

THE LIVED EXPERIENCES OF SELECTED CANCER PATIENTS WHO TRANSITIONED FROM USING INTRAVENOUS TO NOVEL SUBCUTANEOUS ROUTE OF CHEMOTHERAPY

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Abstract

Advancements in cancer treatment have introduced novel approaches to chemotherapy administration, including the shift from traditional intravenous (IV) delivery to subcutaneous methods. While these innovations have demonstrated clinical efficacy and improved treatment efficiency, limited research has explored the lived experiences of patients undergoing this transition. Understanding these experiences is essential in delivering holistic and patient-centered oncology care. This study utilized a qualitative descriptive phenomenological design guided by the Husserlian approach. A purposive sample of seven cancer patients diagnosed with either HER2-positive breast cancer or CD20-positive non-Hodgkin lymphoma who transitioned from IV to subcutaneous chemotherapy was selected from the Lung Center of the Philippines. Data were collected through semi-structured, open-ended virtual interviews. The gathered data were analyzed using Colaizzi's seven-step phenomenological method to identify significant themes and meanings. The transition from intravenous to subcutaneous chemotherapy significantly enhances the overall patient experience beyond clinical outcomes. It promotes physical comfort, emotional well-being, and psychosocial and spiritual adaptation. These findings underscore the importance of integrating patient perspectives into oncology care and highlight the role of healthcare providers in supporting patients through treatment transitions. Subcutaneous chemotherapy represents a patient-centered advancement that contributes to improved quality of life among cancer patients.

Keywords: Subcutaneous Chemotherapy, Intravenous Chemotherapy, Lived Experiences, Cancer Patients, Phenomenology, Monoclonal Antibodies, Patient-Centered Care.

Introduction

Advancements in cancer therapeutics have significantly transformed the landscape of oncology, particularly in the administration of chemotherapy. Historically, chemotherapy emerged from early 20th-century discoveries and was further developed following observations of the cytotoxic effects of nitrogen mustard during World War II, leading to its application in treating hematologic malignancies. Over time, chemotherapy has evolved into a cornerstone of cancer management, with more than half of cancer patients receiving it as part of their treatment regimen (American Cancer Society, 2019). Contemporary oncology now emphasizes targeted therapies, including monoclonal antibodies (MABs), which act at the molecular level to selectively inhibit cancer cell growth and proliferation (Zahavi & Weiner, 2020). Alongside these pharmacologic innovations, novel routes of administration have been introduced, notably the subcutaneous method, offering an alternative to the traditional intravenous (IV) route.

Globally and within the Philippines, cancer remains a major public health concern. Breast cancer continues to be the most prevalent malignancy among Filipino women, accounting for approximately 27.7% of all cancer cases (Sales et al., 2020). Data from the GLOBOCAN 2020 report indicate 27,163 new breast cancer cases and 9,926 related deaths in the country (Sung et al., 2021). The Philippines demonstrates one of the highest incidence rates of breast cancer in Asia, with a continuing upward trend in both morbidity and mortality (Wu & Lee, 2019). Similarly, non-Hodgkin lymphoma (NHL) remains a significant contributor to cancer burden, with 4,140 new cases and 2,415 deaths reported in 2020 (Sung et al., 2021). These malignancies have benefited from advances in targeted therapy, particularly through MABs such as trastuzumab for HER2-positive breast cancer and rituximab for CD20-positive lymphomas, which have markedly improved survival outcomes and expanded therapeutic options

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(Patel et al., 2020).

Traditionally, MABs have been administered intravenously, requiring prolonged infusion times and substantial healthcare resources. However, recent developments have introduced subcutaneous formulations of these agents, which offer comparable efficacy and safety while significantly reducing administration time and improving patient convenience (Heo & Syed, 2019; Davies et al., 2017). This transition represents a paradigm shift in chemotherapy delivery, with implications not only for clinical efficiency but also for patient experience. The subcutaneous route minimizes invasiveness, decreases hospital stay duration, and may enhance overall quality of life, particularly for patients undergoing long-term treatment (St Clair-Jones et al., 2020).

Despite these clinical advancements, there remains a notable gap in understanding the subjective experiences of patients undergoing this transition. Cancer treatment is inherently multidimensional, affecting individuals physically, emotionally, psychosocially, and spiritually (Lovelace et al., 2019). The shift from intravenous to subcutaneous chemotherapy introduces a new and unfamiliar experience that may influence patients' perceptions, coping mechanisms, and overall adaptation to treatment. Existing literature has predominantly focused on pharmacologic efficacy and safety, with limited attention given to the lived experiences of patients, particularly within the Philippine context.

Grounded in the Roy Adaptation Model, this study views patients as adaptive systems responding to environmental stimuli, such as changes in treatment modalities (Petiprin, 2020). The transition to subcutaneous chemotherapy may serve as a significant stimulus requiring adjustment across multiple domains of human functioning. Understanding how patients interpret and respond to this transition is essential in delivering holistic, patient-centered care.

Therefore, this study aims to explore and elucidate the lived experiences of selected cancer patients who transitioned from intravenous to subcutaneous chemotherapy. By capturing their narratives, this research seeks to provide deeper insights into the multifaceted impact of evolving cancer treatments and contribute to improving nursing practice, patient education, and healthcare delivery in oncology settings.

Methodology

Research Design

This study employed a qualitative research approach utilizing descriptive phenomenology. Phenomenology is appropriate for exploring and

understanding the essence of lived experiences shared by individuals who have encountered a particular phenomenon (Clark Moustakas, 1994; Creswell & Poth, 2018). Specifically, this study adopted the Husserlian descriptive phenomenological approach, which focuses on describing experiences as perceived by participants while setting aside researcher biases through the process of bracketing (Englander, 2020). This design was deemed suitable as the study aimed to capture and interpret the lived experiences of cancer patients transitioning from intravenous (IV) to subcutaneous chemotherapy.

Research Setting

The study was conducted at the Lung Center of the Philippines, a tertiary specialty government hospital providing comprehensive oncology services. Data collection was facilitated through virtual platforms to ensure accessibility and adherence to health protocols.

Population and Sample

The target population consisted of cancer patients diagnosed with either HER2-positive breast cancer or CD20-positive non-Hodgkin lymphoma who had experienced both intravenous and subcutaneous chemotherapy. A purposive sampling technique was employed to select participants who met specific inclusion criteria relevant to the research objectives (Campbell et al., 2020).

A total of seven (7) participants were included in the study. Inclusion criteria were as follows: (1) confirmed diagnosis of breast cancer or non-Hodgkin lymphoma through biopsy and immunohistochemistry; (2) prior experience with intravenous monoclonal antibody therapy (e.g., trastuzumab or rituximab); (3) transition to subcutaneous chemotherapy within the study period; (4) legal age and mentally competent; and (5) willingness to participate as evidenced by informed consent. Patients with cognitive impairment or those unable to participate in in-depth interviews were excluded.

Research Instrument

Data were collected using a researcher-developed semi-structured open-ended interview guide. Open-ended interviews allow participants to freely express their perceptions, emotions, and experiences, thereby providing rich and in-depth qualitative data (Creswell & Poth, 2018). The interview guide was reviewed and validated by medical experts, including board-certified oncologists, to ensure content validity and relevance.

Data Collection Procedure

Prior to data collection, ethical clearance and institutional approval were secured. Participants

were recruited and informed about the study's purpose, procedures, and ethical considerations. Informed consent was obtained before conducting the interviews.

Data collection was carried out through virtual interviews using Voice over Internet Protocol (VoIP) platforms such as Zoom or Messenger. This method allowed participants to remain in a comfortable and natural environment, which is known to enhance openness and authenticity of responses (Archibald et al., 2019). Each interview lasted approximately 30 to 60 minutes and was audio-video recorded with participant consent to ensure accuracy of transcription.

Field notes were also documented to capture non-verbal cues, emotional expressions, and contextual observations, supporting data triangulation.

Data Analysis

Data were analyzed using Colaizzi's seven-step method of descriptive phenomenological analysis, a rigorous and systematic approach widely utilized in qualitative research to capture the essence of lived experiences (Colaizzi, 1978; Praveena & Sasikumar, 2021). Initially, all interview recordings were transcribed verbatim, and the researcher engaged in repeated reading of the transcripts to achieve familiarization with the data. Significant statements directly related to the phenomenon under investigation were then extracted from the narratives. These statements were carefully examined to formulate meanings while maintaining fidelity to the participants' original expressions. Subsequently, the formulated meanings were organized into clusters of themes, allowing for the identification of patterns and shared experiences across participants. An exhaustive description of the phenomenon was then developed by integrating all emergent themes into a comprehensive narrative. This was followed by the identification of the fundamental structure of the phenomenon, which encapsulated the core essence of the participants' lived experiences. Finally, validation of the findings was conducted through participant verification to ensure accuracy, credibility, and consistency of the interpretations with the participants' actual experiences.

This systematic approach ensured that the analysis remained grounded in participants' actual experiences while capturing the essence of the phenomenon under study.

Ethical Considerations

Ethical principles were strictly observed throughout the study. Participants were informed of their rights, including voluntary participation, confidentiality, and the ability to withdraw at any time without

consequences. Personal identifiers were removed, and participants were assigned codes to maintain anonymity.

All data, including recordings and transcripts, were securely stored in password-protected devices accessible only to the researcher. In accordance with ethical standards, data will be retained for a specified period and subsequently disposed of properly.

Results

The analysis of the lived experiences of cancer patients who transitioned from intravenous (IV) to subcutaneous chemotherapy revealed a complex yet meaningful process of adaptation. Using Colaizzi's phenomenological method, several themes emerged that encapsulate the physical, emotional, spiritual, and psychosocial dimensions of the participants' experiences. These findings highlight how patients interpret, respond to, and ultimately adapt to a novel mode of chemotherapy administration.

One of the most prominent findings was the emergence of renewed hope and a positive outlook toward recovery. Participants expressed that the transition to subcutaneous chemotherapy symbolized progress in their treatment journey, fostering optimism about survival and the possibility of returning to normal life. Many described a shift in mindset - from fear and uncertainty associated with cancer diagnosis and IV chemotherapy - to a more hopeful perspective as treatment became less burdensome. This aligns with existing literature indicating that innovations in cancer treatment can positively influence patients' psychological well-being and perceived quality of life (Lovelace et al., 2019).

Another significant theme identified was the perceived convenience and reduced treatment burden associated with subcutaneous chemotherapy. Participants consistently reported that the shorter administration time and less invasive nature of subcutaneous injections significantly improved their treatment experience. Compared to IV chemotherapy, which often required prolonged hospital stays and physical discomfort, the subcutaneous route allowed patients to spend less time in healthcare facilities and more time engaging in daily activities. This finding is supported by previous studies demonstrating that subcutaneous administration enhances patient satisfaction, reduces healthcare resource utilization, and improves treatment efficiency (Heo & Syed, 2019; St Clair-Jones et al., 2020).

In terms of physical experiences, participants noted fewer procedural discomforts with subcutaneous chemotherapy. While IV therapy was often

associated with pain from needle insertion, vein irritation, and fatigue from long infusion hours, the subcutaneous method was described as quicker and generally more tolerable. Some participants still reported mild discomfort at the injection site; however, these effects were perceived as minimal compared to the overall burden of IV treatment. This observation is consistent with findings that subcutaneous formulations of monoclonal antibodies maintain comparable safety profiles while improving patient comfort (Davies et al., 2017).

The study also revealed important insights into the emotional and psychological adaptation of patients. Initially, participants experienced apprehension and uncertainty upon learning about the transition to a new treatment modality. Fear of the unknown, concerns about effectiveness, and anxiety regarding potential side effects were common during the early phase of transition. However, as patients gained experience with the subcutaneous route, these negative emotions gradually diminished and were replaced by feelings of relief, acceptance, and confidence. This adaptive process reflects the principles of the Roy Adaptation Model, wherein individuals respond to environmental stimuli through coping mechanisms that promote psychological equilibrium (Petiprin, 2020).

From a psychosocial perspective, participants highlighted the positive impact of reduced treatment time on their relationships and social functioning. The decreased need for prolonged hospital visits allowed them to spend more time with family and engage in meaningful social interactions. This contributed to an improved sense of normalcy and strengthened support systems, which are critical factors in coping with chronic illness. Literature supports that social support plays a vital role in enhancing resilience and overall well-being among cancer patients (Alhusban, 2019).

Spiritual experiences also emerged as a significant theme, with participants expressing heightened faith and meaning-making throughout their treatment journey. Many described relying on spiritual beliefs and practices as sources of strength and comfort, particularly during periods of uncertainty. The transition to a less burdensome treatment modality reinforced their sense of gratitude and hope, further deepening their spiritual outlook. This finding is consistent with studies indicating that spirituality is an essential coping mechanism for individuals facing life-threatening illnesses (Ursavaş & Karayurt, 2021).

Finally, participants identified the most fulfilling aspect of the transition as the regained sense of control over their treatment and daily lives. The

subcutaneous route empowered patients by reducing dependency on hospital-based care and allowing greater flexibility in managing their condition. This sense of autonomy contributed to improved self-esteem and overall satisfaction with treatment.

The results of the study demonstrate that the transition from intravenous to subcutaneous chemotherapy is not merely a clinical change but a multidimensional experience that influences patients' physical comfort, emotional well-being, social interactions, and spiritual perspectives. The findings underscore the importance of adopting a holistic, patient-centered approach in oncology care, particularly in the context of emerging treatment innovations.

Conclusion

This study explored the lived experiences of selected cancer patients who transitioned from intravenous to subcutaneous chemotherapy, revealing that the shift extends beyond a procedural change and represents a significant multidimensional transformation in patients' lives. The findings demonstrate that subcutaneous chemotherapy contributes to improved patient experiences by reducing treatment burden, enhancing convenience, and promoting a greater sense of comfort and autonomy. Participants described the transition as a turning point in their treatment journey, fostering renewed hope, optimism, and a more positive outlook toward recovery.

Across physical, emotional, psychosocial, and spiritual dimensions, patients exhibited adaptive responses consistent with the principles of the Roy Adaptation Model, highlighting their ability to cope with and adjust to changes in treatment modalities. While initial reactions included uncertainty and apprehension, these were gradually replaced by acceptance, confidence, and empowerment as patients experienced the benefits of the subcutaneous approach. The reduced time spent in healthcare facilities allowed for improved social engagement and strengthened relationships, while spiritual beliefs provided additional support in navigating the challenges of cancer treatment.

The study underscores the importance of recognizing the patient's holistic experience in the adoption of new medical technologies. Subcutaneous chemotherapy not only maintains clinical effectiveness but also enhances quality of life by addressing the broader needs of patients. These findings emphasize the critical role of healthcare providers, particularly nurses, in facilitating patient adaptation through education, emotional support, and compassionate care. Integrating patient-centered perspectives into oncology practice is essential in ensuring that

advancements in treatment translate into meaningful improvements in both clinical outcomes and patient well-being.

Conflicts of Interest

The authors declare that there is no conflict of interest in this manuscript. Results have been deduced objectively; nothing influenced this result by any individual, monetary, or institutional interests. In effect, utmost endeavors were in order to conduct a bias-free operation of gathering and analyzing the data into interpretation and producing a study based on merit, away from research inconsistencies.

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