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Effectiveness of Interventional Programme on Neck Disability among Patients Undergone Thyroidectomy

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Abstract: ***The present study was conducted to assess the effectiveness of interventional programme on neck disability among patients undergone thyroidectomy in Govt. Medical College Hospital, Kottayam. A quantitative approach was used for the study. The study was theoretically supported by Betty Neumans' system model. A total of 60 patients, 30 each in control and experimental group, were selected for the study using non probability purposive sampling technique. The data were collected using socio personal and clinical data sheet, Neck Disability Index (modified). Interventional programme was provided to experimental group and the control group received routine postoperative care. Interventional programme was provided from the first post operative day and continued till14th day. Post test were conducted on 4th and 14th post operative day. The data were analyzed by frequency, percentage and Mann Whitney U test. The results showed that during first post test 82.33% of subjects in the control group and 100% of subjects in the experimental group had moderate neck disability and mild neck disability respectively. During second post test 63.33% of subjects in the control group and 66.67% of subjects in the experimental group had moderate and no neck disability. The U value showed that the interventional programme was effective in improving neck disability. The researcher concluded that even though the interventional programme does not cost extra money to patients, these interventions are helpful for improving their comfort and preventing complications in post operative periods.***

Keywords: Effectiveness, Interventional programme, neck disability, patients undergone thyroidectomy

1. Introduction

Thyroid disease is one of the most common health problems in all over the world. Thyroid gland is the most vital hormone gland and it has an important role in the human growth and development.[1]It helps to regulate many body functions.[1]It has been increasing by an average of 6.4% every year in the course of the recent 10 years, and thyroid cancer mortality has been expanding by 0.9% every year over a similar period.[2]Thyroidectomy is one of the most commonly performed neck surgeries.[3]Post thyroidectomy, the patients have postoperative occipital headaches, posterior neck pain, neck and shoulder movement problems, stiffness in the shoulders, and limitation of cervical spine range of motion as a result of the fixed position of neck during and after thyroidectomy surgery.[4]These factors are most likely caused by injury of the skin, extra - laryngeal muscles or nerves, or as a psychological reaction to neck surgery. The above clinical features may be occurring for a long - time following surgery and may affect negatively on the patients' quality of life.[5]

Nurses play an important role in informing patients about the signs and symptoms of potential complications after total thyroidectomy, also should assess pain severity and educate patient neck stretching exercises, which should be practiced on and which the patients have the less pain level or have the ability to move their head, neck and shoulders freely. In addition to, written and verbal information about the surgery and neck stretching exercises, postoperative instructions about medications, wound care, nutrition, activities of daily living and follow - up should be given to the patients. It provides neuromuscular coordination and flexibility in patients by reducing pain and muscle weakness. These exercises should be performed in early postoperative period and a nurse should teach the patient these exercises and ensure the patient's comfort after thyroidectomy.[6]

2. Objectives

1) To assess the neck disability among patients undergone thyroidectomy
2) To evaluate the effectiveness of interventional programme on neck disability among patients undergone thyroidectomy

3. Materials and Methods

A quantitative approach was used for the study. The study design selected was post test only control group design. Non probability purposive sampling technique was employed to select 60 samples undergone thyroidectomy in Govt. College Hospital, Kottayam. All patients who had undergone thyroidectomy willing to participate in the study, able to read and communicate Malayalam or English, in the age group of 21 - 60 and having mobile phone facility were included in the study. Patients with a history of pulmonary and neurological disease, cervical spondylosis, Gastro Oesophageal Reflux Disease, history of vocal cord paralysis and history of previous neck surgery were excluded from the study. Interventional programme include diet, activity, wound care and exercises. The stretching exercises started from 1st post operative day. Tools and techniques used to collect data in the present study were the following: Socio personal and clinical data sheet and Neck disability was assessed by Neck disability Index. Post test were conducted

on 4th and 14th post operative day. Frequency, percentage and Mann Whitney U test were used for data analysis.

In this research study a set of interventions were used to control the post thyroidectomy neck disability of patients undergone thyroidectomy. The interventions to control neck disability include stretching exercise programme, which is carried out during the course of hospitalization and telephonic follow up will be continued till 14th day of discharge. The investigator taught the client regarding the exercises day before surgery and asked to do return demonstration at the same time. The investigator implemented the interventional programme from the first post operative day till 14th day of discharge. During the hospitalization the investigator visited the patient thrice daily and implemented the exercise programmes and measures for improving the neck disability. Then telephonic follow up continued after discharge.

4. Results

4.1 Socio personal data of patients undergone thyroidectomy

Among 60 patients, 36.67% of subjects in the control group and experimental group belonged to the age group of 41 - 50. In the control group 36.67% of subjects belonged to the age group of 51 - 60 whereas in the experimental group 23.33% of the subjects were in the age group of 51 - 60. The data showed that 66.67% of subjects in the control group and 80% of subjects in the experimental group were females. The data depicted that 90% of the subjects in the control and 73.33% of the subjects in the experimental group were married. 6.67 % and 10% of subjects were unmarried in the control and experimental group respectively. The data revealed that in the control group 50% of subjects had high school education and 26.67% of subjects had higher secondary education. In the experimental group 46.67% of subjects studied up to higher secondary school and 16.67% of subjects studied up to primary school. The data showed that 50% of subjects in the control group and 20% of subjects in the experimental group were private employees. 33.33% of subjects in the control group and 53.34% of subjects in the experimental group were unemployed. In control group, 56.67% of subjects belonged to BPL category and 43.33% of subjects belonged to APL category. In experimental group, 66.67% of subjects belonged to BPL category and 33.33% belonged to APL category.

4.2. Clinical data of patients undergone thyroidectomy

The data depicted that 50% of subjects in the control group and 66.67% of subjects in the experimental group had no comorbidities. In the control group 26.67% and 20% had hypertension and diabetes mellitus respectively. In the experimental group 16.67% and 10% had hypertension and diabetes mellitus respectively. The data depicted that 73.33% of subjects in the control group and 86.67% of subjects in the experimental group had no unhealthy habits. Data showed that 96.67% of subjects in the control group and 93.33% of subjects in the experimental group underwent total thyroidectomy. The data showed that 40% and 30% of subjects in the control group had thyroid carcinoma and multinodular goitre respectively.30% of subjects each in the experimental group had thyroid carcinoma and multinodular goitre. The data presented depicts that duration after diagnosis of thyroid disorder in more than 1 month for 53.33% of subjects in the control group and 56.67% of subjects in the experimental group.

4.3. Neck disability among patients undergone thyroidectomy

Table 1: Frequency distribution and percentage of patients undergone thyroidectomy based on severity of neck disability during post test 1 and post test 2 (n = 60)

Severity of neck disability	Control (n=30)		Experimental (n=30)	
	f	%	f	%
Post test 1				
No (0)	0	0	0	0
Mild (1 - 9)	5	16.67	30	100
Moderate (10 - 19)	25	83.33	0	0
Severe (20 - 28)	0	0	0	0
Post test 2				
No (0)	6	20.00	20	66.67
Mild (1 - 9)	5	16.67	10	33.33
Moderate (10 - 19)	19	63.33	0	0
Severe (20 - 28)	0	0	0	0

The data presented in the table 1 depicts that moderate neck disability was experienced by 83.33% of subjects in control group during post test 1. In the experimental group 100% experienced mild neck disability during post test 2 and in the control group, 63.33% of subjects had moderate neck disability during Post test 2. In the experimental group 66.67% and 33.33% of subjects had no neck disability and mild neck disability respectively during post test 2.

4.4. Effectiveness of interventional programme on neck disability among patients undergone thyroidectomy

H_{01}: There is no significant difference in neck disability among patients undergone thyroidectomy in control and experimental group.

Table 2: Median and Inter Quartile Range (IQR) of severity of neck disability among patients undergone thyroidectomy based on post test 1 and post test 2 (n=60)

Group	Severity of Neck disability			
	Post test 1		Post test 2	
	Median	IQR	Median	IQR
Control (n=30)	13	8	11	14
Experimental (n=30)	8	2	5	0

Table 3: Mean rank, sum of ranks and U value of post test 1 and post test 2 scores of severity of neck disability among patients undergone thyroidectomy in control and experimental group (n=60)

Post operative day	Severity of Neck disability				
	Group	Mean rank	Sum of ranks	U	p
Post test 1	Control (n=30)	43.62	1308.50	56.50	0.00
	Experimental (n=30)	17.38	521.50		
Post test 2	Control (n=30)	41.50	1245.00	120.00	0.00
	Experimental (n=30)	19.50	585.00		

Table 3 depicts that the obtained U value of severity of neck disability was statistically significant at 0.01 level during post test 1. This shows that there was significant difference in neck disability among subjects undergoing thyroidectomy between control and experimental group during post test 1. It indicates that intervention is effective in reducing the neck disability after thyroidectomy.

5. Conclusion

The study of effectiveness of interventional programme on neck disability among patients undergone thyroidectomy was a successful research work. Based on the findings of the study, the following conclusions were drawn. Patients who underwent thyroidectomy had neck disability and the interventional programme was found effective in improving neck disability. Interventional programme does not cost extra money to patients. This intervention reduces neck disability of patients, thereby improving their comfort and prevent complications.

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