercise Increased oral fluids	IV fluids IV insulin Electrolyte replacement

	Glucagon SQ or IM IV glucose		Generalized supportive care
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