

**PEDIATRIC UROLOGY CASE REPORTS**

ISSN 2148-2969

<http://www.pediatricurologycasereports.com>**An ayurvedic approach to nephrotic syndrome in children****Monika Meshram\***

*Department of Shalyatantra, Mahatma Gandhi Ayurved College Hospital and Research Centre, Salod, Datta Meghe Institute of Medical Sciences, Wardha, Maharashtra, India*

**ABSTRACT**

Nephrotic syndrome causes the kidney to leak big volumes of protein into the urine. This can lead to a range of difficulties including swelling of body tissues and a greater chance of catching an infection. Nephrotic syndrome is a serious chronic kidney disease that affects a large number of children. The autoimmune condition nephrotic syndrome has evolved. T lymphocyte dysregulation and vascular permeability variables have been found to contribute to changes in podocyte function and perm selectivity that result in NS, according to pathogenesis studies. Treatment outcome is determined by steroid response. The majority of them are initially susceptible but later recover or become steroid reliant or resistant. Treatments such as levamisole, cyclophosphamide, cyclosporine, long-acting alternative corticosteroids, and others have been used in combination with different protocols to treat steroid-dependent or resistant NS, with varying effectiveness or greater adverse effects. As a result, an alternative therapy is required. Poly herbal formulations with immunomodulators, nephroprotective, and antioxidant activities may be more effective as a supplement to contemporary therapeutic medications in the treatment of steroid-dependent or resistant instances of NS.

**Key Words:** Nephrotic syndrome, nephroprotective herbs, ayurvedic treatment steroid resistant nephrotic syndrome, steroid-dependent nephrotic syndrome

**✉ Monika Meshram**

*Department of Shalyatantra,  
Mahatma Gandhi Ayurved College Hospital and Research Centre,  
Wardha, Maharashtra, India,*

*Phone: +91- 9764442953*

*E-mail: monikameshram26@gmail.com*

*Received: 19-May-2022, Manuscript No. PUCR -22-*

*64347; Editor assigned: 23-May-2022, PreQC No.*

*PUCR -22-64347 (PQ); Reviewed: 06-Jun -2022,*

*QC No. PUCR -22-64347; Revised: 13-Jun-2022,*

*Manuscript No. PUCR -22-64347 (R); Published: 21-*

*Jun-2022, DOI: 10.14534/j-pucr.20222675573*

**Introduction**

One of the primary nephrotic syndrome, Focal Segmental Glomerulo Sclerosis (FSGS) has a high risk of recurrence (30%-40%) after kidney transplant and is the most common recurrence disease that results in allograft loss. Patients often require immune suppression to complete decrease, yet many patients also relapse

later decrease or are resistant to therapy. The better regimen for “frequent relapses” and “steroid dependent” patients is, however not yet established. Therefore is a need for time to find and establish scientifically a safe regimen for this kind of disease.

Nephrotic syndrome is a pathological condition of glomeruli in the kidney that result from increased permeability of the glomerular basement membrane to plasma protein and is characterized by excessive proteinuria, hypo-albuminemia, hypercholesterolemia and edema. A nephrotic syndrome that accounts for roughly 20% of all End-Stage Kidney Disease (ESRD) causes Disease burden. Nephrotic syndrome is found in every age, irrespective of gender and race. However, prevalence is more in adults in comparison to children with a ratio of 26:1. Males are more prone than females with a ratio of 2:1. Adults with the nephrotic syndrome

had an annual incidence of three new cases per 100,000. All over the world, idiopathic nephrotic syndrome is answerable for around 12% of all causes of Chronic Renal Disease (CKD) and up to 20% of ESRD in kids [1].

### Literature review

The type of childhood nephrotic syndrome will determine how it is treated by health care providers:

- Medication for primary childhood nephrotic syndrome
- Congenital nephrotic syndrome: drugs, surgery to remove one or both kidneys, and transplantation
- Secondary childhood nephrotic syndrome: treat the underlying sickness or disease

### Primary childhood nephrotic syndrome

Idiopathic children's nephrotic syndrome is treated with a variety of drugs that regulate the immune system, eliminate excess fluid, and lower blood pressure.

### Secondary childhood nephrotic syndrome

Diabetes, a condition in which the body is unable to use glucose, is one of the most common disorders that can cause secondary childhood nephrotic syndrome.

- IgA vasculitis, is a disorder in which The body's tiny blood vessels become damaged and leak. hepatitis, a virus-induced inflammation of the liver.
- HIV (human immunodeficiency virus), a virus that causes immune system dysfunction.
- Lupus is an autoimmune illness that happens when the body's immune system assaults itself.
- Malaria, a blood-borne illness spread by mosquitos

### Control the immune system

Corticosteroids are a class of drugs that suppress the immune system's activity, reduce albumin loss in the urine, and reduce oedema. Prednisone or a similar corticosteroid is widely used to treat idiopathic childhood nephrotic syndrome. With daily corticosteroids for 6 weeks and subsequently a slightly lesser dose every other day for 6 weeks, almost 90% of children achieve remission. A phase of remission occurs when the youngster is symptom-free. After the first medication, many children relapse, and doctors

treat them with a shorter course of corticosteroids until the condition goes into remission. Multiple relapses are common in children, although they usually recover without long-term renal impairment. When a child relapses frequently or does not respond to treatment [2].

### Remove extra fluid

A diuretic, a medicine that aids the kidneys in removing excess fluid from the blood, may be prescribed by a doctor. Blood pressure can often be reduced by removing excess fluid.

### Lower blood pressure

High blood pressure can develop in kids with paediatric nephrotic syndrome, and they may need to take supplementary drugs to control it. Angiotensin-converting enzyme inhibitors and angiotensin receptor blockers, two categories of blood pressure drugs, have the added benefit of delaying the course of renal disease. Many children with nephrotic syndrome require two or more drugs to manage their blood pressure. Secondary Nephrotic Syndrome in Children Secondary childhood nephrotic syndrome is treated by treating the underlying cause of the first sickness. A health care provider might, for example, treat children by

- Changing or stopping drugs that are known to induce secondary childhood nephrotic syndrome
- Providing antibiotics for an infection
- Adjusting medicine to treat lupus, HIV, or diabetes

While addressing the underlying cause, the child's kidney function will be improved or restored using the same medications that are used to treat primary childhood nephrotic syndrome. Children's caregivers should ensure that they take all prescribed drugs and adhere to their health care provider's treatment plan.

Congenital Nephrotic Syndrome (CNS) is a condition in which the kidneys are Researchers have discovered that drugs are ineffective in treating congenital nephrotic syndrome and that by the age of two or three years old, the majority of children would require a kidney transplant. A kidney transplant is an operation that replaces a healthy kidney with one from another person.

- Growing hormones to promote growth and help

bones mature.

- Amputation of one or both kidneys to reduce the loss of albumin in the urine
- Dialysis to artificially filter wastes from the blood if the kidneys fail

Infection is one of the possible consequences of childhood nephrotic syndrome. Because the body loses proteins that typically fight, against infection when the kidney is destroyed, a youngster is more likely to get an infection to treat infections, and doctors will advise treatments. To avoid infection, children with childhood nephrotic syndrome should have the pneumococcal vaccine and annual influenza vaccine. Children should also receive age-appropriate vaccinations, while certain live vaccines may be delayed while a child is taking certain drugs, as determined by a health care practitioner [3].

Clots in the blood Thrombosis can obstruct the flow of blood and oxygen via any major artery in the body. Clots are more likely to occur when a child loses proteins through the urine. The health-care provider will look after you

### Prevention

When the reason is idiopathic or congenital, researchers have yet to discover a technique to prevent childhood nephrotic syndrome. Eating, Nutrition, and Diet Children with nephrotic syndrome may need to make dietary changes such as

- Minimising the amount of sodium they consume each day (typically from salt); and
- Reducing the number of liquids they consume each day.
- Consuming a low-saturated-fat, low-cholesterol diet to support minor cholesterol levels before making any modifications to a child's diet, parents or caregivers should consult with the child's health care practitioner [4].

### Nephrotic syndrome in ayurveda

The Ayurvedic classical text texts do not address nephrotic syndrome by term. Albuminuria with hyperlipidemia and oedema may be classified as

prameha (a disease of urinary system with altered composition, frequency and quantity of urine). Urine with albuminuria is concentrated, viscid, or dense. These characteristics are linked to sandrameha, a prameha subtype. The kapha vata dominant tridosha, as well as rasa, mutra, udaka, and ojas, are vitiated in this ailment, according to Ayurveda. Ayurveda's essential concepts of causation and therapy can be applied to any ailment, even if it isn't addressed in an ancient literature. Nephrotic syndrome is defined as an increase in kapha dosha, as well as vitiation of rasadhātu, ojas, Mutra, and udaka, involving mutravaha and udakavaha strotas. Ayurveda is a medical system that employs a variety of treatment methods. The synergistic effects of combining diverse therapy aspects are beneficial to the outcome. Nephrotic syndrome is caused by the blocking of minute bodily channels called strotas in the kidney, according to Ayurveda. Mutravaha strotas are bodily channels that convey urine and are responsible for the passage of liquid into and out of the kidney. If the incoming strotas are blocked, the kidneys are deprived of fluids, resulting in shrinkage, and if the outgoing strotas are obstructed, swelling occurs [5,6].

### Conclusion

Ayurvedic treatment for Nephrotic syndrome has specific herbs which directly affect the kidney cell to improve their function stop the Auto-immune and anti-inflammatory pathology and regenerate the new normal cell.

Punarnava has Specific action on the heart increases the output of blood from the heart. It also increases the circulation of blood to the kidney thus reviving the kidney from many diseases like renal failure, nephrotic syndrome and GFR and others. Gokshuru is the best genito urinary tonic and giving strength to the kidney, urinary bladder, ureter and penis by increases the blood circulation.

Raktchandan is a diuretic and anti-infective also acts as urine alkalizer. Palaash act as urine alkalizer. Gokshuradi guggul is the combination of various herbs for diseased kidneys and they improve the renal function at all levels.

## References

- [1] Llach F. Thromboembolic complications in nephrotic syndrome: coagulation abnormalities, renal vein thrombosis, and other conditions. *Postgraduate medicine.* 1984; 76(6):111-23.
- [2] Palmer SC, Nand K, Strippoli GF. Interventions for minimal change disease in adults with nephrotic syndrome. *Cochrane Database Syst Rev.* 2008; 2008(1):CD001537.
- [3] Singhal R, Brimble KS. Thromboembolic complications in the nephrotic syndrome: pathophysiology and clinical management. *Thromb Res.* 2006; 118(3):397-407.
- [4] Eddy AA, Symons JM. Nephrotic syndrome in childhood. *Lancet.* 2003; 362(9384):629-39.
- [5] Waldman M, Crew RJ, Valeri A, et al. Adult minimal-change disease: clinical characteristics, treatment, and outcomes. *Clin J Am Soc Nephrol.* 2007; 2(3):445-53.
- [6] Fine JL, Grzybicki DM, Silowash R, et al. Evaluation of whole slide image immunohistochemistry interpretation in challenging prostate needle biopsies. *Hum Pathol.* 2008; 39(4):564-72.