



Nephrotic syndrome 腎病症候群(英文)

Definition

Nephrotic syndrome is caused by increased permeability of glomeruli, resulting in large amount of urine protein loss (>3.5 g per day and subsequently leading to hypoalbuminemia <3.0 g/dl), edema and hyperlipidemia (mainly cholesterol).

Clinical Features

It is characterized by foamy urine, lower limb or whole body edema, and hyperlipidemia. Some patients have hypertension, hematuria, and impaired renal function. If there is no proper control over the underlying causes, it may progress to renal failure.

Etiologies

It can be classified into primary and secondary causes. Primary nephrotic syndrome is caused by unknown etiology. On the other hand, secondary nephrotic syndrome is caused by systemic diseases such as diabetes mellitus, systemic lupus erythematosus, drugs, metallic toxicity, tumors, or infection. Patients with nephrotic syndrome should see doctors for help and it is necessary to receive renal biopsy for further evaluation.

Treatment:

1. Principles about the treatment of edema:

Avoid excessive exercise and acquire adequate rest. Restrict salt and water intake, and use diuretics for symptomatic relief of edema.

2. Diet:

Proper nutrition with adequate protein intake. Avoid over and under eating.

3. Hyperlipidemia:

Patients with nephrotic syndrome are prone to have hyperlipidemia. Therefore, it is necessary to restrict high fat food intake and use lipid-lowering-drugs when with poor response to diet control.

4. Thrombosis formation:

Because anti-coagulation factors are lost in the urine and frequent diuretic uses can lead to water loss and increase blood viscosity in patients with nephrotic syndrome, these conditions can contribute to thrombosis formation. The most common manifestation is renal vein thrombosis which is characteristic of hematuria, worsening proteinuria or renal function. If without contraindication, anticoagulant agents should be used if renal vein thrombosis is diagnosed.

5. Infection:

Due to significant loss of immunoglobulins from urine, malnutrition, and the use of steroid and immunosuppressant medication, patients with nephrotic syndrome may have poor immune function and higher risk of infection. Once infection occurs, the patient should consult a doctor immediately.

6. Medication:

Steroid and immunosuppressant drug are the main modality of treatment choice. Treatment of choice depends on the etiology of nephrotic syndrome. Consult nephrologist for further decision on treatment plan.