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A study to assess the knowledge on Wolff Parkinson's white syndrome among

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Abstract

The present aim of the study was to assess the knowledge on Wolff Parkinson's White Syndrome among staff nurses at Saveetha Medical College and Hospital. Method and materials A quantitative approach with descriptive research design was adopted for the present study. 50 staff nurses were selected by using non-probability purposive sampling technique. A self-structured method questionnaire was used to collect both the demographic data and the existing level of knowledge on Wolff Parkinson's White Syndrome among staff nurses.

Result: Among 50 staff nurses, the mean score of existing level of knowledge on Wolff Parkinson's White Syndrome among staff nurses was found to be 14.62 with standard deviation 2.49. Around 31(62%) of staff nurses had moderate level of knowledge on Wolff Parkinson's White Syndrome

Conclusion: hence the findings of present study concluded that, the knowledge among staff nurses on Wolff Parkinson's White Syndrome should be improved to provide quality care.

Keywords: Wolff Parkinson's white syndrome, tachycardia, knowledge, staff nurses

Introduction

Wolff Parkinson white syndrome is rare congenital abnormality that involves the presence of abnormal electrical conductive circuits between the atria and ventricles ^[1]. It is a extra electrical pathway between the upper and lower heart chambers, causes a rapid heartbeat. ^[2] This doesn't lead to life threatening but ends up with serious heart problems, now new methods has been adopted and curative treatment of wolfs Parkinson syndrome is done by radiofrequency ablation ^[3]. The cause for wolfs Parkinson syndrome is idiopathic, that is random in general population and also due to inherited auto somanal dominant tract ^[4] WPW end with paroxysm of tachycardia and had abnormality in electrocardiography and currents this also called as congenital inheritance, involving abnormal conductive cardiac tissues between atria and ventricles, that association with supraventricular tachycardia (SVT).^[5] The incidence of newly recovered cases were approximately 4 out per one death rate of 0.0015 ^[6]. Thus a study enables that, knowledge on exact cause on WPW syndrome on exact cause on WPW syndrome on exact cause on WPW syndrome is secondary, the pathogenesis and functional and structural abnormality need to be evolved ^[7]. The purpose of the study (1) to assess the knowledge regarding Wolff Parkinson's White Syndrome among staff nurses (2) to find out the association between the existing levels of knowledge regarding Wolff Parkinson's White Syndrome among staff nurses with their selected demographic variables.

Methods and Materials

The quantitative approach with descriptive research design was adopted for the present study. After obtaining ethical clearance from the Institutional Ethical Committee (IEC) of Saveetha Institute of Medical And Technical Sciences and a formal permission from the Department head of Obstetrics and Gynaecology Unit, the study was conducted. A total of 50 staff nurses in OBG ward (n=50) and who met the inclusion criteria were selected as the study participants by using non probability purposive sampling technique. The inclusion criteria for the study participants were the staff nurses who are willing to participate in the study, who are able to speak and read Tamil and English and who are available during the time of data collection. The exclusion criteria for the study participants were who are not willing to participate in the study. The purpose of the study was explained by the investigator to each of the staff nurses and a oral informed consent was obtained before collecting the data. The demographic data and the current level of knowledge was collected was obtained from them.

The demographic data and the existing level of knowledge was collected by using the self-structured questionnaire and the collected data were tabulated and analysed by using descriptive and inferential statistics.

Results and Discussion

Section-A: Demographic Characteristics

Among 50 staff nurses, most of the staff nurses 27(54%) were aged between 20–25 years, 50(100%) were female, 29(58%) were Hindus, 24(48%) were ANM/GNM and 23(46%) had 4 – 6 years of experience.

The present study is supported by Gherardo Finocchiaro, *et al.*, (2017) who reported in their study the vast majority of patients were men (n= 16; 84%) and white Europeans (n = 17; 89%). The mean age at death was 31 ± 15 years. Five cases (26%) were asymptomatic. Of the 14 symptomatic patients, 13 (68%) had reported palpitation, 1(5%) experienced syncope and 2 had documented supraventricular tachycardia at hospital admission. Five individuals (26%) had a previous ablation, 4 of which were associated with successful resolution of the WPW pattern on the ECG. In the majority of cases (n = 16; 84%), SCD occurred at rest. The mean heart weight was 408 ± 105 g. In 10 patients (53%), the autopsy revealed a normal heart, 5 cases showed definitive cardiac pathology (4 cases of

hypertrophic cardiomyopathy [HCM] and 1 case of cardiac sarcoid), and 4 cases demonstrated autopsy findings of uncertain significance (2 cases of idiopathic left ventricular hypertrophy, 1 with idiopathic fibrosis, and 1 with an enlarged left ventricle) [8].

Section B: Assessment of level of knowledge on Wolff Parkinson’s white syndrome among staff nurses.

The assessment of level of knowledge on Wolff Parkinson’s White Syndrome among staff nurses revealed that 31(62%) had moderate knowledge, 16(32%) had adequate knowledge and 3(6%) had inadequate knowledge [Table 1 and Figure 1].

The mean score of knowledge scores on Wolff Parkinson’s White Syndrome among staff nurses was 14.62 with standard deviation 2.49 with minimum score of 9.0 and maximum score of 19.0 [Table 2].

Table 1: Frequency and percentage distribution of level of knowledge on Wolff Parkinson’s White Syndrome among staff nurses N = 50

Level of Knowledge	No.	%
Inadequate (0 - 10)	3	6.0
Moderate (11 – 15)	31	62.0
Adequate (16 – 20)	16	32.0

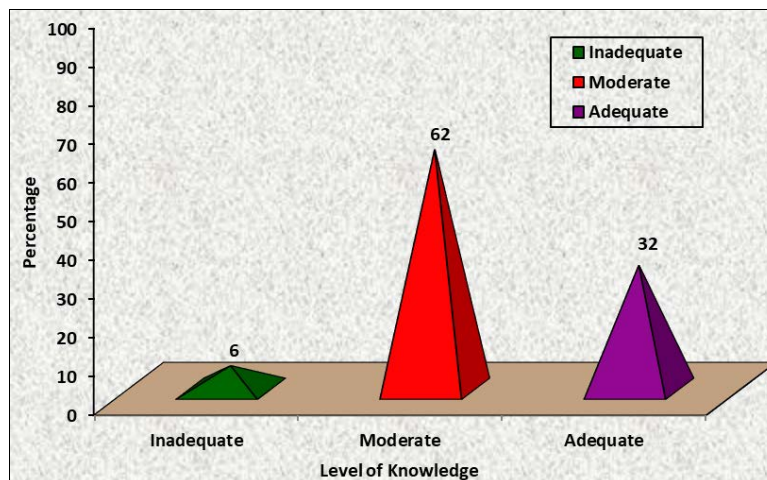


Fig 1: Percentage distribution of level of knowledge on Wolff Parkinson’s White Syndrome among staff nurses

Table 2: Assessment of knowledge scores on Wolff Parkinson’s White Syndrome among staff nurses N = 50

Knowledge	Mean
Minimum Score	9.0
Maximum Score	19.0
Mean	14.62
Standard Deviation	2.49

The present study findings is supported by Anne Evan (2001) conducted a study which discusses the importance of critical care and emergency nurses having an understanding of why pre-existing cardiac disorders can influence antiarrhythmic treatment. The patient with a pre-excitation syndrome is usually managed in a coronary care unit. However, these patients may be admitted to an intensive care unit (ICU) with complications of Wolff Parkinson White (WPW) syndrome; for example post cardiopulmonary arrest or WPW as a co-morbidity. It is common practice in critical care areas for registered nurses to administer antiarrhythmics without a doctor’s prescription in life-threatening situations. Therefore, the critical care

nurse must have knowledge of the implications of administering standard antiarrhythmic agents if this patient reverts into a tachyarrhythmia. If antiarrhythmics are administered that are contraindicated in patients with WPW syndrome, then there is potential for deleterious effects. This case study highlights the different pharmacological agents for treating tachyarrhythmia’s in a patient with WPW syndrome. The paper outlines the correct treatment and discusses the deleterious effects of incorrect administration of drugs in WPW syndrome.[9]

Section C: Association of level of knowledge with selected demographic variables.

The findings of the analysis revealed demographic variable education had shown statistically significant association with level of knowledge on Wolff Parkinson’s White Syndrome among staff nurses at $p < 0.05$ level and the other demographic variables had not shown statistically significant association with level of knowledge on Wolff Parkinson’s White Syndrome among staff nurses.

Table 3: Association of level of knowledge on Wolff Parkinson's White Syndrome among staff nurses with their selected demographic variables N = 50

Demographic Variables	Inadequate		Moderate		Adequate		Chi-Square Value
	No.	%	No.	%	No.	%	
Age							
20 – 25 years	1	2.0	17	34.0	9	18.0	$\chi^2=2.040$ d.f=6 p = 0.916 N.S
25 – 30 years	2	4.0	10	20.0	5	10.0	
30 – 35 years	0	0	3	6.0	1	2.0	
Above 35 years	0	0	1	2.0	1	2.0	
Gender							
Male	-	-	-	-	-	-	-
Female	3	6.0	31	62.0	16	32.0	
Religion							
Hindu	0	0	18	36.0	11	22.0	$\chi^2=6.563$ d.f=4 p = 0.161 N.S
Christian	3	6.0	11	22.0	5	10.0	
Muslim	0	0	2	4.0	0	0	
Others	-	-	-	-	-	-	
Education							
ANM/GNM	0	0	18	36.0	6	12.0	$\chi^2=11.898$ d.f=4 p = 0.018 S*
P.B.B.Sc. Nursing	3	6.0	5	10.0	4	8.0	
B.Sc. Nursing	0	0	8	16.0	6	12.0	
M.Sc. Nursing	-	-	-	-	-	-	
Years of experience							
1 – 3 years	2	4.0	14	28.0	6	12.0	$\chi^2=4.721$ d.f=6 p = 0.580 N.S
4 – 6 years	1	2.0	15	30.0	7	14.0	
7 – 10 years	0	0	1	2.0	3	6.0	
>10 years	0	0	1	2.0	0	0	

*p<0.05, S – Significant, N.S – Not Significant

The present study is supported by Mihoko Kawabata, *et al.*, (2016) [10] who conducted a retrospective multicenter study which included 96 patients (56 ± 15 years, 72 male) with WPW syndrome and AF undergoing Kent bundle ablation. Some patients underwent simultaneous pulmonary vein isolation (PVI) for AF. The incidence of post-procedural AF was examined. Sixty-four patients underwent only Kent bundle ablation (Kent-only group) and 32 also underwent PVI (+PVI group). There was no significant difference in the basic patient characteristics between the groups. Additional PVI did not improve the freedom from residual AF compared to Kent bundle ablation alone (p = 0.53). In the Kent-only group, AF episodes remained in 25.0% during the follow-up (709 days). A univariate analysis showed that age ≥60 years, left atrial dimension ≥38 mm, B-type natriuretic peptide (BNP) ≥40 pg/ml, and concomitant hypertension were predictive factors for residual AF. However, in the multivariate analysis, only BNP ≥40 pg/ml remained as an independent predictive factor (HR = 17.1 and CI: 2.3–128.2; p = 0.006). The study concluded that among patients with WPW syndrome and AF, Kent bundle ablation alone may have a sufficient clinical impact of preventing recurrence of AF in select patients. Screening the NP level would help decide the strategy to manage those patients [10].

Conclusion

From the findings of the present study it was concluded that majority of the staff nurses had moderate knowledge on Wolff Parkinson's White Syndrome. These finding stresses the need to educate the staff nurses more on Wolff Parkinson's White Syndrome by imparting health education.

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Conflict of Interest

Author's declare no conflict of interest.

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