

Content available at: <https://www.ipinnovative.com/open-access-journals>

IP International Journal of Medical Paediatrics and Oncology

Journal homepage: <https://www.ijmpo.com/>

## Original Research Article

## Effect of an information booklet on nephrotic syndrome regarding knowledge and attitude of caregivers towards care of children with nephrotic syndrome in tertiary level centre of Bihar

Manisha Kumari<sup>1,\*</sup>, Amit Kumar<sup>1</sup>, Anand Kumar Gupta<sup>1</sup>, Jayant Prakash<sup>1</sup><sup>1</sup>Dept. of Paediatrics, Indira Gandhi Institute of Medical Science, Patna, Bihar, India

## ARTICLE INFO

## Article history:

Received 01-10-2022

Accepted 19-12-2022

Available online 11-01-2023

## Keywords:

Nephrotic syndrome

Awareness

Knowledge

Attitude

Information booklet

## ABSTRACT

**Background:** Nephrotic syndrome, the most common renal disease in pediatric age group, is responsible for frequent hospitalization of children. As parents are the most responsible person for care of their children, it is necessary for them to be aware and have knowledge regarding strict adherence to therapeutic regimen, about the disease recurrence and measures for adequate care of their child's health. An information booklet on nephrotic syndrome can help the caregivers in understanding the disease process and in maintaining their child's health.

**Aim:** Effect of an information booklet on nephrotic syndrome regarding knowledge and attitude of caregivers towards care of children with nephrotic syndrome in tertiary level centre of Bihar

**Materials and Methods:** This cross sectional study was carried out on admitted patients in Indira Gandhi Institute of Medical Science, Bihar from January 2021 to December 2021. An information booklet on nephrotic syndrome was given to caregivers of children diagnosed with nephrotic syndrome. About 50 parents/caregivers were interviewed with a preformed structured questionnaire before and after reading the information booklet.

**Results:** Of 50 respondents, an overall improvement in knowledge increased from 18% in pretest to 80% in post test. This result proves that the information booklet helped in improving the knowledge of caregivers towards care of their children.

**Conclusions:** The present study concluded that there was significant improvement in knowledge of caregivers after administering information booklet.

This is an Open Access (OA) journal, and articles are distributed under the terms of the [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License](https://creativecommons.org/licenses/by-nc-sa/4.0/), which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: [reprint@ipinnovative.com](mailto:reprint@ipinnovative.com)

## 1. Introduction

One of the fatal problems affecting children's health are the renal diseases.<sup>1,2</sup> Nephrotic syndrome, being the most common renal diseases among children, damages glomeruli.<sup>3,4</sup> It is also one of the most common reason for recurrent hospitalization of children. As nephrotic syndrome is a curable disease information regarding the same among parents and caregivers can not only reduce the hospitalization rate of children but also improve the

overall health and prognosis among children suffering from nephrotic syndrome. Nephrotic syndrome, as we know it, is a combination of proteinuria, hypoalbuminemia, hyperlipidemia, and edema.<sup>5</sup>

Nephrotic syndrome is characterised by nephrotic range proteinuria (proteinuria >3.5 g/24 hour or a urine protein:creatinine ratio > 2), edema, hypoalbuminemia (serum albumin <2.5 g/dL) and hypercholesterolemia (cholesterol >200mg/dL).<sup>6,7</sup>

More than 80% cases of childhood nephrotic syndrome is Minimal Change Nephrotic Syndrome. Minimal change

\* Corresponding author.

E-mail address: [manishakumari.mk15@gmail.com](mailto:manishakumari.mk15@gmail.com) (M. Kumari).

nephrotic syndrome is the most common cause of steroid sensitive nephrotic syndrome which has a satisfactory long term outcome.<sup>3</sup> More than 95% of children with minimal change disease respond to corticosteroid therapy.<sup>7</sup>

Corticosteroids remain the mainstay for treatment of nephrotic syndrome. Those children responding to corticosteroid therapy are steroid-sensitive group that has a favourable and good long term prognosis whereas those dependent or resistant to corticosteroid therapy are steroid resistant group that has poor outcomes despite immunosuppression therapy.<sup>8</sup> 85-90% are steroid sensitive, approx 50% show frequent relapses or steroid dependence, and 3-10% are the late steroid resistance.<sup>9-11</sup> Long term corticosteroid therapy itself has many deleterious effect on health of children. So, parents should have the knowledge about the strict adherence to the corticosteroid therapy.

In India, the incidence of minimal change nephrotic syndrome among children is high. An Indian journal of nephrology article shows that its prevalence varies within India. It is approximately 33% in Haryana and <12% in Vellore.<sup>12</sup> It is known to affect 1-3 / 1 lakh children under 16 years of age.<sup>7</sup>

As minimal change nephrotic syndrome is the most common acute and curable renal disease. Educating the parents and the caregivers regarding the disease process, its symptoms, management, and care at home is of utmost importance for the treatment and better prognosis of the disease among children with nephrotic syndrome.

## 2. Objectives

1. To spread awareness about nephrotic syndrome.
2. To assess the knowledge and attitude of caregivers on nephrotic syndrome.

## 3. Materials and Methods

This cross-sectional study was carried out on admitted patients in Indira Gandhi Institute of Medical Science and hospital, Bihar. The caregivers of children with new onset nephrotic syndrome were identified and addressed about the study, its process and its purpose by the investigators. A total of 50 caregivers of admitted patients diagnosed with new onset nephrotic syndrome were included in the study. The investigator conducted the pretest after briefing about the procedure by providing a preformed structured questionnaire. An information booklet on nephrotic syndrome published in Hindi and English was given to the caregivers. 2 days duration was given to read the information booklet. After reading and clarification of the information booklet the investigator conducted post test. The validated preformed structured questionnaire published in Hindi and English, included demographic profile of the patient, function of kidney, meaning of nephrotic syndrome, signs and symptoms giving clue to the disease,

urine tests done at home, medical management, supportive management, need of treatment adherence, prevention of complications due to disease and due to treatment and regular follow up.

### 3.1. Inclusion criteria

1. Children 1-12 years diagnosed with new onset nephrotic syndrome admitted in pediatric ward.
2. Parents/Caregivers willing to participate.

### 3.2. Exclusion criteria

1. Children who were shifted to PICU.
2. Caregivers not understanding Hindi or English language.

## 4. Results and Discussion

The present study consists of 50 parents/caregivers of children of nephrotic syndrome admitted to our pediatric ward, IGIMS, Bihar over a period of 1 year. Among the 50 caregivers who were included in the study, 56% of them had male child. 52% of them were of 5-10 years age group. 56% of them had edema of duration < 1 week. Demographic profile of the patient is shown in Table 1.

**Table 1:** Demographic profile of patients with nephrotic syndrome

Variables	Number	Percentage
<b>Age in years</b>		
1-5	18	36
5-10	26	52
>10	6	12
<b>Sex</b>		
Male	28	56
Female	22	44
<b>Religion</b>		
Hindu	41	82
Muslim	9	18
<b>Duration of edema in weeks</b>		
<1	28	56
1-2	14	28
>2	8	16

**Table 2:** Knowledge score of sample

Test	Frequency	Percentage
Pre-test	9	18%
Post-test	40	80%

Knowledge of caregivers of children with new onset nephrotic syndrome with respect to various aspects of nephrotic syndrome in pretest was 18% which increased to 80% in post test after reading the information booklet as shown in Table 2. Result of our study was found to be concordant with the study by Chhameshwari Verma.<sup>13</sup>

Overall, the information booklet improved the better understanding of the caregivers regarding the disease process, its management and in improving the health care of children. There was no association of demographic variables with the gain in knowledge of the caregivers. As this study was conducted in small group of population, furthermore awareness programme are required for betterment of children with nephrotic syndrome.

## 5. Conclusion

As nephrotic syndrome is the most common pediatric renal disease associated with frequent hospitalization. Information about the care of children with nephrotic syndrome is of utmost important for remission of the disease and to prevent relapses and serious complications leading to fatality. During our study, it was observed that the caregivers were keen to know about the disease, edema, diet, urine testing, medication, warning signs and recurrence of the disease and the complications associated with it. Our study concluded that there was marked increase in awareness and knowledge of caregivers regarding nephrotic syndrome after reading the information booklet. Caregivers also shared their experience about the benefit of providing such type of information booklet on the disease and care for the same. This study highlighted the need of spread of awareness about care of children with nephrotic syndrome in IPD as well as OPD patients.

## 6. Conflicts of Interest

All contributing authors declare no conflicts of interest

## 7. Source of Funding

None

## References

1. Smeltzer SC, Bare BG. Brunner and Suddharth's textbook of medical surgical nursing. 7th ed. Philadelphia: Lippincott publications; 2000.
2. Minimal change nephrotic syndrome. Available from: <http://www.medterms.com/script/main/art.asp?articlekey24095>.
3. Ghai OP, Gupta P, Paul VK. Essential pediatrics. 6th ed. New Delhi: CBS Publication; 2004.
4. Hockenberry MJ. Wong's Essentials of pediatric nursing. vol. 8. Noida: Elsevier Publication; 2009.

5. Kumar K, Sharma S, Gupta N. Prevalence of Different Clinical Variants of Nephrotic Syndrome in Children 1-18 Years of Age in Tertiary Care Hospital of North India. *Int J Sci Stud*. 2020;7(10):121–4.
6. Downie ML, Gallibois C, Parekh RS, Noone DG. Nephrotic syndrome in infants and children: pathophysiology and management. *Paediatr Int Child Health*. 2017;37(4):248–58. doi:10.1080/20469047.2017.1374003.
7. Kliegman RM, Stanton BF, Geme JS, Schor NF. Nelson textbook of Pediatrics. vol. 3. 1st ed. South Asia: Elsevier; p. 2521–6.
8. Ali U, Bagga A, Banerjee S, Kanitkar M, Phadke KD, Senguttuvan P, et al. Management of steroid sensitive nephrotic syndrome: Revised guidelines. *Indian Pediatr*. 2008;45(3):203–14.
9. Sinha A, Saha A, Kumar M, Sharma S, Afzal K, Mehta A, et al. Extending initial prednisolone treatment in a randomized control trial from 3-6 months did not significantly influence the course of illness in children with steroid sensitive nephrotic syndrome. *Kidney Int*. 2015;87(1):217–24. doi:10.1038/ki.2014.240.
10. Yoshikawa N, Nakanishi K, Sako M, Oba MS, Mori R, Ota E, et al. A multicenter randomized trial indicates initial prednisolone treatment for childhood nephrotic syndrome for two months is not inferior to six-month treatment. *Kidney Int*. 2015;87(1):225–32. doi:10.1038/ki.2014.260.
11. Webb NJA, Woolley RL, Lambe T, Frew E, Brettell EA, Barsoum EN, et al. Long term tapering versus standard prednisolone treatment for first episode of childhood nephrotic syndrome: Phase III randomized control trial and economic evaluation. *BMJ*. 2019;365:11800. doi:10.1136/bmj.11800.
12. Malik A, George G. Spectrum of childhood nephrotic syndrome in India. *Ind J Nephrol*. 2008;19(3):87–110.
13. Verma C. Effect of An Information Booklet on Knowledge of Caregivers Regarding Care of Children with Nephrotic syndrome in Selected Hospitals of Mumbai. *Int J Pediatr Nurs*. 2019;5(2):53–5.

## Author biography

**Manisha Kumari**, Senior Resident

**Amit Kumar**, Assistant Professor

**Anand Kumar Gupta**, Associate Professor

**Jayant Prakash**, Professor

**Cite this article:** Kumari M, Kumar A, Gupta AK, Prakash J. Effect of an information booklet on nephrotic syndrome regarding knowledge and attitude of caregivers towards care of children with nephrotic syndrome in tertiary level centre of Bihar. *IP Int J Med Paediatr Oncol* 2022;8(4):157-159.