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Original Research Article

Assessment of common infections related to steroidal treatment among children in selected hospitals, in view to develop an information booklet

Priya Vijay Bhorge[1,*]

[1] *Dept. of Child Health Nursing, MKSSS's SN College of Nursing, Nagpur, Maharashtra, India*

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ABSTRACT

Corticosteroids are potent medications that have been extensively used to treat many inflammatory and autoimmune conditions. They have been used in a variety of life-threatening and disabling conditions and have saved or improved many lives. However, they cause numerous side effects on various body systems. Corticosteroids inhibit the immune system and increase susceptibility to infections. A regular dose of corticosteroids for 1-2 weeks can make the patient prone to infection.Therefore the study was conducted to assess the common infections related to steroidal treatment which are commonly associated with long-term use of these agents and provide practical recommendations for patient monitoring and the prevention and management of these infections. For this study, quantitative research approach was considered appropriate. A research design was Non-experimental exploratory design. This study was conducted in selected hospitals of city. The samples selected was Children on steroidal treatment admitted in hospitals who meet the inclusive and exclusive criteria. Sample size was 60 and non- probability purposive sampling was used. Self-structured infection assessment checklist format was found to be the most appropriate instrument to assess common infections related to steroidal treatment among children. Descriptive and inferential statistics used for data analysis Majority 38.3% of them had respiratory tract infection followed by 25% of them had skin infection, 15% of the children had gastrointestinal tract infection and 1.7% of them had Urinary tract infection. Duration of steroidal treatment and education of the parents were found to have significant association with gastrointestinal tract infection among children. Developmental stage of child and duration of steroidal treatment were found to have significant association with respiratory tract infection among children. None of the demographic variable was found to have significant association with urinary tract infection among children. Developmental stage of child and Education of the parents were found to have significant association with gastrointestinal tract infection among children.

1. Introduction

The immune system is smart and has the ability to learn the "face" of a germ and remember it. Once your immune system has successfully battled it, most people are less susceptible to recurring infections caused by that germ. An immunodeficiency happens when your body lacks the ability to produce antibodies which attach to germs and destroy them.[1] Secondary Immunodeficiencies result from various conditions including cancer therapies, bone marrow transplantation and immune-modulating drugs used to treat a variety of autoimmune conditions. People with immunodeficiency get the same kinds of infections other people get ear infections, sinusitis and pneumonia. The difference is their infections occur more frequently, are often more severe, and have a greater risk of complications.[2]

Corticosteroids are potent drugs used in management of various inflammatory and autoimmune disorders.

* *Corresponding author.*
E-mail address: priyabhorge28@gmail.com (P. V. Bhorge).

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Corticosteroids inhibit the immune system and increase susceptibility to infections including those associated with live vaccines. Infection can spread rapidly, may have an atypical presentation and the severity may be masked. A regular dose of corticosteroids for 1-2 weeks can make the patient prone to infection. [1]

2. Need of the Study

As per researchers view, in paediatric units there are patients with various steroid treatment comes repeatedly with various types of infection and after going through researches, researcher being child health nurse is motivated to assess common infections among children on steroidal treatment and provide education through information booklet regarding common infections in and its care.

Similar study was conducted on Infections in children with Nephrotic syndrome by Department of Paediatric Medicine, National Institute of Child Health, Karachi. All children with nephrotic syndrome who had various infections during the study period were evaluated for the activity of disease and type of infections. Out of 62 children with nephrotic syndrome having infections, 45 (72.58%) were boys and 17 (27.42%) girls in a ratio of 2.5:1. Out of them 53 (85.45%) were known nephrotic and 36 (58%) of them were on steroid therapy. Nine were new cases and had not received steroids. A total of 74 episodes of infections were observed in 62 children. Acute respiratory infections (ARI) and skin infections were the most common (29.27% and 27.02% respectively) followed by diarrhoea (13.51%), UTI (12.5%) and peritonitis (10.81%). Two patients had pulmonary tuberculosis and 3 patients had more than one infection (cellulitis, peritonitis and pneumonia). All children with cellulitis and peritonitis were in active disease, whereas more than 80% of patients with ARI, diarrhoea and UTI were having either relapse or had recent onset of disease. According to study ARI, cellulitis and diarrhoea were most common infections in nephrotic syndrome followed by UTI and peritonitis. [3]

2.1. Problem statement

Assessment of common infections related to steroidal treatment among children in selected hospitals, in view to develop an information booklet

3. Objectives of the Study

1. To assess common infections related to steroidal treatment among children.
2. To find association between selected demographic variables and study findings.

4. Materials and Methods

4.1. Research approach

Quantitative research approach was considered appropriate

4.2. Research design

Research design selected for the present study was Non-experimental exploratory design

4.3. Research setting

The study was conducted in selected hospitals of city.

4.4. Sample

Children on steroidal treatment admitted in selected hospitals and who meet the inclusive and exclusive criteria.

4.5. Sampling size

The sample size for the present study was 60 children on steroidal treatment.

4.6. Sampling technique

Non- probability purposive sampling was used.

4.7. Tool

Self-structured infection assessment checklist format, it was found to be the most appropriate instrument to assess common infections related to steroidal treatment among children.

4.8. Description of tool

The tool used for the present study comprised of two sections.

4.8.1. Section I: Demographic data

This section consists of 6 items for obtaining information about selected demographic factors such as developmental stage of child, Gender of child, duration of steroidal treatment, number of times of previous hospitalization and education of the parents.

4.8.2. Section II: Self structured infection assessment check list format

This section deals with:

1. Gastrointestinal tract infection
2. Respiratory tract infection
3. Urinary tract infection
4. Skin infection.

4.9. Findings

4.9.1. Distribution of samples (children) based on demographic data.

According to developmental stage 51.7% of samples were Schooler and 48.3% of them were Pre-schooler.

According to gender 66.7% of samples belong to male gender and 33.3 % belongs to female gender.

According to duration of steroidal treatment 41.7% of respondents were taking steroidal treatment for 4-6 months, 36.7% of the respondents were taking treatment for 1-2 months and 21.7% of the respondents were taking treatment for 2-4 months.

According to number of times of previous hospitalisation 66.7% of samples are having 1-time previous hospitalization and 15% of the samples were having more than 3 times of previous hospitalization, 11.7 % of the samples were having 3 times previous hospitalization and 6.7% of the respondents were having 2 times previous hospitalization.

According to education of parents 33.3 % of parents had secondary education, 23.3% of the parents had primary education, 20% of the parents had non- formal education, 11.7% of the parents had higher secondary education and 11.7 % of the parents were graduated.

4.9.2. Analysis of data related to common infections related to steroidal treatment among children.

Majority 38.3% of them had respiratory tract infection followed by 21.7% of them had skin infection, 13.3% of the children had gastrointestinal tract infection and 1.7% of them had Urinary tract infection.

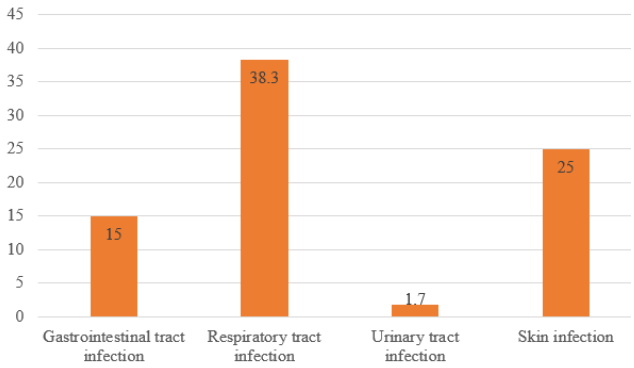

Fig. 1: Common infections related to steroidal treatment

4.9.3. Analysis of data related to association between selected demographic variables and study findings

Duration of steroidal treatment and education of the parents were found to have significant association with gastrointestinal tract infection among children. Developmental stage of child and duration of steroidal treatment were found to have significant association with respiratory tract infection among children. None of the demographic variable was found to have significant association with urinary tract infection among children. Developmental stage of child and Education of the parents were found to have significant association with skin infection among children.

5. Limitations

1. The study was carried out on children having steroidal treatment more than 1 month and less than 6 months.
2. Children between 3 and 12 years of age were selected for the study.
3. The study was limited for short period.

6. Recommendations

On the basis of the findings of the study following recommendations have been made for further study.

1. Similar study can be conducted on large subject to generalize the result.
2. A study can be conducted to assess problems in various age groups.
3. The same study can be conducted for a longer period to get more reliable result.
4. The study can be done in various settings.

7. Conclusion

Most common infection due to steroidal treatment among children is respiratory tract infection. Majority 38.3% children had respiratory tract infection followed by 21.7% of them had skin infection, 13.3% of the children had gastrointestinal tract infection and 1.7% of them had Urinary tract infection. Relationship between presence of common infections and system is significant.

8. Conflict of Interest

The authors declare that there are no conflicts of interest in this paper.

9. Source of Funding

None.

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Author biography

Priya Vijay Bhorge, Lecturer

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