

CASE STUDY

SUBJECT : CHILD HEALTH NURSING

TOPIC : NEPHROTIC SYNDROME.

NURSING ASSESSMENT

Biographic Data

Name of the patient : Baby Sannidhi

Age : 3yrs

Gender : Female

ID no : 1806120011

Date of Admission : 12/6/18

Address :

Date of history taking : 14/6/18

Informant : Mother

Diagnosis

Nephrotic Syndrome

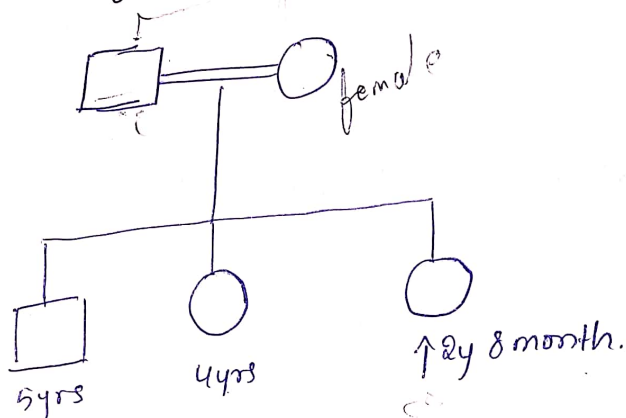
Medical History

Chief Complaints : My patient was admitted in hospital with the chief complaints of swelling around eyes since 8 days and decreased urine output since 8 days.

History of present illness : presently my patient have decreased urine output, swelling around eyes, ankle, feet and abdomen.

Past History :- There is no any past History of hospitalization.

Family History



Third degree Consanguineous marriage

GROWTH AND DEVELOPMENT

1) Anthropometric measurement

Parameter	Patient Value	Normal Value
Height	90cm	95cm
Weight	18 kg	14 kg
Head Circumference	47cm	47cm
Chest Circumference	42cm	42 - 46cm
Mid arm Circumference	20cm	14cm

2) Vital Signs.

Parameters	Patient Value	Normal Value
Temperature	98°F	98.6°F
pulse	126b/m	120 - 135b/m
Respiration	32b/m	25 - 35b/m
Blood pressure	110/70mm Hg	110/70mm Hg

3) Dentition.

Total 16 teeth are formed

4) Motor development

Gross motor development

- Runs quickly with control
- stand on one leg on few second
- walk on the tip of toe
- Jump well.

Fine motor development

- Build a tower of 8-10 cubes
- initiate circular strokes completely
- good hand and finger co-ordination.

5) Sensory development

Vision :- Binocular Vision is fully developed
child can see the far away objects
visual acuity is 20/20.

Taste :- Identify the taste mainly spicy & Sweet.

Smell :- Recognize the smell.

6) Language - and Communication.

- understand complex sentences.
- enjoy stories and pictures.
- obey & prepositional commands.

36

77 Cognitive development

Sensory motor stage

or pre-operational stage

They understand the concept

Listening the parental words.

87 Emotional development

or Psychosocial

Autonomy v/s shame

Develop sense of control & developed sphincter control

after 2 yrs of birth.

or Psychosexual

Anal stage

Focus to drive on anus.

development of bladder and sphincter control & gratification is obtained from the anal & urethral areas.

97 Moral development

Pre-conventional morality

Stage 1 & 2. Punishment & obedience

child will develop wrong & Rt activity.

107 Spiritual development

Initiative projective stage

Understanding without recognition.

Learn new concepts & things.

Summary of growth and development.

My patient Baby Saumikhi age of 3yrs has achieved all growth and development & milestones as per the age.

Immunization.

The child is Immunized as per the Immunization schedule.

Last my patient taken DPT booster vaccine at the age 1 1/2 year.

Elimination pattern.

Bowel : Normal

Bladder : Irregular - urine output is decreased

Nutritional pattern

Actual weight : 14 kg.

expected weight : 18 kg.

$$\text{Degree of malnutrition} = \frac{\text{actual wt}}{\text{expected wt}} \times 100.$$

$$= \frac{14}{18} \times 100.$$

$$= 77\%$$

My patient is moderately wellnourished.

Sleeping pattern

My patient have normal sleeping pattern i.e 10-12 hrs daily.

PHYSICAL EXAMINATION.

General appearance

Body built : moderately build

Nourishment : moderately nourished

Face : Facial puffiness is present

Eyes : peri-orbital puffiness is present.

Abdomen :

Inspection : No scars

Swelling is present.

Abdominal girth : 62.5 cm.

Palpation : Tenderness is present.

Extremities :

Edema present in the ankle & feet.

External Genitalia :

Edema present.

Psychosocial History :

General status : Middle class family.

Play activities : My patient play the parallel play & dramatic play.

Laboratory

Date	Specimen
12/6/18	Blood

Treatment

Drug

Trij Lasix

Tab indy solone

Tab Am long

Laboratory Investigation.

Date	Specimen	Investigation	Client's value	Normal value
12/6/18	Blood	Haemoglobin	12.1g/dl	10-15g/dl
		RBC	6.1m/cumm	3.8-5.5m/cumm
		Serum albumin	2.0g/dl	3.5-5.4g/dl
		Serum urea	19.9/dl	1-20 mg/dl.
		Serum creatinine	0.3mg/dl.	0.0-0.7mg/dl.

Treatment:

Drug	Generic name	Dose	Route	frequency	Action
Tab Lasix	furosemide	20mg	IV	B.D.	Diuretic.
Tab Mylolone	prednisolone	15mg	orally	B.D.	Anti-inflammatory
Tab Amlong	Amlodipine	5mg	orally	B.D.	Calcium Channel Blocker.

DISEASE ASPECT

Introduction.

Childhood nephrotic syndrome is not a disease in itself; rather, it is a group of symptoms that

- Indicate kidney damage - particular damage to the glomeruli, the tiny units within the kidney where blood is filtered.

- Result in the release of too much protein from the body into urine.

- When kidneys are damaged, the protein albumin normally found in the blood, will leak into urine.

Anatomy & Physiology.

The renal system is the organ system that produce stores and eliminates urine.

In humans it includes two kidneys, two ureters & bladder and the urethra.

Kidneys

These are bean shaped organs, which help the body produce urine to get rid of unwanted waste substance.

They are one on each

Everyday quarts. of blood in urine, composed

Each kidney has a renal pelvis and a renal pyramid.

The urine flows through tubes called nephrons into the bladder emptying through a tube called the urethra.

Each kidney is called a nephron.

The nephron consists of a tubule, the

The glomerulus is a cluster of blood vessels through which blood is filtered. The fluid then moves through the tubule where needed minerals

They are located just below the rib cage, one on each side of the spine.

Everyday, the kidney filters about 180-150 quarts of blood to produce about 1 to 2 quarts of urine, composed of waste & extrafluid.

Each kidney consist of 2 distinct regions.

Renal parenchyma

Renal pelvis.

The urine flows from kidney to the bladder through tubes called ureters. The bladder stores urine when the bladder empties, urine flows out of body through a tube called the urethra, located at the bottom of the bladder.

Each kidney is made up of million filtering units called nephrons. each nephron filters a small amount of blood.

The nephron includes a filter called glomerulus & a tubule. The Nephron work through a two step process.

The glomerulus lets fluid & waste products pass through it: however it prevents blood cells & large molecules, mostly proteins, from passing. The filtered tubule fluid then passes through the tubule, which sends needed minerals back to the blood stream & removes waste.

Definition

Nephrotic Syndrome is one of the common cause of hospitalization among children.

Nephrotic Syndrome is a symptom complex manifestation by massive edema, hypoalbuminemia, marked albumin & hyperlipidemia.

Types

1) Congenital Nephrotic Syndrome :- It is rare but a serious and fatal problem usually associated with other congenital abnormalities of kidney. It is inherited as autosomal recessive disease. Severe renal insufficiency & urinary infections along with condition result in poor prognosis.

2) Primary Nephrotic Syndrome :- It is the most common type and regarded as autoimmune phenomenon as it responds immunosuppressive therapy. Subtypes :-
→ Minimal change nephrotic syndrome [85%]
→ Mesangial proliferative nephrotic syndrome [5%]
→ Focal segmental nephrotic syndrome [10%].

3) Secondary Nephrotic Syndrome

Children at risk of secondary nephrotic syndrome may occur due to infection or due to DM, malignant hypertension.

Etiology

Book picture

1) primary nephrotic syndrome

→ Unknown

2) Secondary nephrotic syndrome

→ Diabetes

→ Hepatitis

→ HIV virus

→ Lupus

→ Malaria

→ Certain medications

Ex:- Aspirin, etc.

3) Congenital nephrotic syndrome

→ Inherited genes

which are passed from parent to child

through genes

→ Infection at birth

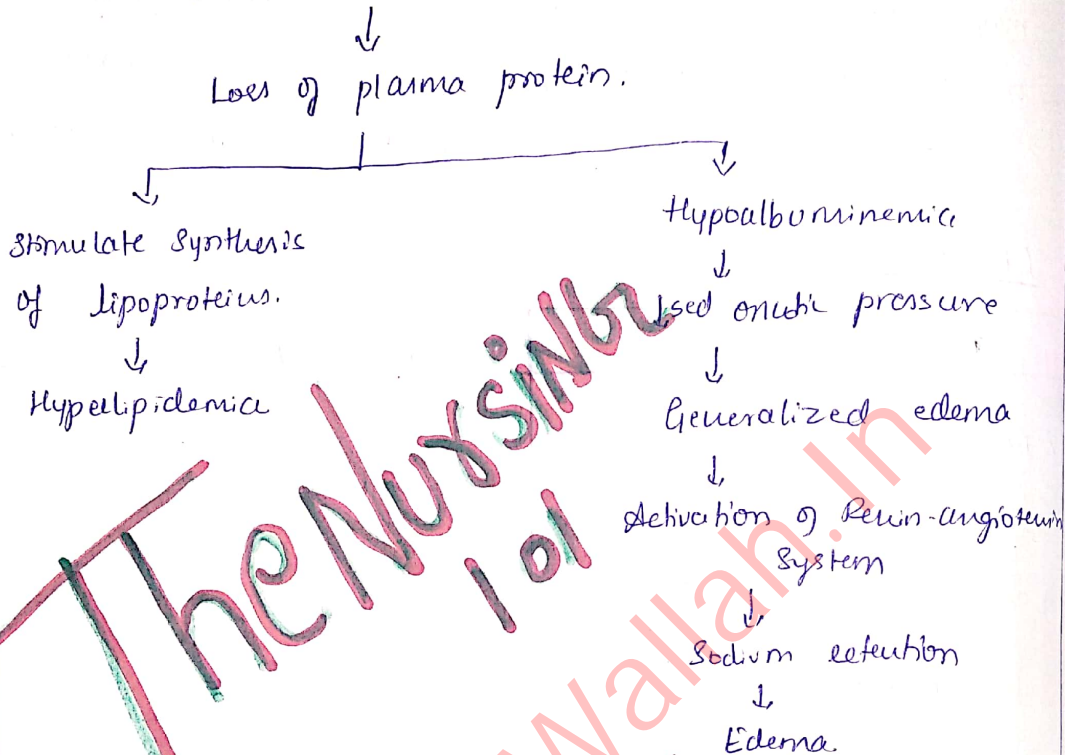
3) Secondary Nephrotic Syndrome : It occurs in children about 10% of all cases. This condition may occur due to some form of chronic glomerulonephritis or due to DM, Systemic lupus erythematosus, malaria, malignant HIV, drug toxicity, lymphomas, Syphilis etc.

Etiology

Book picture	patient picture
1) primary nephrotic syndrome → Unknown.	→ Unknown.
2) Secondary nephrotic syndrome → Diabetes → Hepatitis → HIV virus → Lupus → Malaria → certain medication e.g. Aspirin, Thuprofen	
3) Congenital Nephrotic Syndrome → inherited genetic defect which are problems passed from parent to child through genes → Infection at birth.	

Pathophysiology.

Damaged glomeruli Capillary membrane



Clinical Manifestation.

Book picture	Patient picture
<ul style="list-style-type: none"> → Edema → Albuminuria → Hypoalbuminemia → Hypertlipidemia → Blood in urine → Fever → Abdominal pain. → Diarrhoea → High Blood pressure 	<ul style="list-style-type: none"> → Edema → Hypoalbuminemia.

Diagnostic

- History
- Physical
- Urine test
- Blood test
- ultrasound
- kidney bio

Management

Medical management

The treat ba

1) primary N

2) Secondary

treat

3) Congenital

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& kidney

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Diagnostic Evaluation

- History Collection
- physical examination
- urine test
- Blood test
- ultrasound of kidney
- kidney biopsy

Management

Medical management-

The treat based on Type of Nephrotic Syndrome :

1) primary Nephrotic Syndrome : Medications.

2) Secondary Nephrotic Syndrome :

treat the underlying illness or disease

3) Congenital Nephrotic Syndrome :

medications ; surgery to remove one or both kidney

& kidney transplantation.

Primary Nephrotic Syndrome is treated with several type of medications that control the immune system, remove Extracellular fluid & lower blood pressure.

Pharmacological Management.

Blood pressure medication?

Drugs called Angiotensin Converting enzyme Inhibitors reduce blood pressure and also reduce the amount of protein excrete in urine. Ex:- Captopril.

and also Angiotensin II receptor blocker

Ex:- Losartan.

Diuretics :- Help control swelling by increasing kidney fluid output Ex:- Furosemide

Anticoagulant : Help control blood ability to clot & reduce risk of blood clot. Ex:- Heparin.

Corticosteroids :- that may decrease the inflammation that accompanies certain kidney disorders.

Ex:- prednisolone
growth hormones to promote growth & help bone mature

Eating, Diet and Nutrition.

Children who have nephrotic syndrome may need to make changes to their diet, such as:

Limiting the amount of sodium, often from salt, they take in each day.

Reducing the amount of liquid they drink each day.

Eating a diet
to help control

Complications.

→ Blood clots :-
blood pressure
help prevent
blood clot

→ High blood
→ High Blood
the resulting
raise blood

→ Acute kidney
→ Chronic renal

Alarming Monitor

→ urinary signs
& urine

→ Fluid & electrolyte
Ascites, etc.

→ Circulatory

→ Neurology

→ Mobility &

Eating a diet low in saturated fat & cholesterol.
to help control elevated cholesterol levels.

Complications.

- Blood clots :- The inability of the glomeruli to filter blood properly can lead to loss of blood proteins that help prevent clotting. This increases risk of developing blood clot.
- High blood cholesterol & elevate blood triglyceride
- High blood pressure : Damage to glomeruli & the resulting buildup of waste in bloodstream can raise blood pressure.
- Acute kidney failure
- Chronic renal failure.

Nursing Management.

- urinary system, oliguric, urine retention, proteinuria & urine discoloration
- Fluid & electrolyte balance excess fluid, edema, ascites, weight gain.
- Circulatory increased blood pressure
- Neurology Examination is done.
- Mobility should be checked

Nursing Diagnosis's.

- Fluid Volume excess related to fluid accumulation in tissue
- Altered nutrition less than body requirement. related to lack of appetite.
- Risk of infection related to hospitalization
- Altered body image related to disease condition.

Assessment	Nsg D/s	objectives	Nsg Intervention	Nsg Implementation	Evaluation
<u>Objective data</u> By observation & physical examination I found that my pt. have swelling in face, abdomen, and ankle	Fluid volume excess related to fluid accumulation in tissue	To reduce amount of fluid accumulation in tissues	→ provide rest, Comfort, position & frequent changes in position → provide a diet @ low salt & high protein → provide medication as per physician orders.	→ provided rest, Comfort, position & frequent changes in position i.e. prone position → provided diet @ low salt & high protein → provided medication ex: Diuretics.	Accumulation of fluid reduced to some extent

Health Education

- Educate the family members about the nephrotic syndrome & its complications
- Educate the parents to provide high protein diet.
- Educate the parents to provide low salt diet.
- Educate the parents to provide skin care to the child.
- Educate the parents to maintain general cleanliness.
- Educate the parents to provide medication properly.
- Educate the parents to provide orange juice.

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sg
+ Nsg

Summary 6

My patient baby Sannidhi was admitted in the ICU with the chief complaint of ~~thirst~~ periorbital swelling around eyes & decreased urine output. All the investigation & treatment are done. Now my patient condition has been improved.

Conclusion

By this case study, I clearly understood about ~~chronic~~ Nephrotic Syndrome & its etiology, mgt & Rx. Now I am able to manage this case in future.