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EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON THE KNOWLEDGE OF PARENTS REGARDING CARE OF CHILDREN WITH SICKLE CELL DISEASE AT TERTIARY CARE HOSPITAL OF CENTRAL INDIA.

Community Medicine

Dr Rushali Rajan Lilare — Assistant Professor, Department of Community Medicine, GMC, Nagpur, Maharashtra, India

Dr Uday W Narlawar — Professor & Head, Department of Community Medicine, GMC, Nagpur, Maharashtra, India

Rajat Lillore* — Ex Bsc Nursing student, Nagpur, Maharashtra, India *Corresponding Author

ABSTRACT

Sickle cell disease is most common genetic disease and has been recognized as a major public health problem by international agencies such as WHO and United nations educational, scientific and culture organization (UNESCO). Children with sickle cell disease require more frequent hospital care and younger children are more vulnerable to morbidity.

Aim & Objectives: 1) To assess the knowledge of parents regarding care of children with sickle cell disease.2)To assess the effectiveness of planed teaching programme on knowledge of parents regarding care of children with sickle cell disease.

Material & Methodology: The present study was designed to be an interventional type by selecting 30 parents randomly by convenient method sampling from the pediatric ward of the Government Medical College where children with sickle cell disease were admitted during the month of February- March 2015. A structured questionnaire was used to collect the pretest and post test data on the knowledge of parents regarding care of sickle cell after a planned teaching programme and data analyzed using SPSS software version 19.

Results: Out of total subjects 30% of each parents were in the age between 26-30 and >35 years. About 56.67 % were females and 43.33 % were males. Majority of the subject 30% each had completed their secondary and higher secondary education with Maximum subject 50% had monthly family income 4001-5000Rs.About 66.67% of subjects were Hindu. Majority of subject 40% were labourer followed by 36.67% were having private job. Maximum subjects 46.66% belongs to joint family. Mean knowledge score in pretest was 10.73 ± 3.32 and after the planned teaching mean knowledge score was 16.9± 2.59, this difference was found to be statistically significant.

Conclusion: In the present study the planned teaching programme significantly helps in the improvement of the knowledge score (68.02%) of parents regarding care of children with sickle cell disease.

KEYWORDS

Sickle cell disease, planned teaching programme

Introduction:

According to the World Health Organization(WHO), anemia is defined as hemoglobin (Hb) levels <12.0 g/dL in women and <13.0 g/dL in men. Anemia is present when the hemoglobin level is more than two standard deviations below the mean for the child's age and sex. Pregnant women and children are particularly vulnerable. Sickle cell anemia is an autosomal recessive disease that results from the substitution of valine for glutamic acid at position 6 of the beta-globin gene. Patients who are homozygous for the HbS gene have sickle cell disease. Patients who are heterozygous for the HbS gene have sickle trait. The gene frequency for sickle cell anemia in India is 4.3%,but the disease is reported chiefly from Orissa, Maharashtra, Madhya Pradesh and Jharkand.[1] Patients with sickle cell anemia presents with serious and varied manifestations. Pain is the most common presentation of vaso-occlusive crisis while acute chest syndrome, sequestration crises, aplastic crises and various infections are another form of presentation. In the management of such children hydration and analgesia are the mainstays in a pain crisis. Blood transfusion is useful in patients in aplastic crisis and acute sequestration crisis. Oxygen supplementation is of benefit if the patient has hypoxia. Intubation and mechanical ventilation may be required in children in whom cerebrovascular accidents have occurred, or with acute chest syndrome. In the preventive care all children require prophylaxis with, at least until 5 year of age and should receive immunizations with pneumococcal, meningococcal and *Haemophilus influenzae* B vaccines. Parents need to learn how to identify complications and be informed for necessity and indications for admission. Genetic counselling and testing should be offered to the family. In India, HbS was first detected in Veddoid tribe in Nilgiri hills of Tamilnadu, in 1952 by Lehman and Cutbush.[2] The incidence varies from 5% to 34% and it is mainly restricted to the tribal population.[3] In India, it is the second most common haemoglobinopathy, next to Thalassemia.[4] According to State Health Society; there are about 30 lakhs sickle cell carrier and 1.5 lakh sickle cell disease sufferers in Maharashtra. Out of these, about 10.5 lakh sickle cell carriers and 70 thousand sickle cell disease sufferers belong to the tribal population.[5,6]

Aim & Objectives: 1) To assess the knowledge of parents regarding care of children with sickle cell disease.2)To assess the effectiveness of planed teaching programme on knowledge of parents regarding care of children with sickle cell disease.

Material & Methodology: The present study was conducted at Government Medical College, Nagpur among the parents of children with sickle cell disease who were admitted in the pediatrics ward in January 2015. The present study was an interventional type of study with the sample size of 30 as randomly selected by convenient method sampling. A structured questionnaire was designed to collect pre test & post test data. Pretest was carried out on 24th Feb 2015 from 11am to 1pm and post test on 3rd march 2015 after planned teaching programme which was conducted by the final year BSC nursing student. The session was of one hour followed by post test. Data collected and analyzed using SPSS version 19. Institutional ethical clearance was obtained.

Results:

- In the present study there were 30 parents of children with sickle cell disease, these children were admitted in the pediatrics ward of Government Medical College, Nagpur. Maximum 30% each were in the age between 26-30 years and >35years. About 57% & 43% were male and female respectively.majority 30%of subjects were educated upto secondary and higher secondary class.About 50% of the subjects had income between 4001-5000. Maximum 66.67 subjects were Hindu. Majority 40% were laborer and 46.66% had joint family.(Table-1)
- Mean knowledge score in pre test was 10.73 ± 3.32 and after the planned teaching it was 16.9± 2.59, this difference was to be statistically highly significant.(p-value is 0.0001)(Fig 1)

Table 1.Distribution of study subject according to socio demographic characteristics. (N= 30)

Age Group	Number	(%)
20-25	4	13.33
26-30	9	30
31-35	8	26.67
> 35	9	30
Gender		
Male	13	43.33
Female	17	56.67

Education		
Illiterate	3	10
Primary	8	26.67
Secondary	9	30
High Secondary	9	30
Graduate	1	3.33
Income (In Rs)		
2000-3000	5	16.7
3001-4000	5	16.7
4001-5000	15	50
>5000	5	16.7
Religion		
Hindu	20	66.67
Muslim	3	10
Christian	3	10
Other	4	13.33
Occupation		
Laborer	12	40
Private job	11	36.67
Govt. Job	3	10
Other	4	13.33
Family Type		
Nuclear	12	40
Joint	14	46.66
Extended	4	13.33

Figure 1. Pre test and Post test score after planned teaching

Discussion:

In the present study," Effectiveness of planned teaching programme on the knowledge of parents regarding care of children with sickle cell disease at tertiary care hospital of Central India" there were total 30 parents. About 30% each belongs to the age between 26-30and > 35 years 26.67% and 13.33% belong to age between 31-35 and 20-25 years respectively. Majority 56.67 % were females. Majority of the subject 30% each had completed their secondary and higher secondary education,10% were illiterate and only 3.33% had completed their graduation level. Majority of subject 40% are laborer. Maximum subjects 46.66% belongs to joint family.

In the study by **Purnima Yadav et al** 100 parents were enrolled. Maximum 66% parents had education between 6th to 10th standard followed by 13% parents who had education up to 12th standard. Only 6 parents were uneducated and 7 were graduate.[7]

In our study the mean knowledge score in pretest was 10.73 ± 3.32. Mean knowledge score after the planned teaching was 16.9± 2.59, this difference was to be statistically highly significant. Knowledge score was improve by 68.02%. p-value is 0.0001,which is > 0.05 thus it is conclude that planned teaching regarding care of children with sickle cell disease.

Purnima Yadav et al found that in view to the questions about awareness of sickle cell anaemia 65% were aware and 35% were unaware. Out of those who were aware of sickle cell only 37% knew exactly what is sickle cell anemia and 63% responded wrongly. After providing education, post test scores regarding the knowledge improved significantly. [7]

In the study by Asnani MR et al there was evidence that educational programs improved patient knowledge, standardised mean difference 0.87 points, which improved further when a trial. Caregiver knowledge, reported in a single trial of 20 families, also showed an improvement. The effect on patient knowledge was sustained at longer follow-up periods, whereas the effect on caregiver knowledge was not sustained.[8]

Conclusion: In our study pre test the mean knowledge score was 10.73 which after the planned teaching was 16.9. Therefore teaching the parents about sickle cell has significantly shows the improvement of their knowledge.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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