A Study on the Effect of Position in COPD Patients to Improve Breathing Pattern

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ABSTRACT
From this research study the effect of position in COPD patients to improve breathing pattern could be identified. It is found that 64% of people are preferable in position at 45 o angle with pillow position at 60 o angle within 24% of people and 12% of people is preferable in position at 90 o angle with pillows. In case of severe asthma patient is suggesting the position at 90 o angles with pillows & COPD patient is suggesting the position at 45 o angles with pillows. The client is placed in a fowler's position to reduce the pulmonary venous congestion and relieve the dyspnea. In this study the objective was to find out the effectiveness of breathing pattern through use of comfort devices while positioning for patient with COPD.

Objectives of the study are:
1. To evaluate the effect of position in COPD patients to improve breathing pattern as verbalized by the patient.
2. To find out whether there is any difference in breathing pattern with change of position.
3. To identify the effectiveness of breathing pattern through use of comfort devises while positioning for patient with COPD.

Introduction:
The health history focuses on the physical & functional problem experienced by the patient and the effect of these problems on the patient's life and life style. COPD is a broad classification of disorders including chronic bronchitis, bronchiectasis emphysema and asthma. It is an irreversible condition associated with dyspnea on exertion and reduced airflow in or out of the lungs. It affects over 25% of the adult population. The airflow obstruction that causes a reduction in airflow varies according to the disease. In chronic bronchitis and bronchiolitis, excessive accumulation of mucus and secretions blocks the airway.

In emphysema, the obstruction to oxygen and carbon-di-oxide exchange results from destruction of the walls of the alveoli caused by an overextension of the air spaces in the lung narrow. In asthma the bronchial airways are narrow and restrict the amount of air flowing into the lungs. COPD is considered to be a disease related to an interaction of genetics and the environment.

In semi fowlers position the venous return to the heart and the lungs is reduced, pulmonary congestion is alleviated and impingement of the liver on the diaphragm is minimized. The patient who can breathe only in the upright position may sit on the side of bed with feet supported on a chair the head and arms resting on an over the bed table and lumbosacral spine supported by a pillow. If pulmonary congestion is present, positioning the patient in an armchair is advantageous because this position favours the shift of fluid away from the lungs.

In a fowler's position the patient's head is elevated and the arms are supported on pillows so that the patient sits with arms supported in an arm chair fashion.

The chance for thrombosis increased when knee pillows are used for a long period due to pressure on the blood vessels. This position is used whenever the drainage of the abdominal cavity is desired, to localize infection like peritonitis, to relieve breathing difficulty, to relieve tension on the abdominal sutures and to relax the large muscles of the back and thighs. It also gives the patient a sense of well being and makes it easier for him for self care.

Material and methods:
The method adopted for this study was a questionnaire method. According to Eleanor Watters Treece Javies William Treece.

It is composed of a series of questions that are filled in by all participants in the sample. There are two types open-ended questions and closed ended questions.

Open ended questions: - This question may be broader narrow in nature. Frequently they ask why, what and how etc.

Close-ended questions: - A close ended questions is one in which the respondent’s answer is limited to the choices offered him.

The method of data collection was done by observation and evaluation with the help of questionnaire.

According to the objective prepared for the study, the effect of positions in COPD patients to improve breathing pattern were identified. Different positions were given to patient and analysis was done. It was possible to rank the different position accordingly.

Effect of position as categorized into:
- Position at 45° with pillows.
- Position at 60° with pillows.
- Position at 90° with pillows.

**Table – 1: Effect of position at 45° angle to improve breathing pattern.**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position at 45° with pillows</td>
<td>44</td>
<td>68%</td>
</tr>
</tbody>
</table>

From table one it was found that 68% of patients prefer a position at 45° angle with pillow as patient got ease in breathing at 45° angle.

**Table – 2: Effect of position at 60° angle to improve breathing pattern.**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position at 60° with pillows</td>
<td>15</td>
<td>23%</td>
</tr>
</tbody>
</table>

From table two it was found that 23% of patients prefer a position at 60° angles with pillow as patient got ease in breathing at 60° angles.

**Table – 3: Effect of position at 90° angle to improve breathing pattern.**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position at 90° with pillows</td>
<td>8</td>
<td>12%</td>
</tr>
</tbody>
</table>

From table three it was found that 12% of patients prefer a position at 90° angles with pillow as patient got ease in breathing at 90° angle.

**Figure – 1: Effect of position at various angles to improve breathing pattern.**

**SUMMARY:**

From this research project the effect of position in COPD patients to improve breathing pattern could be identified. It is found that 64% of people are preferable in position at 45° angle with pillow position at 60° angle within 24% of people and 12% of people is preferable in position at 90° angle with pillows. In case of severe asthma patient is suggesting the position at 90° angle with pillows & COPD patient is suggesting the position at 45° angle with pillows.

The client is placed in a fowlers position to reduce the pulmonary venous congestion and relieve the dyspnea. In this study the objective was to find out the effectiveness of breathing pattern through use of comfort devices while positioning for patient with COPD.

**CONCLUSION:**

The study concluded that Objective stated were fulfilled and the outcome to expected result were achieved.

The accuracy and quality of response were observed and analyzed.