JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue

JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)

An International Scholarly Open Access, Peer-reviewed, Refereed Journal

A STUDY TO ASSESS THE KNOWLEDGE ON CARE AFTER RADIOACTIVE IODINE THERAPY AMONG CANCER PATIENTS AT KIDWAI CANCER INSTITUTE, BENGALURU WITH A VIEW TO DEVELOP AN INFORMATION BOOKLET

Mr.Puttaraju T. M.[1] Lecturer, Kidwai College of Nursing, Bengaluru

Dr. Ananda[2] Assistant Professor, Dept of Medical Surgical Nursing, DC TRC and RGICD College of Nursing Bengaluru

Dr. Mala MG [3] Assistant Professor, Dept. Of Community Health Nursing, Kidwai College of Nursing,Bengaluru

ABSTRACT

Background: Radioactive Iodine Therapy (RAI) is widely used in the management of thyroid diseases. Adequate patient knowledge regarding post-therapy care is essential to minimize radiation exposure to caregivers, public, and prevent therapy-related complications.

Aim: To assess the level of knowledge on care after radioactive iodine therapy among post-thyroid patients at Kidwai Cancer Institute, Bengaluru, and to develop an information booklet.

Methodology: A descriptive research design was adopted among 50 post-thyroid patients receiving RAI therapy. Convenient sampling technique was used. Data were collected using a structured interview schedule consisting of demographic variables and 40 knowledge-based items. Descriptive and inferential statistics were used to analyze the data.

Results: Majority of participants (42.5%) demonstrated inadequate knowledge regarding post-RAI care. Only a small proportion displayed adequate knowledge. Demographic variables such as educational status and prior information significantly influenced knowledge scores ($p < 0.05$).

Conclusion: The findings indicate a substantial knowledge deficit among patients receiving RAI therapy. An information booklet was developed to enhance patient awareness and promote safe radiation practices.

Keywords: Radioactive Iodine Therapy, Patient Knowledge, Thyroid Cancer, Radiation Safety, Information Booklet.

1. INTRODUCTION

Radioactive Iodine (I-131) Therapy is a widely used nuclear medicine treatment for hyperthyroidism and thyroid malignancies. After ingestion, I-131 concentrates in thyroid tissue where it destroys abnormal or residual cells. Although effective, patients undergoing RAI therapy can expose others to radiation if proper precautions are not followed.

Globally, thyroid cancer incidences are increasing, particularly among women aged 25–65 years. In India, the prevalence of thyroid disorders and malignancies is steadily rising, making RAI therapy a common modality in tertiary cancer institutes such as Kidwai Cancer Institute.

Post-therapy care includes dietary precautions, radiation safety measures, hygiene, and follow-up protocols. Lack of knowledge may lead to complications such as sialadenitis, radiation thyroiditis, bone marrow suppression, and unnecessary radiation exposure to family members.

Hence, assessing patients' knowledge and developing appropriate educational materials are crucial components of post-therapy care.

2. OBJECTIVES

1. To assess the knowledge of patients receiving radioactive iodine therapy.
2. To determine the association between knowledge and selected demographic variables.
3. To develop an information booklet regarding care after RAI therapy.

3. HYPOTHESIS

- **H_0:** Patients may not have significant knowledge on care after radioactive iodine therapy.
- **H_1:** There will be a significant association between knowledge scores and selected demographic variables.

4. METHODOLOGY

Research Approach:

Non-experimental, descriptive survey approach.

Research Design:

Descriptive research design.

Population:

Post-thyroid patients aged 20–70 years receiving RAI therapy at Kidwai Cancer Institute.

Sample Size:

50 patients.

Sampling Technique:

Convenience sampling.

Inclusion Criteria:

- Patients receiving radioactive iodine therapy.
- Patients willing to participate.
- Able to understand Kannada or English.

Exclusion Criteria:

- Critically ill patients.

- Patients receiving other cancer treatments.

Data Collection Tool:

Structured interview schedule consisting of:

- Part I: Demographic variables
- Part II: Knowledge assessment (40 MCQs)

Scoring:

- Adequate: >75% (>37)
- Moderate: 50–75% (25–37)
- Inadequate: <50% (<25)

Reliability:

Split-half method, r = 0.86.

Data Analysis:

Descriptive statistics (frequency, percentage, mean), inferential statistics (Chi-square test).

5. RESULTS

Section I: Demographic Profile

- Majority (38%) belonged to the age group 31–40 years.
- 70% were females.
- 60% had only primary school education.
- 44% were government employees.
- 40% belonged to a family income below Rs. 10,000.
- 58% had no family history of thyroid cancer.

Section II: Knowledge Scores

- **Mean knowledge score:** 42.5%
- **Majority (42.5%) showed inadequate knowledge** on care after RAI therapy.
- Few participants demonstrated adequate knowledge.

Knowledge was particularly low in areas related to:

- Safety precautions
- Managing side effects
- Radiation hygiene
- Dietary restrictions
- Follow-up care

Section III: Association with Demographic Variables

Significant associations ($p < 0.05$) were found between knowledge scores and:

- Educational status
- Occupational status
- Family income
- Previous information received on RAI therapy

No significant association was found with:

- Age
- Gender
- Religion
- Type of family
- Area of residence

6. DISCUSSION

The study revealed a considerable knowledge deficit among patients undergoing RAI therapy. Lack of awareness regarding radiation precautions places caregivers and the public at risk. Similar findings from previous literature emphasize that patient education significantly reduces exposure risks and improves treatment outcomes.

Educational interventions such as booklets, counseling, and demonstration-based sessions are proven to enhance competence and self-care practices. The development of an information booklet in this study contributes to improved patient education and safe handling practices.

7. CONCLUSION

The study concludes that:

- Patients have inadequate knowledge regarding care after RAI therapy.
- There is a need for continuous, structured education for patients and family members.
- An information booklet was developed to fulfill this educational gap.

Better patient understanding can minimize complications, improve self-care, and ensure safety for the community.

8. LIMITATIONS

- Small sample size (50).
- Limited to one cancer institute.
- Convenience sampling limits generalizability.

9. RECOMMENDATIONS

1. Conduct similar studies with larger sample sizes.
2. Implement structured teaching programs before discharge.
3. Provide RAI educational kiosks in hospitals.
4. Develop multilingual learning materials.
5. Conduct follow-up studies to measure the effectiveness of the booklet.

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