

INTERNATIONAL JOURNAL OF PEDIATRIC NURSING

(PEER-REVIEWED AND REFEREED JOURNAL)

VOLUME 10, NUMBER 1 JANUARY – APRIL 2024



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Gender Based Level of Self-Esteem among Adolescents

Rajathi Sakthivel

How to cite this article:

Rajathi Sakthivel. Gender Based Level of Self-Esteem among Adolescents. Int J Pediatr Nurs. 2024;10(1):7–11.

Abstract

Background: Teens undergo major changes in their lives and their self-esteem can often become fragile. Teenagers' self-esteem is often affected by the physical and hormonal changes they experience, especially during puberty. The study aimed to assess the level of self-esteem and identify gender based differences among adolescents.

Materials and Methods: The descriptive study design was adopted. Through a non-randomized convenient sampling technique, one hundred twenty students in the age group of 15-18 years were enrolled. The data were collected through the Rosenberg Self-Esteem Scale through the interview method. The collected data were analyzed by descriptive and inferential statistics.

Results: Out of 120 adolescents, 32% had low self-esteem and 14% had high self-esteem. Overall, the level of self-esteem was low among males (63%) as compared to female (37%) adolescents. The chi-square value depicts that age, sex, education, and residence had a significant association with low and high self-esteem.

Conclusion: Adolescents with low self-esteem, irrespective of gender face lot of difficulty in managing obstacles and preventing issues. Thus, there is an urgent need for a holistic approach and assertiveness training is required to strengthen emotional and psycho-social development and aid in achieving whole adolescent health.

Keywords: Self-esteem; Adolescents; Gender based differences; Holistic approach; and Assertiveness.

INTRODUCTION

Self-esteem is the way; individuals think and feel about themselves and how well they do

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Received on: 06.12.2023

Accepted on: 01.02.2024

things that are important to them. Self-esteem comes from different sources for children at different stages of development. The development of self-esteem in young children is heavily influenced by parental attitudes and behavior.¹ Currently, school age youngsters spend more time with their friends than they spend doing homework, watching television, or playing alone. In addition, the amount of time in which they interact with their parents is greatly reduced from when they were younger. At this stage, social acceptance by a child's peer group plays a major role in developing and maintaining self-esteem.² Peer acceptance and relationships are important to children's social and emotional development and their development of self-esteem,

self-confidence, and self-acceptance. It is the way that individuals perceive themselves and their self-value that allows for self-exploration, emotional growth, and moral development.³

Infants start to build self-esteem as soon as they are born. Their self-esteem is first built by having their basic needs met, including the need for love, comfort, and closeness. They gradually learn that they are loved as the people who care for them consistently treat them gently, and makes comfort them when they cry, and show them attention. How their parents or primary caregivers treat them slowly leads to the later development of self-esteem.⁴ They are usually extremely concerned about how they look and how they are perceived and accepted by their peers. Teens who set goals in their lives have higher self-esteem than those who do not. High self-esteem is also directly related to teens who have a very supportive family.⁵

Need for the study

Body image is a major component in teenagers' self-esteem, teens who have high self-esteem like the way they look and accept themselves the way they are. Teens with low self-esteem usually have a poor body image and think they are too fat, not pretty enough, or not in a masculine nature.⁶ The physical and emotional changes that take place in the adolescence stage, especially early adolescence, present new challenges to a child's self-esteem. Boys whose growth spurt comes late compare themselves with peers who have matured early and seem more athletic, masculine, and confident. In contrast, early physical maturation can be embarrassing for girls, who may feel gawky and self-conscious in their newly developed bodies. Both boys and girls expend inordinate amounts of time and energy on personal grooming, spending long periods in private rooms trying to achieve success in their lives. Parents can enhance teenagers' self-esteem by asking for their help or advice and listening to their opinions.⁷ Hence, the researcher had an insight to identify the level and gender differences in self-esteem among middle adolescents.

Statement of problem

Assess the Gender Based Level of Self-Esteem among adolescents in selected schools in Chennai

Objectives

1. To assess the level of self-esteem among

adolescents.

2. To compare gender based levels of self-esteem among adolescents.
3. To associate the level of self-esteem with selected demographic variables of adolescents.

MATERIALS & METHODS

The univariable, descriptive cross-sectional research design was adopted for this study. Through a non-randomized convenient technique, a total of 120 adolescents in the age group of 15-18 years were enrolled in selected schools, in Chennai. The data were collected through the Rosenberg Self-Esteem (RSE) Scale through the interview method.

Tools Description

The 10 item RSE scale was designed to measure the self-esteem of adolescents. However, a 4 point Likert scale was used, Low self-esteem responses were "disagree" or "strongly disagree" on items 1, 3, 4, 7, 10, and "strongly agree" or "agree" on items 2, 5, 6, 8, 9. The scale can also be scored by individual 4 point items after reverse scoring the negatively worded items. Higher scores indicate higher self-esteem. The RSE scale coefficient of reproducibility of .92, indicating excellent internal consistency. Test retest reliability over a period of 2 weeks reveals correlations of .85 and .88, indicating excellent stability.

Ethical Considerations

The study was approved by the Hindu Mission College of Nursing, Chennai. The necessary permission from the school was obtained, before data collection, written consent was obtained from the guardian of the samples and assent was obtained from the samples. Individual anonymity was maintained throughout the study.

Data Collection Procedure

After formal permission was obtained from the school, the self-administered questionnaire was given to the students and they were informed about the importance of responding very carefully to each statement of the questionnaire. The data were collected approximately 20-25 students per day. The approximate time taken to complete the questionnaire was 15-20 minutes. The collected data were analyzed by descriptive and inferential statistics.

RESULTS

Table 1: Frequency and percentage distribution of adolescents
(N=120)

Demographic Variables	Number	Percentage
Age (Years)		
14-15	39	32.5
16-17	40	33.3
18-19	41	34.2
Sex		
Male	58	48.3
Female	62	51.7
Education		
9th	21	17.5
10th	33	27.5
11th	38	31.7
12th	28	23.3
Occupation - Father		
Daily wages	36	30.0
Agriculture	52	43.3
Private	18	15.0
Business	14	11.7
Occupation - Mother		
Housewife	35	29.2
Agriculture	50	41.7
Private	25	20.8
Business	10	8.3
Family Income		
Below 10,000	34	28.3
10,001-25,000	39	32.5
25,001-50,000	44	36.7
More than 50,000	3	2.5
Residence		
Urban	48	40.0
Rural	30	25.0
Semi Urban	42	35.0
Religion		
Hindu	78	65.0
Christian	30	25.0
Muslim	12	10.0

Regarding Table 1 of demographic variables, among 120 adolescents, all the age groups were equally distributed an average of 32-34%, and nearly 51% were females and the remaining 48% were male. Concerning education, 32% were studying in 11th standard, 43% of parents' occupational status was agriculture, 37% had in baseline salary of Rs 25,000-50,000 and nearly 40% stayed in an urban

area with a maximum of 65% belonging to Hindu religion.

Table 2: Assess the level of self-esteem of adolescents
(N=120)

Level of Self-esteem	No	Percentage
Low (Below 15)	38	31.7
Normal (15-25)	65	54.2
High (Above 25)	17	14.1
Total	120	100

Table 2 depicts that, nearly more than half of the percentage i.e., 54% of adolescents were in normal self-esteem, and the remaining percentage 14% were in a high level of self-esteem and 32% were in a low level of self-esteem.

Table 3: Comparison of the Gender Based Level of Self-Esteem of adolescents.

Gender	Level of Self-esteem					
	Low (38)		Normal (65)		High (17)	
	No	%	No	%	No	%
Male (58)	24	63.2	27	41.5	7	41.2
Female (62)	14	36.8	38	58.5	10	58.8

Table 3 reveals that the Gender Based Level of Self-Esteem of adolescents i.e., nearly 63% of males and 37% of females had a low level of esteem whereas, in the opposite view, 59% of females and 41% of males had a high level of self-esteem.

Table 4: Association between the level of self-esteem among adolescents with their demographic variables

(n=120)					
Demographic Variables	Level of Self-esteem				Chi-square Test
	Low (38)		High (17)		
	No	%	No	%	
Age (Years)					
14-15	19	50.0	3	17.6	4.09
16-17	11	28.9	5	29.4	P=0.04
18-19	8	21.1	9	53.0	
Sex					S 2.48
Male	24	63.2	7	41.2	P< 0.02
Female	14	36.8	10	58.8	S
Education					
9th	16	42.1	3	17.6	5.45
10th	13	34.2	4	23.6	P < 0.02
11th	5	13.2	5	29.4	S
12th	4	10.5	5	29.4	

table cont...

Residence					
Rural	12	31.6	3	17.6	4.64
Semi-Urban	12	31.6	5	29.4	P < 0.03
Urban	7	18.4	9	53.0	S

P>0.05 Significant

Table 4 shows an association between the level of self-esteem among adolescents with their demographic variables of age, sex, education, and residence had a significant association between level of self-esteem in $p>0.05$ whereas there is no significant association found between family income and religious variables.

DISCUSSION

Self-esteem is an essential feeling for adolescents to live their lives and integrate into society. The major aspect in building the personality of an individual lead by self-esteem. The findings of the study are discussed based on objectives. The first objective identified that 14% had a high level of self-esteem and 32% of adolescents had low self-esteem. The results of the present study are supported by a similar cross-sectional study conducted in Minia City among 298 students, 27.5% identified with low self-esteem.⁸ Another cross-section study, conducted in urban and semi-urban areas of Vietnam among 1,149 secondary students found that low self-esteem was detected at a prevalence of 19.4%.⁹

The second objective of determining gender based self-esteem found that nearly 63% of males and 37% of females had low self-esteem whereas high self-esteem found that, the reverse view of 59% of females and 41% of males. In a controversial view, the comparative study was conducted in Karachi among 356 students in the age group of 15-21 (mean=18.24) years and reported that males significantly had higher self-esteem ($M=27.1$, $SD=6.53$) than females. ($M=25.13$; $SD=6.01$). $t=3.425$, $p<.01$.¹⁰ The same controversial view in the review article also stated that gender roles influence adolescents' self-esteem. i.e., self-confidence is a stereotypical male feature, whereas in girls the performance of self-confidence is considered a breach of traditional gender roles. Therefore, it's reported that boys had higher self-esteem than girls.¹¹ Hence, the null hypothesis of H01 in the present study stated that there is no significant difference between the gender based self-esteem was rejected.

The third objective was to associate the level of self-esteem with selected demographic variables of

adolescents. The present study found a significant association between the level of self-esteem with their demographic variables of age, sex, education, and residence. In age, half of the percentage of middle adolescents the age of 15-16 years studying in 9 and 10th grade had low self-esteem whereas, as age increases late adolescents in the age of 18-19 years and moving to higher secondary more than half of the percentage had high self-esteem. Considering gender roles in this study, the majority of males had low self-esteem when compared to females it may be due to less social participation and physical problems causing the withdrawal from regular work. The controversial view in the cross-cultural examination study by using a large internet sample (N 985,937) across 48 nations, found that age increases self-esteem from late adolescence to middle adulthood and significant gender gaps, with males consistently reporting higher self-esteem than females.¹²

Another study conducted among 348 adolescents in Pokhara Metropolitan City found that adolescents who experience higher education, and social/family support are likely to have higher self-esteem.¹³ Lee D, Lee S. (2023) in his study concluded that the controversial view of female adolescents is at a higher risk of low self-esteem than male adolescents.¹⁴ In the present study findings, regarding the residence part, the adolescents who are residing in rural areas had low self-esteem when compared to the adolescents who reside in urban areas. Because the lifestyle pattern of urban creates many exposures that lead to self-confidence and increase the level of self-esteem.¹⁵ Hence, the null hypothesis of H02 stated that there is no significant association between the selected variables like age, gender, education, and residence was rejected, and accepted for the other variables like family income and religion.

RECOMMENDATIONS

Adolescence is the stage when self-esteem may head in positive or negative directions and there are various factors responsible to influence for the development of self-esteem. School based counseling efforts should be made to enable these students to learn how to face life challenges, teach skills to build confidence, and increase their resilience. A similar study can be conducted with larger samples and a comparative study can be conducted in different settings of rural and urban areas for better generalization.

CONCLUSION

Global self-esteem, an individual's overall evaluation of self, is one of the most studied constructs in the social sciences. Self-esteem development depends on the various factors and areas in which children are nurtured. Low self-esteem makes adolescents irrespective of gender face a lot of difficulties in managing obstacles and preventing issues. School intervention programs should be in consideration to enable these students to learn how to face life challenges, and teach skills to maximize confidence and capacity building regarding their resilience. These results therefore suggested the need for a school based or web based provision aimed at proactively increasing students' self-esteem and skills for dealing with academic stress and overall development.

ACKNOWLEDGMENT

The researcher would like to thank all the selected school authorities and students who cooperated and participated in the completion of this study.

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Effect of Customized Integrated Teaching Program on Knowledge Regarding Child Abuse and Neglect among Peoples Residing in Rural Area of Bhopal

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How to cite this article:

Monika David. Effect of Customized Integrated Teaching Program on Knowledge Regarding Child Abuse and Neglect among Peoples Residing in Rural Area of Bhopal. Int J Pediatr Nurs. 2024;10(1):13–17.

Abstract

The present study has been undertaken to assess knowledge score regarding child abuse and neglect among peoples by integrated teaching program in Gandhi Nagar at Bhopal. The research design adopted for the study was pre-experimental in nature. The tool for the study was self-structured knowledge questionnaire which consists of two parts-I consisted questions related to Socio-demographic data; part-II consisted of self-structured knowledge questionnaire to assess the knowledge score regarding child abuse and neglect among peoples residing in rural area. The data was analyzed by using descriptive and inferential statistical methods. The most significant finding was that 63.3% of peoples residing in rural area were having average knowledge regarding child abuse and neglect whereas 36.7% had good knowledge after post-test. It was suggested that the nurses must educate peoples residing in rural area regarding tobacco products consumption and its impact.

Keyword: Effect; Integrated teaching program; Knowledge and tobacco products consumption and its impact.

INTRODUCTION

Neglect and abuse of children are grave public health issues as well as ACEs. Long term effects on well being, opportunities, and health may result from them. Any form of abuse

or neglect of a child under the age of eighteen that causes harm, the possibility of injury, or the danger of harm to a child is included in this topic, whether it comes from a parent, carer, or another someone in a custodial capacity (such as a teacher, coach, or religious leader). Abuse and neglect can take four common forms.¹

The deliberate use of physical force that has the potential to cause bodily harm is known as physical abuse. Examples of using force on a child include striking, kicking, shaking, burning, and other similar actions.

Pressuring or coercing a youngster into doing sexual actions is known as sexual abuse. It encompasses actions like penetrating, fondling, and introducing a youngster to other sexual practices.

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Received on: 02.11.2023

Accepted on: 30.12.2023

Kindly refer to the CDC's webpage on preventing child sexual abuse for additional details.²

Behaviours that damage a child's sense of self-worth or emotional health are referred to as emotional abuse. Name calling, humiliation, rejection, with holding affection, and threats are a few examples.³

When a child's fundamental emotional and physical needs are not met, it is considered neglect. These necessities include a place to live, food, clothing, education, healthcare, and the ability to express and receive appropriate responses to their feelings.⁴

Need for Study

In their life time, about one in four youngsters will be the victims of abuse or neglect. Of maltreated children, 78 percent are ignored, 18% are physically abused, and 9% are sexually abused.⁵ Homicide is the second most common cause of death for children under one year old, with a fatality rate of 2.2 per 1000 children per year due to child maltreatment. Childhood exposure to violence can have negative effects on one's physical, emotional, and mental well being throughout one's life. Mitigating negative health effects from physical child abuse requires prevention, diagnosis, and therapy.⁶ This exercise looks at differential diagnosis situations where child abuse and neglect should be taken into account as well as the actions that should be done to support the impacted children.⁷

Objective of the Study

1. To assess the pre-test and post-test knowledge score regarding child abuse and neglect among peoples residing in rural area.
2. To assess the effectiveness of integrated teaching program on knowledge regarding child abuse and neglect among peoples residing in rural area.
3. To find out the association between the pre-test knowledge score regarding child abuse and neglect among peoples residing in rural area with their selected demographic variables.

Hypotheses

RH₀: There will be no significant difference between pretest and post-test knowledge score on child abuse and neglect among peoples residing in rural area.

RH₁: There will be significant difference between pretest and post-test knowledge score on child abuse and neglect among peoples residing in rural area.

RH₂: There will be significant association between the pre-test score on child abuse and neglect among peoples residing in rural area with their selected demographic variables.

Assumption

1. Peoples residing in rural area may have deficit knowledge regarding child abuse and neglect.
2. Integrated teaching program will improve knowledge of peoples residing in rural area regarding tobacco products consumption and its impact.

METHODOLOGY

An evaluative approach was used and research design pre-experimental one group pre-test & post-test research design was used for the study. The samples consisted of 30 peoples residing in rural area selected by Non probability convenient sampling technique. The setting for the study was Gandhi Nagar at Bhopal. Data was collected with the help of demographic variables and administering a self-structured knowledge questionnaire by the investigator before and after integrated teaching program. Post-test was conducted after 7 days of pre-test. Data were analysis using descriptive & inferential statistics.

ANALYSIS AND INTERPRETATION

Table 1: Frequency and percentage distribution of samples according to their demographic variables. *n* = 30

Demographic Variables	Frequency	Percentage
Age in Years	7	
21-25	9	23.3
26-30	8	30.0
31-35	6	26.7
≥35		20.0
Family Monthly Income		
<10000	3	10.0
10001-15000	13	43.3
15001-20000	10	33.3
>20000	4	13.3

table cont...

Marital Status

Married	17	56.7
Single	9	30.0
Widow	2	6.7
Divorce	2	6.7
Occupation		
Street vendor	3	10.0
Laborer	15	50.0
Shopkeeper	7	23.3
Office worker	5	16.7

Table 2: Frequency and percentage distribution of Pre-test scores of studied subjects

Category and Test Score	Frequency (N=30)	Frequency (%)
Poor (1-10)	20	66.7
Average (11-20)	10	33.3
Good (21-30)	0	0.0
Total	30	100.0

The present table 2 concerned with the existing knowledge regarding child abuse and neglect among peoples residing in rural area was shown by pre-test score and it is observed that most of the peoples residing in rural area 20 (66.7%) were poor (1-10) knowledge and some peoples residing in rural area have 10 (33.3%) average categories.

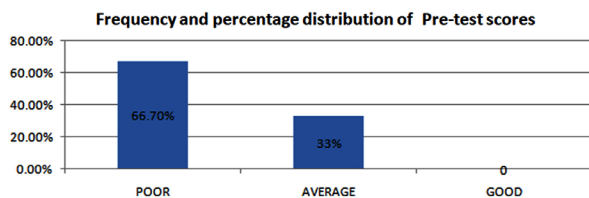


Fig. 1: Frequency and percentage distribution of Pre-test scores of studied subjects.

Table 3: Mean (X) and standard Deviation (s) of knowledge scores

Knowledge Pre-test	Mean (X)	Std Dev (S)
Pre-test score	8.50	1.94

The information regarding mean, percentage of mean and standard deviation of test scores in shown in table 3 knowledge in mean pre-test score was 8.50 ± 1.94 while in knowledge regarding child abuse and neglect among peoples residing in Gandhi Nagar at Bhopal.

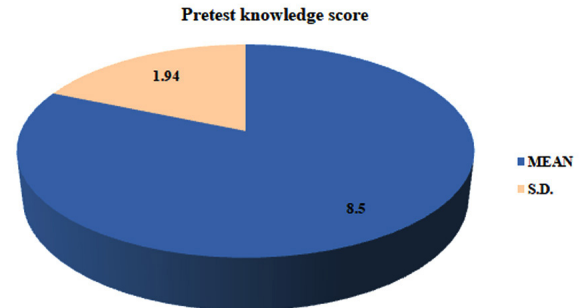


Fig. 2: Mean (X) and standard Deviation (s) of knowledge scores

Table 4: Frequency and percentage distribution of Post test scores of studied subjects

Category and Post-test Score	Frequency (N=30)	Frequency (%)
Poor (1-10)	0	0.0
Average (11-20)	19	63.3
Good (21-30)	11	36.7
Total	30	100%

The present table 4 concerned with the existing knowledge regarding child abuse and neglect among peoples residing in rural area was shown by post test score and it is observed that peoples residing in rural area 11(36.7%) were good (21-30) knowledge and other peoples residing in rural area have 19(63.3%) category which are average (11-20) post-test knowledge score in the present study.

Table 5: Mean (X) and standard Deviation (s) of knowledge scores

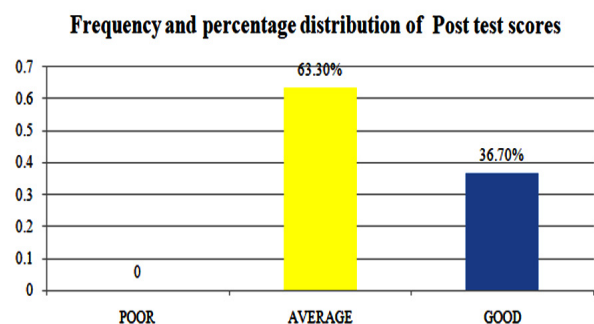


Fig. 3: Frequency and percentage distribution of Post test scores of studied subjects

Knowledge Test	Mean (X)	Std Dev (S)
Post-test score	18.13	4.03

The information regarding mean, percentage of

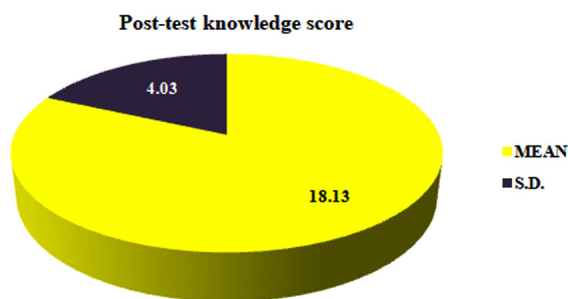


Fig. 4: Mean (X) and standard Deviation (s) of knowledge scores

Table 6: Effectiveness of awareness package by calculating Mean, SD, Mean Difference and 't' Value of Pre-test and Post-test knowledge.

Knowledge Score of Peoples Residing in Rural Area	Mean (X)	S. D. (s)	Std. Error of Mean	D. F.	t-value	Significance
Pre-test	8.50	1.94	0.87	29	-10.96	P<0.05
Post-test	18.13	4.03				

When the mean and SD of pre-test and post-test were compared and 't' test was applied. It can be clearly seen that the 't' value was - 10.96 and p value was <0.05 which clearly show that integrated teaching program was very effective in increasing the knowledge of peoples residing in rural area.

Section-III Association of knowledge scores between test and selected demographic variables:

Table 7: Association of age with pre-test scores

Age (in years)	Test Scores			Total
	Poor (1-10)	Average (11-20)	Good (21-30)	
21-25	5	2	0	7
26-30	7	2	0	9
31-35	5	3	0	8
>35	3	3	0	6
Total	20	10	0	30
X=1.38 p>0.05 (Insignificant)				

The association of age test scores is shown in present table 7. The probability value for Chi-Square test is 1.38 for 3 degrees of freedom which indicated a insignificant valve ($p>0.05$). Hence, it is identified that there is a insignificant association between age and test scores. Moreover, it is reflected that age isn't influenced with the present problem.

mean and standard deviation of post test scores in shown in table 5 knowledge in mean post test score was 18.13 ± 4.03 while in knowledge regarding child abuse and neglect among peoples residing in Gandhi Nagar at Bhopal.

Hence, it is confirmed from the tables of section-II that there is a significant difference in mean of test scores which partially fulfill the first second objective of the present study.

Table 8: Association of family monthly income with pre-test scores

Family Monthly Income	Test Scores			Total
	Poor (1-10)	Average (11-20)	Good (21-30)	
<10000	1	2	0	3
10001-13000	9	4	0	13
13001-20000	6	4	0	10
>20000	4	0	0	4
Total	20	10	0	30
X=3.73 p>0.05 (Insignificant)				

The association of family monthly income and test scores is shown in present table 8. The probability value for Chi-Square test is 3.73 for 3 degrees of freedom which indicated a insignificant value ($p>0.05$). Hence, it is identified that there is a insignificant association between monthly income and test scores.

Table 9: Association of marital status with pre-test scores

Marital Status Class	Test Scores			Total
	Poor (1-10)	Average (11-20)	Good (21-30)	
Married	11	6	0	17
Single	5	4	0	9
Widow	2	0	0	2
Divorce	2	0	0	2
Total	20	10	0	30
X=2.52 p>0.05 (Insignificant)				

The association of marital status test scores is shown in present table 9. The probability value for Chi-Square test is 2.52 for 3 degrees of freedom which indicated a insignificant valve ($p>0.05$). Hence, it is identified that there is a insignificant association between marital status and test scores. Moreover, it is reflected that marital status isn't influenced with the present problem.

Table 10: Association of occupation with pre-test scores

Occupation Class	Test Scores			Total
	Poor (1-10)	Average (11-20)	Good (21-30)	
Street vendor	3	0	0	3
Laborer	10	5	0	15
Shopkeeper	4	3	0	7
Office worker	3	5	0	5
Total	20	13	0	30

$X = 1.88$ $p > 0.05$ (Insignificant)

The association of age test scores is shown in present table 10. The probability value for Chi-Square test is 1.88 for 3 degrees of freedom which indicated occupation and test scores. Hence, it is identified that there is a insignificant association between occupation and test scores. Moreover, it is reflected that occupation occupation isn't influenced with the present problem.

RESULTS

The result of this study indicates that there was a significant increase in the post-test knowledge scores compared to pre-test scores of preventions of pre-eclampsia. The mean percentage knowledge score was observed 8.50 ± 1.94 in the pre-test and after implementation of integrated teaching program post-test mean percentage was observed with 18.13 ± 4.03 .

CONCLUSION

Thus, after the analysis and interpretation of data we can conclude that the hypothesis RH1 that, there will be significance difference between the pre-test knowledge score with post-test knowledge score at the ($P < 0.05$) is being accepted.

Furthermore, integrated teaching program regarding child abuse and neglect among peoples residing in rural area may consider as an effective

tool when there is a need in lacking, bridging and modifying the knowledge.

LIMITATIONS

- The study was limited to Gandhi Nagar of Bhopal.
- The study was limited to 30 peoples residing in rural area.

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Therapeutic Procedures and Care of a Child Nursing Considerations

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How to cite this article:

Sushma Oommen, Usha G. Menon. Therapeutic Procedures and Care of a Child Nursing Considerations. *Int J Pediatr Nurs*. 2024;10(1):19–24.

Abstract

As pediatric nurses, our mission is atraumatic care i.e. to shield children from needless trauma and pain caused by medical procedures. Child's preparation prior to the procedure includes need based assessment of the procedure and readiness for procedure, building trust and establishing rapport as well as clustering multiple procedures to minimize trauma. Prior to procedure informed consent is necessary whenever required. It is essential to follow family centred care and educate the child and family as family is the integral part of child's life. Preparation of child according to age, utilization of age appropriate equipment and age specific techniques, keen observation of child and surrounding are important aspect of childcare. Pharmacological, non-pharmacological and psychological strategies, involvement of loved one's aid for minimizing the pain fear anxiety and distress. The physical and psychological safety of child should be of prime concern while performing a nursing procedure on child, the aim should be to successfully complete the procedure minimizing the negative effects of the same. Therefore, it is vital that *any* medical procedure is ended in a positive manner.

Keyword: Child; Pediatric procedure; Preparation of Child; Developmental Consideration; Pain; Distress.

INTRODUCTION

Hospitalized pediatric patients may undergo a wide range of therapeutic treatments. The idea of pediatric nursing is atraumatic care, and, as pediatric nurses, our mission is to shield children

from needless trauma and pain caused by medical procedures.¹ Procedures that cause anxiety might influence how people approach healthcare going forward; some people may avoid getting medical treatment altogether or develop phobias.² Prior to, during, and following all procedure and treatments, it is nurse's responsibility to make sure that the patient is safe, comfortable and the procedure is carried out adhering to the standards established by the healthcare facility.

The ideal way to provide atraumatic treatment in all three phases is to use a multimodal strategy that combines pharmaceutical and non-pharmacological methods to lessen patient discomfort and enhance their ability to handle procedures.¹ In order to lessen the negative effects of the therapeutic procedure and to enhance the physical and emotional positive outcome, this article focuses on

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Received on: 25.12.2023

Accepted on: 05.02.2024

the child's preparation before, during, and after the procedure.

Child's Preparation Prior to the Procedure

When a medical or nursing procedure is carried out, it should be kept in mind that it does involve multiple people other than child. This may include family, sibling or any other significant or concerned person. Thus, preparation of child as well as parents or significant others is of utmost importance. The **preparation** prior to the procedure includes:

Assessing the Need and Readiness for Procedure

Before performing a procedure, it is essential to perform a need based assessment of the procedure so that unnecessary procedures can be avoided. The child and parental readiness, child's physical and psychological condition should be assessed thoroughly to prevent any kind of adverse affects. During assessment, any unusual or abnormal findings should be informed to the physician concerned and alternatives should be decided.^{1,3}

Clustering Multiple Procedures

If the child has to undergo multiple procedures, then take into account if it can be done concurrently. This will prevent unnecessary discomfort to the child and family thus enhancing cooperation.^{1,3}

Build Trust and Establish Rapport

Trust is facilitated when you can show that you are aware of something that the youngster finds meaningful. Evaluate the procedure experience. Talk about any prior procedure experience that the child or family may have had. Find out child's preferences. Establish a pleasant communication with parents which may increase the trust of child on the nurse.^{3,4}

Inform and Obtain Consent

Before undergoing any procedure, a parent, guardian, or mature minor should be asked for their informed consent. Offer choices, wherever possible. In the ward setting, verbal agreement is sufficient for clinical treatments. Procedures involving sedation or anaesthesia or any major procedure require written and signed consent. When applicable, parental consent should be obtained in addition to the child or young person's consent for the procedure. A child's cooperation with the process can imply assent just as much as

their vocal assent.^{1,4}

Follow Family Centred Care

Preparing the child's parent or primary care giver is important. In order to support the child during the procedure, it should be recommended for a family member to stay; however, it is always advisable to ascertain the parent's decision. Assign the parent a specific task; don't presume that they are aware of what to perform at any point during the process. Usually, this is done to soothe the youngster. Procedure information can help parents feel less anxious and improve the outcome.^{1,3,4,5}

Educate the Child and Family

Age appropriate explanation of procedure and related aspects should be done to improve the understanding of child. The parents also should be educated about the "what, why and how" of procedure and the care of the child in understandable language.^{1,6}

Prepare Age Appropriate Equipment's and Decide Age Specific Techniques

The quantity of information that kids desire to know about a surgery varies. The nurse may talk about it with the parent to decide how best to explain the process to the youngster. A child's age, developmental stage, and level of fear will all influence when the nurse should explain the process to them. In general, on the day of the medical operation, younger and more nervous youngsters can be informed. The best time to prepare toddlers and preschoolers is probably right before the intervention. Children who are older may be informed the day before or during the week of the surgery. Speak gently and stay away from using terms associated with medicine that can be confusing.^{7,8}

CHILD'S CARE DURING THE PROCEDURE

Carry out the Procedure in Appropriate Place and Environment

Research suggests that modifying the environment into comfortable and pleasant to child will reduce negative impact of procedure. For young children, it is advised to perform treatments in the treatment room in order to preserve the patient's bed and room as a safe environment.⁷ Negative experiences in patient's room makes the

child feel threatened whenever a staff member comes into their room. The preference of child or parents can be obtained to give them a sense of control. The equipment should be kept ready well before and, any equipment that can frighten the youngster should be kept out of sight. There should be adequate light. The furniture and other things present in the room should be non-threatening and pleasing to the child.

Before the child enters the procedural environment, nursing staff and equipment should be ready. To lessen anticipatory worry, fewer persons should be involved in the procedure than are necessary. Throughout the process, the patient should only hear from the person coaching or diverting their attention.

Involve Child and Parents

A study indicates that promoting the children's co-determination and participation in the procedures encouraged their consent and receptiveness and facilitated a successful outcome. In contrast, an absence of efforts to involve the children in the procedures contributed to the need for coercion to be employed by parents and nurses.⁸

Parental Presence

If a family member is able to support the child

during the procedure, it can help to lessen their distress. Give parents advance notice of the treatment so they are prepared; this will ease their worry and increase the likelihood that the medical procedure will be successful.^{2,5,8}

POSITIONING FOR COMFORT

At any time, given the needs for process, accessibility, and child safety, the youngster should be placed in a comfortable position. Upright positioning instead of using harsh restraint, gives the child a sense of control and allowing them to have closer contact with their parent or guardian. Immobilise the affected body portion just during the process. It is preferable to provide the child with the freedom to choose, whether to actively participate in the process, to see the procedure or turn away. The young child can be kept in parents lap if parents are willing and confident.^{2,8}

Use Age Appropriate Techniques

While performing any procedures in child or adolescent developmental status (Table 1), child understanding and need should be kept in mind. Remember each child is unique and each developmental stage is special.^{1,4,7}

Table 1: Developmental Consideration remember Age Specific Reactions

<i>Developmental age Psychosocial stage & developmental characteristics</i>	<i>Points to Remember</i>
Infant <ul style="list-style-type: none"> Trust vs. Mistrust Strangers' anxiety Sensorimotor for stage of cognitive development Imitation 	<ul style="list-style-type: none"> Promote the presence and involvement of parents and keep them in the child's line of sight Involve and teach parents procedures which they can perform Offer swaddling and soothing talk Simulate a familiar routine Attempt to assign the same nurse Make advances in a non-threatening manner Allow parents to comfort the child Keep frightening objects out of sight Pay close attention to light and sound stimulation Permit non-nutritive sucking and rocking for comfort Restrain adequately and appropriately restrain
Older Infant / Toddler <ul style="list-style-type: none"> Autonomy vs. Shame and Doubt Egocentric thought Negative behaviour 	<ul style="list-style-type: none"> Encourage parents to be present take an active role in their child's Be hospitable and encouraging. Inform parents on the normal behaviour of toddlers. Make use of your child's favourite toy or blanket as a security object. Set limits and give choices on simple decision-making. Maintain one voice to prevent confusion in child Tell the child that it is OK to cry Expect and ignore resistance, temper tantrum Restrain adequately

table cont....

Preschooler

- Initiative vs. Guilt
- Preoperational phase of cognitive development
- Increased language skill
- Punishment obedience phase
- Fear of intrusion /body mutilation

School Age

- Industry vs. Inferiority
- Interested in knowing
- Concrete thought
- Improved self control

Adolescent

- Identity vs Identity Diffusion
- Importance to appearance
- Striving for independence
- Peer relationship

- Recognise the child's anxiety about the procedure
- If at all feasible, encourage the parent to be present and to take part in the child's care
- Offer consolation and assistance
- Provide play and diversional activities
- Avoid intrusive procedures as much as possible
- Assess child's perception by asking to draw a picture and tell about it
- Find out what does the child knows
- Explain using terms from science and the way the body works
- When instructing a youngster, pose more questions to assist them to overcome feelings of inadequacy
- Use visual aids like audiovisuals, images, and body outlines
- Provide strategies for staying in control, such as deep breathing exercises
- Obtain collaboration Provide constructive criticism Incorporate decision-making (best location, best time)
- Promote active involvement in caregiving
- Maintain privacy
- Evaluate adolescent understanding Encourage questioning regarding fears, or risks
- Involve in decision-making
- Participate in making decisions
- Check if the adolescent wants their parent present
- Minimise the number of limitations to the minimum
- Provide suggestions on how to stay in control
- Offer positive reinforcement
- Provide privacy for care
- Attend to children's concerns about appearance and grooming

Use of Restraints

The use of restraint should be considered only for the safety. Employ the least amount of restriction. Consent and appropriate information education should be taken into account. Select the appropriate device and ensure proper fit. Make sure that the knots are simple to untie thus allow for rapid access. Regularly examine for circulation, feeling, and motion. Maintain the range of motion movement. Always document the findings from neurovascular checks.^{4,6,8}

PROMOTING CHILD CONTROL

Giving the patient a significant role might increase their sense of control and mastery. Give the patient options so; they can participate actively in their medical treatment. Engage them in some simple tasks rather than remaining still. Offer child choices for example, which type of tape or dressing to be used, which position the child prefers (if possible).¹

Atraumatic Technique - Do no harm

While performing a nursing procedure on child, the aim should be to successfully complete

the procedure minimizing the negative effects of the same. The foundation of this principle lies in minimizing separation of child from family, identifying child/family stressors, minimizing/preventing pain, and promoting parent professional partnerships.¹

Non-Pharmacological and Psychological Strategies

During hospitalization, the use of psychological and nonpharmacological strategies not only reduces pain, it relieves anxiety, fear and improves coping level of child as well as parents while the procedures are performed. These techniques may include a play, distraction, deep breathing, use of cold therapy, vibration and cooling devices like buzzy, breast feeding, sweet solution during therapy, and psychological therapies like Guided Imagery, Storytelling, Meditation, Progressive Muscle Relaxation.^{8,9}

Distraction

In order to help a youngster focus attention on something other than pain and the fear involved with the treatment, distraction entails involving them in a wide range of activities. Choose kid appropriate activities based on their developmental

stage. Children's pain and suffering due to needles can be effectively reduced with the use of distraction cards, music therapy, toys, kaleidoscopes, and virtual reality. It is seen as a simple, affordable strategy that requires little training to put into practice.^{8,9,10}

Cold and Vibration Intervention

A study on Impact of Cold and Vibration Intervention on Fear, Anxiety, and Distress during Procedural Procedures, was discovered that during needle-related operations, cold and vibration stimulation were beneficial in lowering anxiety and behavioural distress. It has been discovered that vapocoolant spray works well to increase procedure success rate.⁸⁻¹⁰

Deep Breathing

During an intervention, deep breathing exercises can be utilised as a coping mechanism to assist a patient in controlling their anxiety and pain perceptions. By stimulating the parasympathetic nervous system, which promotes relaxation and calm, an increase in oxygen delivery to the brain can assist to lower anxiety and the fight-or-flight response of the sympathetic nervous system. This technique can be effectively applied by activities like blowing bubbles, birthday candles, or smelling flower or by count breathing etc.^{8,9,10}

Guided Imagery

Patients can be trained to utilise guided imagery to help them cope with painful or anxiety-inducing situations. During guided imagery, the patient is asked to visualise a peaceful location. You can use guided imagery that is straightforward or quite complex.²

Be Observant

As the children are developing verbal and cognitive ability they may not be able to verbalize any discomfort and also the child may regress with little changes thus, a nurse has to be observant for deterioration of child's condition.¹⁰

Be Honest

When a child asks questions about a procedure, parents and healthcare professionals should answer honestly in order to gain the child's trust. The nurse will not take any action. Statements like "It won't hurt a bit" ought to be avoided.^{1,10}

Care of Child after the Procedure

It is the nurses' responsibility to facilitate recovery and resilience after an invasive or non-invasive therapeutic procedure. Children's memories of painful experiences are strong predictors of subsequent reports of pain intensity. Therefore, it is integral that any medical procedure is ended in a positive manner for the patient by: Reducing the child's distress before leaving the procedural setting can help to reduce negative associations with treatment spaces.¹¹ Offer the patient an opportunity for cuddles with the caregiver, provide positive reinforcement of what went well during the procedure and asking them to make choices about what they are doing next may help to promote recovery. 'Book ending' (positive experiences before and after) a procedure can help to reduce negative associations with medical interventions.

Honestly take feedback

After the procedure a debriefing and feedback from patient and their family is an important aspect. Discuss with child and caregiver the experience during procedure what was good or bad; and what can be improved. Enquire if there is anything the child would like to attempt in a different way next time. Avoid any type of criticism.^{2,3}

Allow Child and Parents to Express Emotions and Verbalize

The child should be allowed to verbalize the experiences and express emotions after the procedure. This will help in releasing negative emotions and help the caregivers to understand the concerns.^{4,10}

Use Positive Reinforcement

Positive reinforces include a parent's hug or a pat on the back indicating that the youngster is doing well. There will be positive occurrences or results that will follow the behaviour. When praise or a clear reward is added, a behaviour or response is reinforced in a positive reinforcement scenario.^{2,8}

Allow Parental Involvement

The parents should be allowed to be with the child after the procedure. Parental touch and hold will help child to feel more secure.^{2,8}

Documentation and Communication

Recording the procedure in efficient way will also help for the creation of better experiences next time. Document the child's response to the medical procedure and procedural preferences to help inform subsequent interventions. While documenting important aspect should be included, such as preparation, positioning/restraint used, who was present in the room and their roles, forms of non-pharmacological strategies used, details of any specific parent or patient requests, use of medication or other strategies and lastly the outcome of procedure and the attempts made. The special observations and needs should be communicated to concerned personnel.^{1,2,8,10}

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Relation to Social Determinants in Cardiovascular Disease Risk Profile: An Alarming View

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How to cite this article:

C. Sriramalakshmi, Rajathi S., M. Hemamalini. Relation to Social Determinants in Cardiovascular Disease Risk Profile: An Alarming View. *Int J Pediatr Nurs.* 2024;10(1):25–29.

Abstract

Globally, Cardiovascular disease (CVD) is one of the major reasons for mortality. Cardiovascular health in children and adults is profoundly affected by the milieu of early life. Currently, CVD is taking a different turn based on social antecedents like poverty, the difference in socio-economic status, gender inequality, being a fluid person, and work life in harmony increases the risk of getting into CVD, that too in vulnerable populations like racial and ethnic minorities, women, the elderly, the chronically ill individual with disabilities, lesbian, gay, bisexual, transgender, queer and racism play a significant role in conditioning disease burden and modulating outcomes of CVD. People with low socioeconomic status increase the hypothalamic pituitary adrenal axis (HPA axis) in the body, due to stress response, and at the end, increased cortisol and sympathetic nervous system activity lead to decreased angiogenic activity. People from low socioeconomic backgrounds, loneliness, and social isolation in many cases like racism, ethnic minorities, children, women, elderly, and chronically ill individuals with disabilities, are exposed to constant stress because of a lack of their fundamental needs. The wider introduction of universal screening for social factors that impact cardiac health will help to identify children and families at risk. Hence, aggressive screening tests beginning at an early age will be beneficial for early detection and treatment. Healthcare professionals need to pay attention to promoting health education and awareness aids to decrease CVD-associated mortality.

Keyword: Cardiovascular disease; Social determinants of health (SDoH); Vulnerable population; HPA (Hypothalamic Pituitary Adrenal) axis; Angiogenic activity.

INTRODUCTION

In the last two decades, research evidence proved that CVD has occurred due to increased LDL, VLDL, increased insulin resistance, and some

inflammatory response in the body.¹ Now, the current decade focuses on the lack of social determinants that increase the risk of getting into CVD. Social determinants are the factors that influence health based on economic, social, environmental, and psychological factors. Cardiovascular disease is considered one of the major reasons for mortality globally. Nowadays it is fueled by childhood obesity, mental stress, metabolic disorders, lack of nutrition, community racism, discrimination, being stable in this competitive world, and soon.² There is an increase in heart problem cases in India according to the American Heart Association, and mostly adults and children are affected by CVD, due to the drastic changes in the lifestyle of people with good socioeconomic backgrounds, and many

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Received on: 25.12.2023

Accepted on: 05.02.2024

of them are reported as premature mortality and it has increased to 59% from 1990 to 2010.³

SOCIOECONOMIC STATUS

In low socioeconomic backgrounds, access to basic needs like good shelter, nutritious food, proper road facilities, transportation, public health facilities, and medicines is quite hard for them to get. Even at work or at school, constant exposure to stress over time^{2,4} is frequently simulated by the HPA axis mechanism and can contribute to decreased angiogenic activity, leading to the release of cortisol, and increased sympathetic nervous system activity leading to a complex physiological process.¹ Cortisol, often referred to as the "stress hormone," plays a key role in the body's response to stress. Elevated levels of cortisol, as a result of chronic stress, can have detrimental effects on the cardiovascular system, including the inhibition of angiogenesis. Angio genesis is a crucial process for the growth of new blood vessels, which is essential for tissue repair and regeneration, including in the cardiovascular system. Overall, the HPA axis response to stress, particularly the release of cortisol and increased sympathetic nervous system activity can disrupt the normal physiological processes involved in angiogenesis, potentially contributing to decreased angiogenic activity and impacting cardiovascular health. As a result, these are an add-on for the cardiovascular disease risk profile. Over time, they also become resistant to the HPA axis mechanism by the "negative feedback mechanism" causing a high chance of developing early Type-2 diabetes mellitus and hypertension.⁴

LONELINESS AND SOCIAL ISOLATION

Loneliness and social isolation in many cases like racism, ethnic minorities, women, the elderly, the chronically ill individual with disabilities, lesbian, gay, bisexual, transgender and queer, people belonging to other communities, racism, and people having low socioeconomic status activates central response HPA mechanism and causes an increase in cortisol level in the body. As cortisol rushes the feel of hunger derivatives and the glucose is taken up by the body from stored glycogen as this mechanism continues, the person is neither exposed to type-2 diabetic mellitus nor hypertension due to endothelial destruction.^{2,5}

Green Environment^{6,7}

A green environment is said to lower stress, keeping the environment green motivates us to

be physically active, reduces oxidative stress, increases tissue angiogenesis, and reduces the level of catecholamine activity in the body. Catecholamines are indicators of stress as they activate the sympathetic nervous system. New research sheds light on how the immune system reacts to long-term stress and how SDoH can cause CVD. Understanding how detrimental SDoH may impact important signaling pathways facilitates the interpretation of clinical trial data and improves the capacity to quantify important adversity biomarkers. The novel investigations examine the role of stress hormones, inflammation, and other cellular processes induced by SDoH in the risk of CVD.^{6,7}

PHYSICAL INACTIVITY

Physical inactivity leads to obesity and can add as a risk factor for the cardiovascular disease profile, which is highly seen across industrial areas.⁸ In an urban environment, well-developed industrial facilities, transport facilities, parks, schools, corporate offices, industries, sophisticated colleges, and hospitals make lives easier and become a barrier to physical activity among children and adults. Simultaneously, as their intake is high, their waist circumference and BMI increase, which acts as an add-on to their cardiovascular disease risk profile. Screen time is strongly and consistently linked to an increase in overweight and obesity in both adults and children. Screen time on television is the strongest correlation.⁹ Physical activity must be promoted in older people by asking them to do some small work as they become physically inactive as days pass due to health issues.¹⁰

NEIGHBORHOOD COMPRESSION

However, people from low socioeconomic backgrounds have environments that are noisy and have a higher crime rate, and they "get into the body" to accelerate the progression of cardiovascular disease by activating the amygdala, a region of the brain that senses the degree of threat from external stimuli. When the amygdala is constantly activated, it is associated with greater metabolic activity in the bone marrow. Research also suggests that this connection is mediated by the sympathetic nervous system, which, under conditions of threat, causes hematopoietic stem and progenitor cells to be produced from bone marrow.

Progenitor cells are selectively mobilized in response to stress, and immature myeloid cells with a high pro-inflammatory bias dominate this process.^{1,6} This chain of events starts to occur and starts to migrate to trauma and infection, including atherosclerotic lesions, and over time adds to the risk of getting CVD.

QUALITY OF EDUCATION

Research from 2010, has found that CVD biomarkers in low socioeconomic status populations are comparatively high.^{11,12} That too, students are pushed into a zone where their basic nutrition and education quality have to be compromised. These children experience stress from a variety of sources, including inadequate transportation, clothing, and bullying at school or in college. As a result, over time, children develop endothelial dysfunction (caused by hypertension), inflammation, and increased platelet activation; in certain cases, these symptoms may also manifest as adiposity metrics, insulin resistance, and metabolic syndrome.

WORK LIFE BALANCE

The recent study reported that, couples have found that a dysfunctional relationship puts the female under more stress compared with the male. For the majority of males who already have cardiovascular disease and are under job stress, their chances of getting affected are constantly increasing because of the frequent stimulation of the sympathetic nervous system.¹ This has a negative response in the myocardial contractility, and if days pass, they start to loosen their muscle's elastic nature, where proper relaxation and constriction of blood vessels don't occur.

Adverse early childhood exposure is an important determinant of lifetime health settings for children on a trajectory of increased risk for the development of cardiometabolic risk. Psychological stressors, negative life events, and low family income are associated with childhood overweight and obesity.¹³ Similarly, socioeconomic disadvantage at individual to neighborhood levels, poor hygiene, unhealthy lifestyle habits, limited access to health care, childhood obesity, and cardiometabolic risk are predicted cardiovascular disease and related mortality. Importantly, early life of childhood cardiovascular disease risk factors, particularly childhood obesity, independently predict adult

cardiovascular disease.

FUTURE ROADS

Healthcare professionals will need to consider a public health paradigm of preventing and promoting cardiac health across the lifespan. First, need to recognize the social determinants of health have a profound influence on CVD. In this continuation, need to implement universal screening for social factors that identify children at risk for heart disease and connect them to community resources. The following strategies are initial steps to detect and reduce cardiac vascular mortalities. They are,

Based on the action

- Schemes have to be introduced to meet the needs of low socioeconomic people, which includes free medicine and the setting up of Public Health Centers in many rural places.
- Providing the basic set-up for personal hygiene and providing a peaceful environment.
- Low cost, high quality treatment must be provided.
- To increase social workers and assist in conducting more activities in homes, rehabilitation centers, cancer centers, and so on.
- Laws must be framed against people opposing or discriminating against the vulnerable population.

Lab research

- Identify key biological markers associated with social determinants, which may serve as an effective CVD risk prediction tool.
- To develop tests for these poor CVD markers with high risk.
- To develop a risk factor tool panel based on social determinants of health.

Educational Institution

- In educational institutions, physical activity must be incorporated, and the art of handling stress must be incorporated from childhood.
- Educational preaching must be done to students based on physical inactivity and stress.

- Special care and steps must be taken for the students who are coming under low Socioeconomic Status, as they may have nutrition deficiency, inappropriate BMI, and unhealthy life structure.¹⁵

In-Home

- Raising awareness and promoting physical activity among children through parents.
- A proper diet must begin from home and maintaining a proper BMI it may reduce the risk of getting MI.

Finally, need to detect early and intervene for developmental delays in children with CHD to optimize long-term child potential. Hence, professionals need to pay attention to promoting health education, and creating awareness activities such as walking, yoga, and meditation to be practiced regularly will certainly aid in preventing the rising epidemic of cardiac vascular diseases.^{14,15}

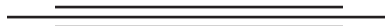
CONCLUSION

Significant effects of SDoH are seen on CVD risk and outcomes, especially in under privileged areas. Apart from enhancing SDoH measurement in cardiovascular research and care, there is a chance to form interdisciplinary teams that delve further into the connections between SDoH and the biological processes that influence CVD risk and consequences. Hence, all efforts are required to be proactively taken to clearly understand the role of risk factors in the emerging epidemic and for their effective control. General screening for conventional risk factors right from a younger age may increase awareness; and help in promoting lifestyle changes that can prevent or slow atherogenesis. A healthy lifestyle, balanced diet, and regular physical exercise should be instilled right from the beginning of childhood aids to reduce Cardiovascular mortalities. Lastly, need to develop customized interventions based on a nuanced understanding of social and environmental influences on cardiovascular health. Further, future research on mixed method approaches of relationships between SDoH and CVD should be used to better understand how individual lived experiences of marginalization and discrimination affect cardiovascular health outcomes.

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Burkitts Lymphoma

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How to cite this article:

Switi Beseekar, Prachi Falke, Nikita Bhokare. Burkitts Lymphoma. 2024;10(1):31–35.

Abstract

Introduction: Burkitt lymphoma is a type of non-hodgkin lymphoma that causes cancer in immune cells called B cells. Recognized as a rapidly growing human tumor. The female 12 year child admitted in AVBR hospital on date 18/05/2020. As father said, child was completely asymptomatic and apparently alright prior to onset of symptoms, child has a palpable painless soft tissue mass on left midaxillary line. 10–15 days prior to hospitalization she developed fever but it relieved by medications. Also have complaints of breathlessness since 5 to 10 days and retrosternal chest pain since 5-10 days. A detailed clinical evaluation is made based on patient, cytological examination, computed topography scan imaging of chest, ultrasound and CSF examination are used as diagnostic technique. If the condition is detected early, treatment of Burkitts lymphoma is more effective. The use of intensive chemotherapy and radiation therapy are useful.¹

Keyword: B-cell; Burkitts lymphoma; Jaw; Non-Hodgkin's lymphoma; Tumor.

INTRODUCTION

Lymphomas are the heterogeneous group of lympho proliferative malignancies resulting from clonal expansion of tumour cells derived from B, T or NK cells. A majority of them are derived

from B lymphocytes.² Lymphomas are primary tumours of lymph cells called lymphocytes, a type of WBCs. Lymphomas is the most founded cancer in infants. Burkitt lymphoma is a type of non-Hodgkin lymphoma in which cancer occurs in immune cells called B cells. Recognized as a fast growing human tumor, Burkitt lymphoma has compromised immunity and is become dangerous if is not treated quickly.³ Burkitt lymphoma (BL) is not an inherited condition. While Burkitt lymphoma is Along with genetic modifications affecting the MYC gene and immunoglobulin genes (genes that provide guidance for antibodies), these genetic variations are acquired (not inherited) and restricted to cancer cells.⁴

Incidence: The age adjusted incidence rate for men and women in India are 2.9/100,000 and 1.5/1000,000 respectively.⁵

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Received on: 25.12.2023

Accepted on: 05.02.2024

OBJECTIVE

1. To know general idea about the condition of the disease.
2. Exploring knowledge of pharmacology, management of medicine and nursing.

PATIENT INFORMATION

Patient history

The 12-year-old female child patient admitted to AVBRH on 18/05/2020 As narrated by the father, child was completely asymptomatic and apparently alright prior to onset of symptoms; child has a palpable painless soft tissue mass on left midaxillary line but parents shown negligence towards it. 10–15 days prior to hospitalization she developed fever which was of intermittent type and relieved by medications. Patient also have an complaints of breathlessness since 5 to 10 days and retrosternal chest pain since 5-10 days. There was no significant background history. There was no other family history of meaning After all examinations such as complete blood count, kidney function test, CEST chest, Pleural effusion cytology, USG, FNAC etc was done when patient admitted to the hospital.

Causes

Burkitts lymphoma reacts in male and female about three times. The endemic type is related to malaria and the Epstein-Barr virus (EBV), Also glandular fever is cause y a widespread virus. For sporadic form the cause is less, sometimes it is along with infection with EBV.

Clinical Finding

Important signs of Burkitts lymphoma include soft tissue mass along with jaw and any other facial bone includes, cervical lymph node swells, abdominal masse and abnormal buildup o fluid in abdomen. Swallon, painless lymph nodes in neck, armpit and groin also early loosening of child's molar and premolar. Intra abdominal tumors may present.⁶

Investigations: Studies found that haemoglobin concentration was 9.6 gm percent, MCH count was 26.2 picogm, Total RBC was 3.26, HCT count was 26.1 which was decreased than normal. Kidney function test was done which was normal. CECT Chest was performed and it showed multiple enlarged discrete homogenously enhancing lymph node are noted in

bilaterally axillary region measuring 27mm*18mm in size. Moderate rigiht pleural effusion with fissural extension. Mild pericardial pleural effusion predominantly along left heart border and around apex. Pleural fluid cytology also done smear show occasional lymphocytes especially of small type along with few polymorph splash macrophages and smudged nuclei in blood mixed within proteinous background. Cytology suggest blood mixed serous effusion with low infiltrate of small lymphocytes. 2-D echo cardiography was done it show moderate pericardial effusion. Ultrasonography of left axilla show the lymphadenopathy was present.

TREATMENT

Medical Management

Treatment of burkitt lymphoma was is most effective with early diagnosis of the condition. There are specific recovery aproches, as well. It can be treated with intensive intravenous therapy. Commonly drugs ar use cyclophosphamide, vincristine, prednisone, doxorubicin. Chemotherapy and radiation therapy for superior vena cava obstruction or paraspinal compression are helpful in treating child with burkitts lymphoma.⁷

Surgical Management

For intraoral masses incisional biopsy has been peformed. Stratified squamous epithelium with a sub epithelial tumor consisting of uniform dysplastic cells arranged in thin stroma sheet shows in histopathological studies. The lymphocytes were round and large with scarce cytoplasm's and increased nuclear to cytoplasmic ratios.⁸

Nursing Management

The nurse is responsible for prescribing the medications and determining their positive and negative effects on the patient. The type and dosage of the pharmacologic treatment is determined by the combination of these effects. Nursing management focuses on managing the problems lymphoma and side effect of chemotherapy.⁹

Assessment

- Assess general condition of the patient.
- Assess the breathing pattern of the patient for rate rhythm as well as pulse.
- Assess the severity of pain and give the

divisional therapy.

- Identify the problems they having in treatment.
- Give health education regarding condition, medication, treatment and prognosis.
- Identify the psychosocial need and help them to cope up.¹⁰
- **Prevention from infections**

Following measures must be taken to prevent infection:

- Broad spectrum antibiotics are used prophylactically.
- Fever is an sign of infection, so if fever occurs blood, urine, stool and nasopharyngeal cultures are done to identify the cause and site of infection.
- An adequate protein and calorie intake.
- provides the child with better host defences against infection.

Management of the side effects of chemotherapy:

• **Nausea and vomiting**

for mild to moderate

- vomiting antiemetic like promethazine, chlorpromazine etc. are used
- Metaclopramide is administered for severe vomiting.
- Antiemetics should be given before chemotherapy is started (30 minutes too 1 hour before chemotherapy) and then regularly at two hours interval up to 24 hours.

• **Anorexia**

- Loss of appetite occurs because of chemotherapy and radiation therapy to:
- Give small frequent feeds to the child according to her likes.
- Give and easily digestible food to the child.
- Serve the food in an attractive manner.

• **Neuropathy**

- Vincristine and Vinblastin can cause various neurotoxic effects leading to foot drop, weakness and numbness of extremities and reduce bowel movements. So:
- Use food rest to prevent food drop in the bed ridden children.

- The children used to suffers from constipation. Regular bowel movement should be ensured by using stool softeners and laxatives. Also fluid intake must be increased.

• **Alopecia**

- Hair loss occur because of chemotherapy.
- Inform the parents and child about this side effect earlier.
- Encourage the parents to purchase a wig for child before hair fall occurs.
- Child's hair should be cut short and she/he should be made to wear surgical cap to collect fallen hair.
- Parents and child should be reassured that hair will grow again after the treatment stops.

• **Mood changes**

- Shortly after starting steroid therapy, children experience mood changes which range from feeling of well-being and euphoria to depression and irritability.
- Parents should be made aware of these behaviour changes.

• **Parental support and guidance**

- Nurses should continually guide, support and help parents to adjust to this disease condition.
- Parents should encouraged to express their feeling, fear, grief and concerns.
- Provide emotional support to the parents continuously.

Nursing Diagnosis: The key diagnosis Patients with burkitt lymphoma can be marked on the basis of assessment results.

1. Ineffective breathing pattern related to decreased lung expansion.
2. Retrosternal pain related to mediastinal lymphadenopathy.
3. Altered nutritional pattern less than body requirement related to consequences of chemotherapy (anorexia, gastric irritation, taste distortion, nausea).
4. Risk of fluid volume deficit related to impaired intake of fluid.
5. Risk of infection related to inadequate secondary defense and immunosuppressin. E.g bone marrow suppression (dose limiting side effect of chemotherapy and radiation.

6. Risk for altered mucus membranes related to side effect of some chemotherapeutic agent.
7. Risk of altered family process related to situational/transitional crisis (long term illness, change in roles/economic status).

EXPECTED OUTCOMES OF THE PATIENT

Expected outcomes of patients may include:

1. Ineffective breathing pattern associated with decreased lung enlargement

Expected Outcome

- Patients should maintain an efficient breathing pattern, signs of rapid shallow breathing at normal rate and depth, and absence of shortness in breathing.
- The client will be establish the respiratory rate within limits.

2. Retrosternal pain related to mediastinal lymphadenopathy

Expected outcome:

- The pain will be minimized and patient will feel relaxed and comfortable.

3. Altered dietary pattern Lower than the necessity of the body linked to Chemotherapy symptoms (anorexia, gastric pain, taste disturbance, nausea)

Expected Outcome

- The normal nutritional pattern will be maintained

4. Risk of infection due to insufficient secondary protection and immunosuppression. For example suppression of bone marrow (dose limiting side effect of chemotherapy and radiation)

Expected outcome

- The patient will be maintain temperature and achieve healing as soon as possible.
- Identification of risk and participating in prevention of infection.

5. Risk of altered mucus membranes due to side effects of some chemotherapy agent.

Expected outcome

- Present intact mucous membranes that are white, moist, and free from inflammation / ulceration.
- Give the demonstration of different techniques to maintain/restore integrity of oral mucosa.
- The normal skin integrity of the mucus membrane will be maintained.

Continuing Care: Patient reference can help the patient handle the transition from hospital to home. The nurse at Home assesses the success of the patient at home and the way the family progresses and patients cope with chemotherapy and radiation therapy. The nurse reinforces the concerns that the patient or the family may not have asked Before the patient is back at home and is traying to Establish new rules trends in study.

Collaborative Probles/Potential Complications¹¹

In the basis of the evaluation results, following this can include possible complications:

- Tumour related complication
 - SVC syndrome
 - Spinal cord compression
 - Pleural cord compression
 - Airway/Pharyngeal obstruction
- Metabolic Complication
 - Tumour lysis
 - Syndrome of inappropriate antidiuretic hormone secretion
 - Hypo/Hyperglycemia
- Gastrointestinal complication
 - Bleeding and obstruction
- Heamatological complication
 - Bone marrow infiltration
 - Pancytopenia

DISCUSSION

Burkitt lymphoma (BL) is common in sub-Saharan Africa (SSA). In high income countries, BL is highly curable with chemotherapy.

However, there are few prospective studies from SSA describing non pediatric BL and no regional standard of care. Thirty five participants age 15 years or older with newly diagnosed BL were enrolled in Malawi from 2013 to 2018. Chemotherapy was administered according to institutional guidelines, with concurrent antiretroviral therapy if HIV infected. Median age was 21 years (range, 15-61) and 15 participants (43%) were HIV infected. Twenty seven participants (77%) had stage III to IV disease, and 19 (54%) had Eastern Cooperative Oncology Group performance status ≥ 1 . Among HIV infected participants, median CD4 count was 130 (range, 29-605) and 10 (67%) had suppressed HIV viral load. Four participants (11%) died before receiving chemotherapy. First line chemotherapy consisted of: cyclophosphamide, doxorubicin, vincristine, and prednisone (CHOP) [n = 22 (71%)] ; infusion aletoposide, prednisolone, vincristine, cyclophosphamide, and doxorubicin [n = 4 (13%)] ; high dose methotrexate based chemotherapy [n = 4 (13%)] ; and rituximab plus CHOP [n = 1 (3%)]. Among 28 evaluable participants, 14 (50%) achieved a complete response. Median overall survival (OS) was 7 months; 1-year OS was 40% [95% confidence interval (CI), 24%-56%]. Sixteen (73%) of 22 deaths were a result of disease progression. Compared with CHOP, more intensive chemotherapy was associated with decreased mortality (hazard ratio, 0.24; 95% CI, 0.05-1.02; $P = .05$). This is among the best characterized prospective cohorts of nonpediatric BL in SSA. Most deaths resulted from progressive BL. Patients who received more intensive therapy seemed to have better outcomes.¹²

Informed Consent:

The patients and their family have been given details before taking this case and the patient and their families have received informed consent.

CONCLUSION

Burkitt's lymphoma is not common, fast moving childhood malignant tumor with varying clinical sign and symptoms. It is not common in Indian population dissuade the doctors from using it as part of the differential condition. The value of strong opinion of the clinician for the diagnosis of the disease as early as possible. This condition is an outstanding example of the value of early diagnosis and appropriate care, which has proved to be life-

saving for the child.

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Case Report on Extrahepatic Portal Venous Obstruction

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How to cite this article:

Stephina Immaculate V., Nagalakshmi E., Tamizharasi K. Case Report on Extrahepatic Portal Venous Obstruction. Int J Pediatr Nurs. 2024;10(1):37–40.

Abstract

Extra Hepatic Portal Venous Obstruction (EHPVO) is an major cause of Portal Hypertension. Pediatric EHPVO is idiopathic in most of the cases. A child who had normal growth and development, having complaints similar to upper GI bleeding underwent video Oesophago Gastro Duodenoscopy (VOGD Scopy) and was found having sclerosed Oesophageal varices in the form of snake like pattern over the entire mucosa. Child was treated with Sclerotherapy.

Keywords: EHPVO; Portal hypertension; Esophageal varices; Sclerotherapy.

Clinical Report of Patient: An 8 year old child admitted to hospital with complaints of hematemesis, sudden in onset, consistent blood clots, in large bouts. Child had melena episode, low grade fever, and per abdomen no organomegaly found. Child is diagnosed as a case of Grade II Esophageal varices, Extrahepatic portal venous obstruction with Portal Hypertension. On Physical examination had a soft non tender abdomen with significant splenomegaly. Child was treated with Inj. Octreotide infusion 1mcg/kg bolus, then IV infusion 1mcg/kg/hour for 24 hours according to body weight, Tab. Propranolol 40 mg ¼ Bd, Tab. Rantac ½ Bd, and child got sclerosed of esophageal varices for the entire mucosa. After sclerotic therapy child had no evidence of bleeding. But child was advised to continue sclerotherapy once in every 3 months till gets relieved from variceal recurrences.

INTRODUCTION

Extrahepatic portal vein obstruction (EHPVO) is commonly due to portal vein thrombosis,

resulting in portal hypertension, and is a major cause of upper GI bleeding in children.

Definition

EHPVO is characterized by cavernomatous transformation of Extrahepatic portal vein as which results in portal hypertension and its consequences. The common site where it occurs is portal vein and at the junction of splenoportal axis.¹

Incidence

According to the WHO, EHPVO is considered as a rare disease with 0.05% prevalence. But in few developing countries, amounts to 30–55% of variceal bleed and 70% of pediatric patients

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Received on: 08.11.2023

Accepted on: 02.01.2023

with portal hypertension. Most the data in India shows that EHPVO is the cause for 54% of portal hypertension and 85-92% of bleeding of upper gastrointestinal tract in children.¹

Etiology

The etiology is heterogeneous with respect to age and geographical locations:¹

1. Anomalies of Portal vein such as agenesis, atresia or stenosis.
2. Venous anomalies and anomalies of vitelline vein.
3. Gene mutation, activated protein C resistance and myeloproliferative disorders.
4. Umbilical Sepsis and Umbilical vein catheterization.
5. Other causes include omphalitis, neonatal sepsis and portal vein.
6. Other causes include any prothrombic state that can induce thrombus formation like pancreatitis, omphalitis, neonatal sepsis and direct injury to portal vein.

Pathology

Portal cavernoma is the hallmark of EHPVO. This thrombus formation leads to absence of bile flow in the portal vein and results in formation of collateral vessels in common bile duct with transportation of bile to liver. Cavernoma formations can occur in any of anatomical structures present around the liver. The formed collateral vessels are inadequate to decompress the portal pressure which produce porto-systemic shunt and results in esophageal varices.

EHPVO Classification

Site	Type 1:	Only trunk involved
	Type 2:	Only branch: 2a-One; 2b-both branches
	Type 3:	Involve type 1 and type 2
Presentation	R:	Recent
	Ch:	Chronic (with portal cavernoma and PHT)
Type of underlying liver disease	C:	Cirrhotic
	N:	Noncirrhotic diseases of liver
	H:	Hepatocellular carcinoma and other near by malignancies
	L:	Post liver transplantation
	A:	Absence of underlying liver disease

Degree of portal venous system occlusion	I:	Incomplete flow to the portal vein as seen radiographically
	T:	Total no flow in portal vein lumen on imaging
Extent of PV system occlusion	S:	Splenic vein
	M:	Mesenteric vein or both

Clinical Features¹

Clinically, it is manifested as esophageal and/or gastric varices, foregut bleeding, splenomegaly, hypersplenism, growth retardation and/or neurocognitive impairment:

1. **Variceal Bleeding:** It can manifest as a sudden episode or secondary to a precipitating event. More often than not, EHPVO patients tolerate bleeding episodes better.
2. **Ascites:** Ascites is usually transudative and transient, seen during episodes of hemorrhage or immediately following surgery.
3. **Growth Retardation:** Growth retardation is because of reduced hepatic portal flow which deprives the body of hepatotropic hormones.
4. **Splenomegaly and Hypersplenism**
Splenomegaly: It is the second common form that is present with abdominal mass and pain. Mild enlargement of spleen is seen in 40 - 80% of these patients.
5. **Portal Biliopathy/Portal Cavernoma Cholangiopathy (PCC):** PCC means any abnormalities of intra or extrahepatic bile ducts and gallbladder wall which are noticed on ERCP and ERCP changes in portal biliopathy are classified as;

Type I: Involvement of only extrahepatic bile duct.

Type II: Involvement of only intrahepatic bile duct.

Type IIIa: Involvement of extrahepatic and unilateral intrahepatic bile duct.

Type IIIb: Involvement of extrahepatic and intrahepatic ducts bilaterally.

DIAGNOSIS

A clinical diagnosis can be made with a detailed history and physical examination demonstrating splenomegaly.

Thrombosed portal vein, cavernoma formation is evidenced on USG.

Other Noninvasive imaging studies like CT angiography and MR angiography are an alternative for invasive splenoportography.³

MANAGEMENT

It includes the treatment of variceal bleeding, growth retardation, portal biliopathy, hypersplenism, and massive splenomegaly. Therapeutic options range from conservative medical therapy, endotherapy and endoscopic variceal ligation to surgical intervention.³

Treatment of Variceal Bleed Medical Management Acute variceal hemorrhage requires emergency treatment. In common the treatment options available are – Medical management, endoscopic variceal obliteration and surgical options.

In an acute variceal bleeding, somatostatin/octreotide/terlipressin can decrease the variceal pressure and help in stabilizing the patient before an endoscopic therapeutic intervention.

Endoscopic sclerotherapy (EST) and endoscopic variceal ligation (EVL) are successful means to achieve hemostasis with success upto 96%.

Endoscopic Sclerotherapy (EST) is well established treatment for bleeding GI varices, accomplishes vascular obliteration by injection of a sclerosing agent. When Sclerotic agents are injected into the site or adjacent to blood vessels it causes vascular thrombosis and endothelial damage leading to endofibrosis and vascular obliteration.

The most commonly used sclerosants are the synthetic chemicals and fatty acid derivatives like sodium tetradecyl sulfate, polidocanol, sodium morrhuate and ethanolamine oleate.⁵

Pediatric dose is not standardly prescribed for the sclerosants. Many pediatric GI specialist use 1/4th of adult dose for less than 12 years of age, depending upon the size.

Technique for Sclerotherapy: To manage bleeding, a sclerosant is sent into the cavity with a sclerotherapy needle through an endoscope. In children usually 25 gauge needle is used. Sclerosants may be injected into variceal locations. The sclerosants induce the thrombosis and occlusion of the lumen of the varix. Paravariceal injection, occludes the varix by tamponade and induces fibrosis of tissue around the varix. It can sometimes cause temporary bleeding during the procedure. There is no evidence that one technique is better than the other.⁵

Endoscopic variceal ligation (EVL) is the procedure of choice in primary prophylaxis. EST is effective in eradicating esophageal varices in 88–100% cases. Initially endoscopy is done to detect the severity and site of varix. 5-10 bands are placed from gastroesophageal junction and progressing upward to 5-8 cm distance. 2–4 sessions are required to treat recurrence of variceal bleeding with an interval of 2–4 weeks.

SURGERY

When the bleeding cannot be controlled, emergency surgery such as shunt procedures or devascularization is required. Surgery is done when there is failure of endoscopic management or bleeding is not controlled to endoscopic treatment.

The preferred surgical interventions are portosystemic shunts (PSS) and ablative procedures.

Porto-Systemic Shunts (PSS) PSS diverts blood flow from the high pressure portal circulation to low pressure systemic circulation by anastomosis between a tributary of the portal vein (splenic, superior mesenteric, and left gastric, left gastroepiploic) and a systemic vein (renal, inferior vena cava, and adrenal). The shunts may be either selective or non selective.⁴

Variceal Ablative Procedures These procedures include splenectomy alone or esophageal devascularization. These procedures are indicated when no suitable vein for shunt is available or as salvage therapy for failed endoscopic variceal bleeding control.⁴

SUMMARY

The prognosis is good in children with EHPVO without cirrhosis. During acute bleeding, pediatric nurses are responsible for maintain of airway with intubation and carefully monitor the child who is on octreotide administration. Children should follow up for every 3–6 months. Nurses responsibility is to educate the parents on further sclerotherapy and make adequate visits to the hospital for the same.

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Standard journal article

[1] Flink H, Tegelberg Å, Thörn M, Lagerlöf F. Effect of oral iron supplementation on unstimulated salivary flow rate: A randomized, double-blind, placebo-controlled trial. *J Oral Pathol Med* 2006; 35: 540–7.

[2] Twetman S, Axelsson S, Dahlgren H, Holm AK, Källestål C, Lagerlöf F, et al. Caries-preventive effect of fluoride toothpaste: A systematic review. *Acta Odontol Scand* 2003; 61: 347–55.

Article in supplement or special issue

[3] Fleischer W, Reimer K. Povidone-iodine antiseptics. State of the art. *Dermatology* 1997; 195 Suppl 2: 3–9.

Corporate (collective) author

[4] American Academy of Periodontology. Sonic and ultrasonic scalers in periodontics. *J Periodontol* 2000; 71: 1792–801.

Unpublished article

[5] Garoushi S, Lassila LV, Tezvergil A, Vallittu PK. Static and fatigue compression test for particulate filler composite resin with fiber-reinforced composite substructure. *Dent Mater* 2006.

Personal author(s)

[6] Hosmer D, Lemeshow S. Applied logistic regression, 2nd edn. New York: Wiley-Interscience; 2000.

Chapter in book

[7] Nauntofte B, Tenovou J, Lagerlöf F. Secretion and composition of saliva. In: Fejerskov O,

Kidd EAM, editors. Dental caries: The disease and its clinical management. Oxford: Blackwell Munksgaard; 2003. pp 7–27.

No author given

[8] World Health Organization. Oral health surveys - basic methods, 4th edn. Geneva: World Health Organization; 1997.

Reference from electronic media

[9] National Statistics Online – Trends in suicide by method in England and Wales, 1979–2001. www.statistics.gov.uk/downloads/theme_health/HSQ20.pdf (accessed Jan 24, 2005): 7–18. Only verified references against the original documents should be cited. Authors are responsible for the accuracy and completeness of their references and for correct text citation. The number of reference should be kept limited to 20 in case of major communications and 10 for short communications.

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