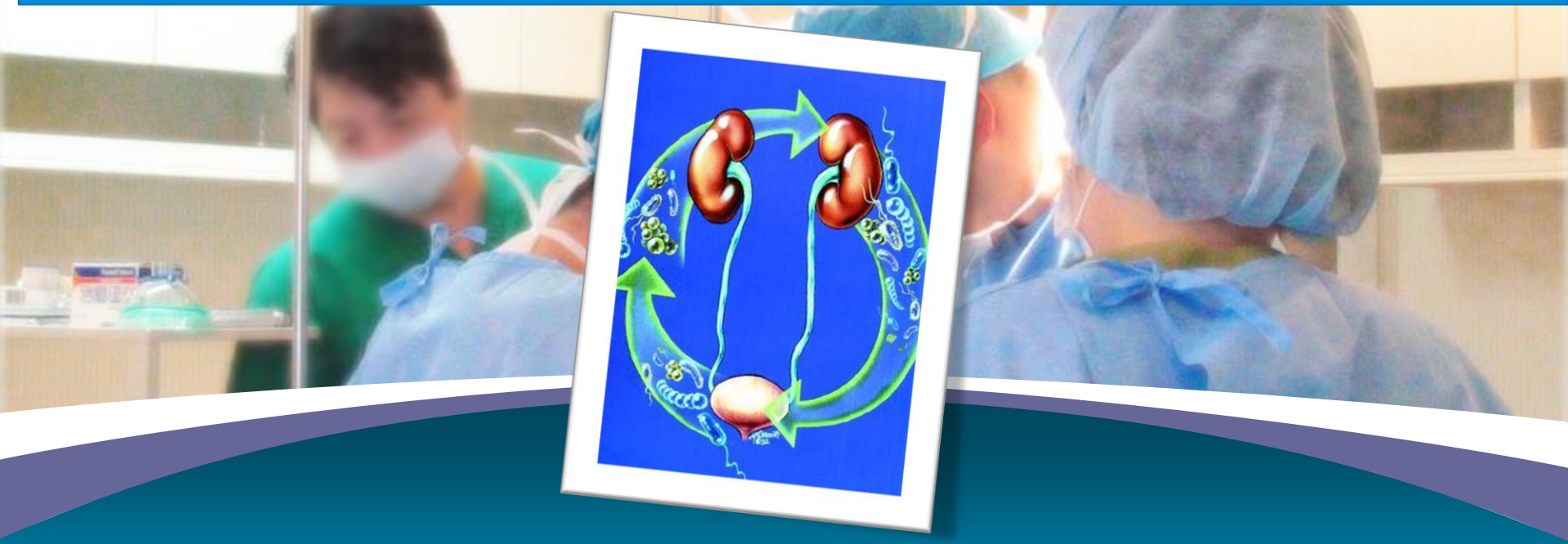
มหาวิทยาลัยราชภัฏนครปฐม

Nursing care of pediatric patients with urinary tract problems



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Learning Objectives

1. Describe child's abnormalities in the urinary system.
2. Describe Pathology, signs and symptoms of child's abnormalities in the urinary system.
3. Describe treatment in child's abnormalities in the urinary system.
4. Describe nursing diagnosis and nursing care in child's abnormalities in the urinary system.

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Content

1. Acute Glomerulonephritis

2. Nephrotic Syndrome

3. Urinary Tract Infection, Pyelonephritis

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Acute Glomerulonephritis

Acute glomerulonephritis

Definition :

- An autoimmune immune-complex disorder occurs 10-21 days s after a group A beta-hemolytic streptococcal infection

Acute glomerulonephritis

causes :

- Follows a group A beta-hemolytic streptococcal infection of the respiratory tract
- Less commonly, follows a skin infection

Acute glomerulonephritis

Pathophysiology:

- Antibodies are made against the toxin of the streptococci
- The antigen-antibody complex becomes entrapped in the glomerular capillary membrane.
- The condition induces inflammatory damage and Impedes glomerular function.
- The glomerulus loses the ability to be selectively permeable, and allows RBCs and proteins to filter through as the GFR falls.

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Acute glomerulonephritis

Clinical Manifestations: AGN

- Edema- Eyelids, face, hands
- Oliguria
- Smoky, discolored urine
- High blood pressure
- Fatigue
- Fluid overload & circulatory congestion s/sx

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Acute glomerulonephritis

Laboratory Assessment: AGN

Component	Results
Urinalysis	Hematuria, *Proteinuria
GFR	↓ to 50mL/min
BUN	> 20
Urine Protein	500-3g/24 hour
Serum Albumin	Decreased

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Way to management Acute glomerulonephritis

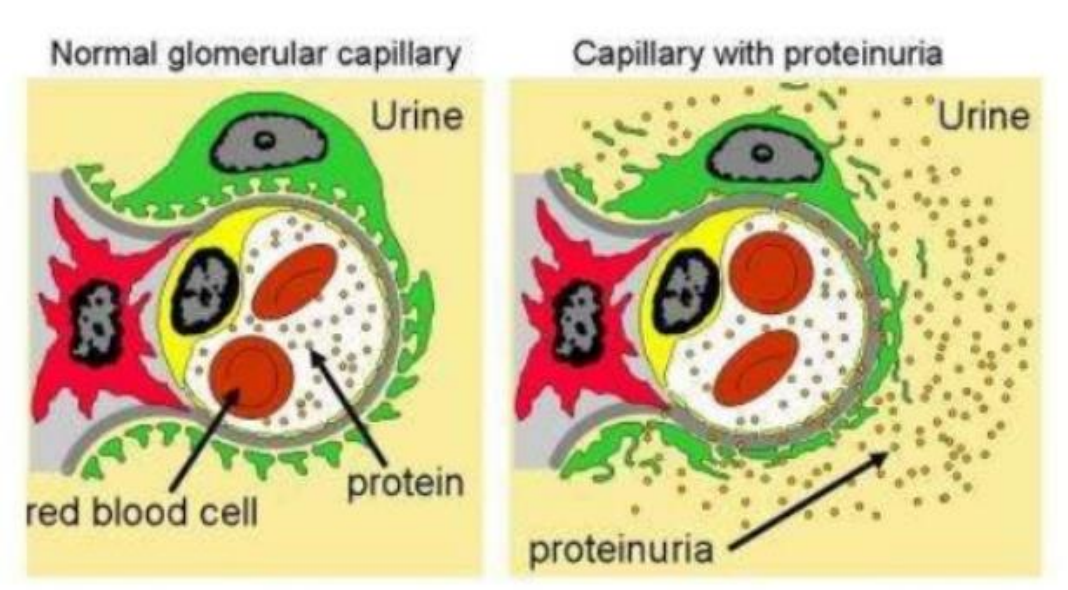
1. Bed rest
2. Fluid and dietary
3. Diuretics to reduce fluid overload
4. Antihypertensive drugs to decrease blood pressure

Acute glomerulonephritis

Nursing care

Give antibiotic therapy
Monitor fluid intake and output
Administer diuretic medications and antihypertension drugs
Teach family that severe glomerulonephritis may require peritoneal dialysis or hemodialysis
Monitor for hypertension and urinary output
Asses for risk of renal failure
Educate parents about dietary restrictions (restrict salt and fluid with low-potassium foods)

Nephrotic Syndrome: NS



Nephrotic Syndrome: NS

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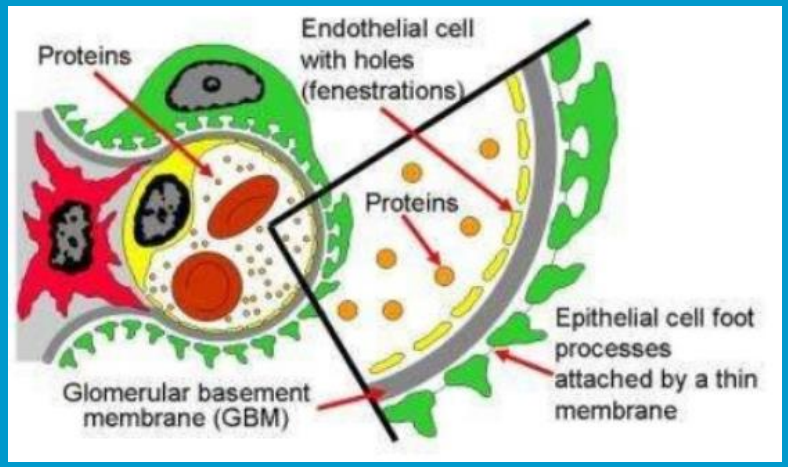
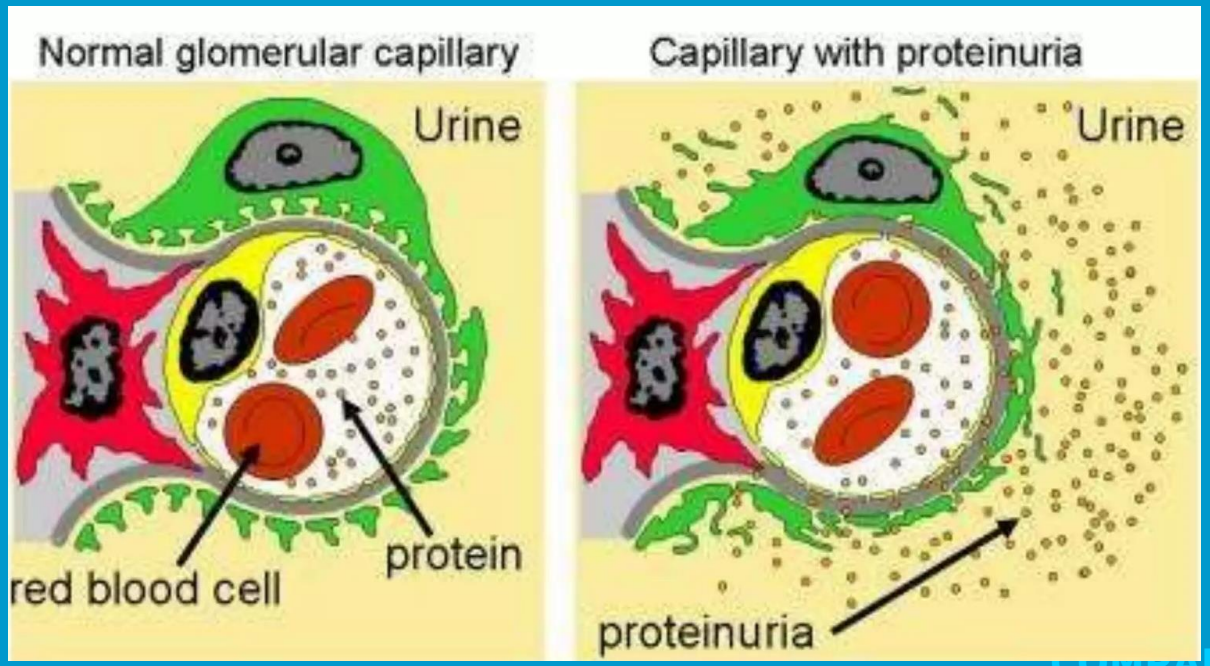
Definition

- Nephrotic Syndrome is an autoimmune process that occurs 1 week after an assault
- characterized by nephrotic range proteinuria an d a triad of clinical findings associated with large urinary losses of protein :
  - hypoalbuminaemia ,
  - edema and
  - hyperlipidemia

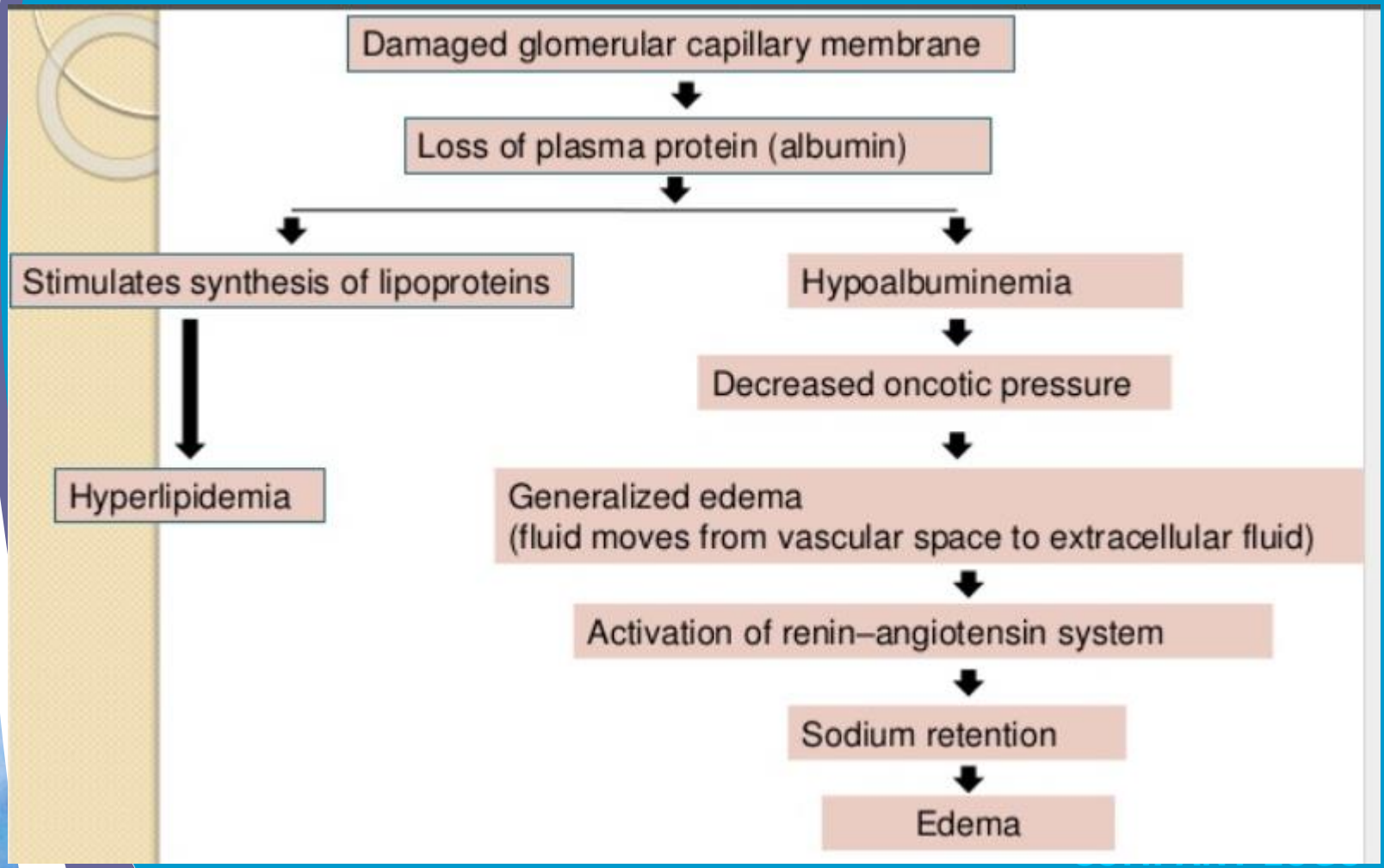
Nephrotic Syndrome: NS





Nephrotic Syndrome: NS

Pathophysiology



Nephrotic Syndrome: NS

Assessment finding

1. Dark, foamy, and frothy urine
2. Decreased urine output
3. Fatigue and lethargy
4. Edema
   - dependent body
   - periorbital edema occurs in the morning
   - abdominal ascites
   - diarrhea, anorexia, and malnutrition

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Nephrotic Syndrome: NS

Diagnostic test finding

1. Proteinuria
2. High urine specific gravity
3. Decreased protein and potassium levels revealed through blood analysis

Nephrotic Syndrome: NS

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Medical management :

1. Protein replacement with a high-protein diet
2. Diuretic and low-sodium diet to alleviate edema
3. Antibiotic for treatment of underlying infections
4. Oral steroid (prednisone) therapy to suppress the autoimmune response and to stimulate vascular reabsorption of edema
5. Angiotensin-converting enzyme (ACE) Inhibitors to help reduce protein loss in urine

Nephrotic Syndrome: NS

Nursing intervention :

1. Provide skin care to edematous skin.
2. Provide warm soaks to decrease periorbital edema.
3. Test the first void of the day for protein.
4. Measure intake and output and daily weight.
5. Anticipate diuresis in 1 to 3 weeks.
   - Maintain bed rest during rapid diuresis
   - Monitor hydration status and vital signs

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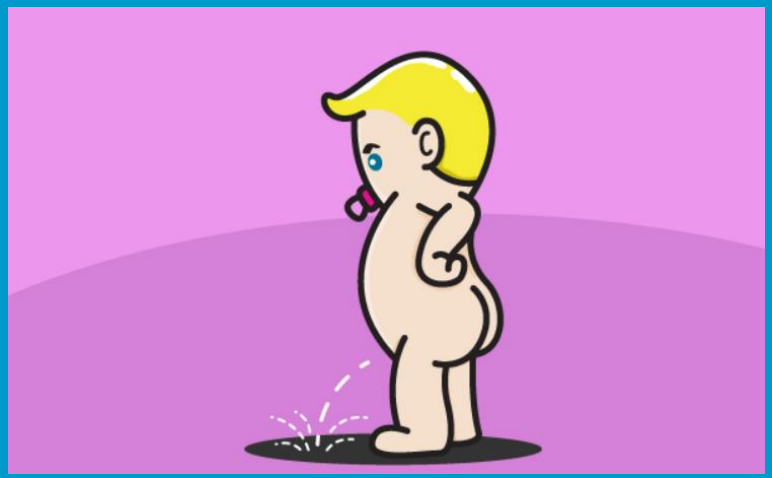
Urinary Tract Infection

Pyelonephritis



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Urinary Tract Infection

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Definition

- A microbial invasion of lower urinary trac infection (bladder, or urethra)

pyelonephritis

Definition

- Inflammation of upper urinary trac infection (kidneys , ureters)

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Urinary Tract Infection

Causes :

- Incomplete bladder emptying
- Irritation by bubble baths
- Poor hygiene
- Vesicoureteric reflux
- Urinary tract obstruction

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Urinary Tract Infection

Assessment finding :

1. Frequent urges to void with pain or urination
2. Abdominal pain, enuresis
3. Lethargy or irritable
4. Cloudy foul-smelling urine
5. Large amounts of bacteria present in clean-catch urine culture

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Urinary Tract Infection

Medical management :

1. Forced fluids to flush infections urinary tract
2. Antibiotics co-trimoxazole or ampicillin to prevent glomerulonephritis

Urinary Tract Infection

Nursing intervention :

1. Administer antibiotics as prescribed.
2. Forced fluids.
3. Teach proper toileting hygiene.
4. Encourage the child to void every 2 hours.
5. Discourage the use of bubble baths.
6. Instruct the parents in ways to prevent UTIs.

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