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Home-based nursing management of hyperthyroidism in an adult woman: A community case report

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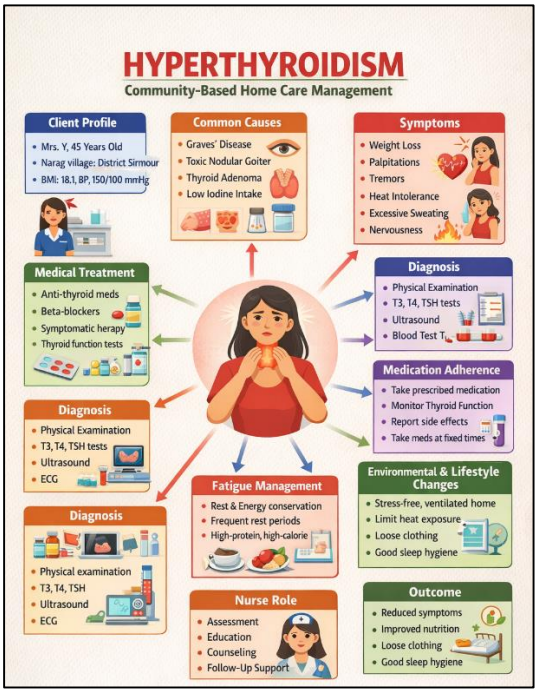
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Abstract:

This case study details the care of Mrs. Y, a 45-year-old woman with hyperthyroidism who lives in Narag village in the Sirmour region of Himachal Pradesh, both at home and in the community. In order to aid in her rehabilitation and avoid problems, the research sought to evaluate her condition, pinpoint relevant variables, carry out nursing interventions, and offer health education. Interviews, physical examinations, and environmental assessments were used to gather data. The customer complained of exhaustion, palpitations, weight loss, and heat sensitivity. Tachycardia and a noticeable thyroid enlargement were among the physical findings. Fatigue, worry, a lack of expertise, and the possibility of reduced cardiac output were among the nursing diagnoses. Dietary advice, stress management, medication compliance, and lifestyle change were the main focuses of the interventions. The client showed better symptom management, a greater comprehension of the problem, and adherence to lifestyle and medical advice after the intervention. The significance of community health nurses in offering comprehensive, evidence-based treatment for endocrine conditions like hyperthyroidism is shown by this instance.

Key words:

Hyperthyroidism, Community Health Nursing, Nursing Care Pan, Health Education.



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1. Introduction:

Excessive production and release of the thyroid hormones triiodothyronine (T3) and thyroxine (T4) cause hyperthyroidism, a common endocrine condition that affects several bodily systems. Graves' disease continues to be the most prevalent cause worldwide, followed by toxic multinodular goitre and thyroid adenoma. The disorder is more common in women than in males and peaks between the ages of 20 and 50. An estimated 1% to 2% of people worldwide are thought to have hyperthyroidism, with greater incidence seen in areas lacking iodine and among women.

Thyroid hormones are essential for controlling brain activity, metabolism, cardiovascular health, and thermoregulation. Clinical symptoms include weight loss, palpitations, anxiety, tremors, heat intolerance, increased hunger, and disturbed sleep are caused by excessive hormone production. Atrial fibrillation, heart failure, osteoporosis, and potentially fatal thyroid storm are among the worst side effects of untreated hyperthyroidism.

To avoid problems and enhance quality of life, early diagnosis and suitable treatment are crucial. Depending on the severity and underlying reason, management usually involves beta-blockers, radioactive iodine therapy, antithyroid drugs, or surgery. But long-term lifestyle changes, consistent monitoring, and treatment compliance are also necessary for optimal management.

Particularly in impoverished and rural areas where access to medical institutions may be restricted, community health nurses are essential in early detection, home-based care, treatment compliance monitoring, and health education. It has been demonstrated that nurse-led treatments, including stress management, nutritional counselling, health education, and family support, enhance patient outcomes and encourage self-management in patients with chronic endocrine diseases. As a result, this case study emphasises how crucial home-based nursing care is to enhancing a client with hyperthyroidism's health and quality of life.

2. Case presentation:

Identification and background:

During a community health nursing posting at Narag village, District Sirmour, a 45-year-old female, Mrs. Y, was identified with symptoms of hyperthyroidism. The client reported experiencing excessive sweating, weight loss, palpitations, and difficulty sleeping for the past for 4 years. The client was not on regular treatment and was unaware of dietary and lifestyle modifications necessary to manage her condition.

Past medical and surgical history:

- History of hyperthyroidism for 4 years.
- No history of surgical procedures.

3. Clinical findings / diagnostic assessment:

General examination (26/02/25):

- Height: 166 cm,
- Weight: 50 kg (BMI 18.1 – Mild Thinness).

Vital signs were:

- Temperature: 96.6°F,
- Pulse: 80 bpm,
- Respiration: 22/min,
- Blood Pressure: 150/100 mmHg.

Findings:

- The client appeared thin, restless, and mildly anxious.
- Neck examination revealed thyroid enlargement.
- Signs of heat intolerance, sweating, and fatigue present.

Diagnosis:

- Hyperthyroidism

Treatment provided:

- Antithyroid medication (as prescribed).
- Beta-blockers for symptom control.
- Adequate rest and balanced diet.
- Regular follow-up for thyroid function tests (T3, T4, TSH).

Nursing Care Plan (based on NANADA):

1. Fatigue related to body's high metabolism and increase energy needs, as evidenced by reduced physical performance and weakness.
2. Anxiety related to fast body functions (Hyper metabolic state), as evidenced by restlessness and rapid heartbeat.
3. Knowledge Deficit related to disease condition and management, as evidenced by patient's verbalization of lack of understanding.

4. Nursing interventions and health education:

1. Fatigue management:

- Encouraged the client to take adequate rest and avoid overexertion.
- Planned daily activities with frequent rest periods to conserve energy.
- Maintained a calm, quiet, and comfortable environment to promote relaxation.
- Advised intake of high-protein and high-calorie foods to meet energy needs.

2. Anxiety reduction:

- Provided emotional support and reassurance to reduce fear and stress.
- Encouraged relaxation techniques such as deep breathing and meditation.
- Advised avoiding stimulants such as coffee or strong tea that may increase anxiety.
- Promoted yoga postures like Balasana and Setubandhasana to calm the mind and body.

3. Nutrition and hydration:

- Encouraged small, frequent meals that are rich in protein and calories.
- Educated the client to avoid iodine-rich foods such as seaweed, fish, and iodized salt.
- Promoted adequate fluid intake to prevent dehydration.
- Monitored weight regularly and encouraged foods that support healthy weight gain.

4. Medication adherence:

- Reinforced the importance of taking prescribed antithyroid medicines regularly.
- Explained the need for periodic thyroid function tests to monitor hormone levels.
- Instructed to report any side effects such as skin rash, sore throat, or fever to the healthcare provider immediately.
- Encouraged maintaining a fixed time for taking medicines daily.

5. Environmental and lifestyle modifications:

- Advised to maintain a quiet, stress-free, and well-ventilated home environment.
- Encouraged avoidance of excessive heat exposure or strenuous exercise.
- Recommended wearing loose and comfortable clothing to help reduce heat intolerance.
- Emphasized the importance of maintaining good personal hygiene and adequate sleep.

6. Health education:

- Provided knowledge about hyperthyroidism, its causes, symptoms, and prevention, enabling the client and family to recognize early warning signs.
- Emphasized the importance of regular follow-up with healthcare providers to monitor thyroid function.
- Advised avoidance of smoking, alcohol, and stress as they may worsen symptoms.
- Encouraged home-based supportive therapies such as yoga, meditation, and relaxation exercises to promote overall well-being.

- Instructed the client and family to maintain a balanced diet and adequate hydration to support recovery.

5. Patient outcome and follow-up:

After consistent nursing care and health education, Mrs. Y demonstrated significant improvement. Her anxiety and fatigue levels reduced, sleep pattern improved, and she reported better tolerance to daily activities. She adhered to dietary and lifestyle modifications, maintained medication schedule, and attended regular follow-up visits. This emphasizes the effectiveness of community-based, nurse-led health education in managing chronic endocrine disorders.

6. Discussion:

As a chronic endocrine condition, hyperthyroidism need ongoing care and monitoring in order to avoid complications and enhance patient outcomes. Common clinical signs such weight loss, anxiety, exhaustion, and thyroid enlargement were shown in this patient, which is in line with findings from other investigations.

Through education, lifestyle changes, and emotional support, nursing management significantly improved the client's condition. Since it encourages medication adherence, early problem detection, and self-care behaviours, patient education is regarded as one of the most crucial aspects of managing hyperthyroidism. Clients who get appropriate instruction exhibit greater symptom management and a higher quality of life, according to studies.

Medication adherence is essential for controlling hormone levels and preventing side effects including thyroid storm and heart failure. The metabolic effects and symptoms of excess thyroid hormones are effectively reduced by beta-blockers and antithyroid medications. In this case, promoting medication compliance significantly decreased the client's symptoms.

Additionally helpful were holistic therapies including yoga, stress reduction, and relaxation treatment. While relaxing techniques aid in lowering anxiety and enhancing physiological stability, stress is believed to exacerbate hyperthyroid symptoms by inciting sympathetic activity. Studies conducted by community-based nurses revealed similar results, showing that lifestyle counselling and supportive care enhanced patients' functional status and general well-being.

Another important element was nutritional counselling, as hyperthyroid patients need enough protein and calories to make up for their elevated metabolic needs. Healthy eating encourages healing and helps stop more weight loss.

The importance of community health nurses in delivering all-encompassing, patient-centered care is demonstrated by this scenario. Particularly in remote areas with limited access to healthcare, nurse-led interventions not only enhance clinical results but also provide patients and families the confidence to actively engage in illness management.

7. Conclusion:

This case report highlights the importance of individualized, home-based nursing management for clients with hyperthyroidism. Comprehensive nursing assessment, targeted interventions, and family involvement were pivotal in promoting recovery. Empowering clients through education about disease management and lifestyle modification can prevent recurrence and improve long-term outcomes. Community health nurses play an essential role in bridging the gap between medical care and community awareness for endocrine health.

8. Ethical considerations:

Patient confidentiality and informed consent were maintained throughout the study. No identifying information is disclosed.

Data Availability: The data supporting the findings of this case report are available from the corresponding author upon reasonable request.

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Use of AI and AI-Assisted Technologies: Artificial Intelligence (AI) tools were utilized solely for the purpose of generating images. No AI-assisted technologies were used in the writing or preparation of the manuscript.

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