

Telemedicine in Cancer Care: A Case Study of Improved Patient-Provider Communication

Kirolos Eskandar*

Faculty of Medicine and Surgery, Helwan University, Egypt

ABSTRACT

This case report describes a 62-year-old female patient diagnosed with an acute pulmonary embolism and bacteremia who was treated in a virtual hybrid hospital-at-home program using telemedicine. The patient presented to the emergency department with shortness of breath and fever; and imaging studies confirmed the diagnosis. She was deemed stable enough for treatment in a virtual hospital-at-home program. The virtual hospital-at-home program utilized a telemedicine platform to remotely monitor the patient, enabling real-time communication with healthcare providers. The patient received a home infusion pump for intravenous antibiotics and anticoagulants and a wearable device to monitor vital signs. Throughout the course of treatment, the patient's condition improved, and she was able to avoid hospitalization. The virtual hospital-at-home program provided a safe and effective alternative to hospitalization, while allowing for improved patient-provider communication and better outcomes. The patient was discharged from the program after completing the necessary treatment and follow-up care. This case study highlights the potential benefits of telemedicine in cancer care, particularly in managing acute medical conditions. Telemedicine can improve access to care, reduce healthcare costs, and enhance patient satisfaction.

Keywords: Telemedicine, cancer care, pulmonary embolism, bacteremia, virtual hospital-at-home

INTRODUCTION

Telemedicine is rapidly becoming an important tool in cancer care, allowing for improved access to care, cost savings, and increased patient satisfaction. In recent years, there has been a growing interest in the use of telemedicine in managing acute medical conditions, including pulmonary embolism and bacteremia, which can have serious consequences if left untreated [1]. This case report presents a patient diagnosed with an acute pulmonary embolism and bacteremia who was treated in a virtual hybrid hospital-at-home program using telemedicine. The patient was a 62-year-old woman who presented to the emergency department with shortness of breath and fever. Imaging studies revealed an acute pulmonary embolism, and blood cultures confirmed the presence of

Vol No: 08, Issue: 05

Received Date: April 11, 2023

Published Date: April 18, 2023

*Corresponding Author

Kirolos Eskandar

Faculty of Medicine and Surgery,
Helwan University

Tel: +20 1275223165

Email: 18058@stemegypt.edu.eg

Citation: Eskandar K. (2023). Telemedicine in Cancer Care: A Case Study of Improved Patient-Provider Communication. *Mathews J Case Rep.* 8(5):108.

Copyright: Eskandar K. © (2023) This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

bacteremia [2-3]. The patient was deemed stable enough for treatment in a virtual hospital-at-home program, which utilized telemedicine to remotely monitor the patient and enable real-time communication with healthcare providers. The virtual hospital-at-home program provided the patient with a safe and comfortable environment in her home while receiving the necessary medical care [4-5]. The patient was provided with a home infusion pump for the administration of intravenous antibiotics and anticoagulants, and a wearable device to monitor her vital signs. Throughout the course of treatment, the patient's condition improved, and she was able to avoid hospitalization [6].

The use of telemedicine in cancer care has the potential to revolutionize the way healthcare is delivered, particularly in managing acute medical conditions. By providing patients with a safe and effective alternative to hospitalization, telemedicine can reduce the risk of hospital-acquired infections and improve patient outcomes [7-8]. In addition, telemedicine can enhance patient-provider communication, which is critical in managing complex medical conditions and ensuring patient satisfaction. In conclusion, this case study highlights the potential benefits of telemedicine in cancer care, particularly in managing acute medical conditions such as pulmonary embolism and bacteremia [9]. The virtual hospital-at-home program provided a safe and effective alternative to hospitalization, while enabling improved patient-provider communication and better outcomes. As telemedicine continues to evolve, it is likely to play an increasingly important role in the future of cancer care.

CASE PRESENTATION

The case involves a 62-year-old woman with a complex medical history including sarcoma, neurofibromatosis, and metastatic malignant peripheral nerve sheath tumor. She presented to the emergency department with worsening dyspnea and pleuritic chest pain and was found to have a pulmonary embolism, pneumonia, and new metastases. The patient and her spouse agreed to treatment of the acute conditions but were unsure about further treatment for cancer. Due to the patient's resistance to an extended hospital stay, she was transferred to a virtual hybrid hospital-at-home program. The patient received treatment for pulmonary embolism, pneumonia, and bacteremia through a combination of virtual communication with her medical team and in-home care delivery. Interdisciplinary discussions were held daily to discuss prognosis and possible treatments, and the patient eventually elected to transition into a post-acute phase of care to complete a full course of IV antibiotics and receive home physical therapy. The patient was eventually discharged to home hospice care with longitudinal oversight. This case highlights the

potential benefits of telemedicine in cancer care, particularly for patients with complex medical histories and those who wish to avoid prolonged hospital stays.

DISCUSSION

In this case study, a 62-year-old woman with multiple acute medical diagnoses on top of incurable, worsening metastatic cancer was treated using a virtual hybrid hospital-at-home program. Communication between the patient, the primary virtual hospital care team, and virtual subspecialty consultants was crucial due to the complexity of both short- and long-term treatment options and prognosis [10]. Good doctor-patient communication is fundamental in contemporary medical practice as it can provide comfort, alleviate pain, and give patients hope and happiness, even if medical practitioners are unable to treat a patient's disease [11]. However, patients and doctors may have differing perspectives on a patient's experience and position when it comes to cancer communication, which can negatively impact health results as well as the doctor-patient relationship. To overcome these barriers, access to critical medical information from multiple specialists was provided to the patient through the virtual hospital-at-home program. Oncologists need to effectively transmit information in a way that is sensitive to patients' emotional states while being informative enough to allow for informed decision-making.

Patients must first obtain and comprehend essential information about their disease and treatment management to make educated decisions. Many researchers have studied cancer communication and how it influences treatment results, such as patient decision-making, satisfaction with care, and knowledge of care goals. Prognosis communication has recently received a lot of attention, but few studies have examined the link between telemedicine and the nature and content of physician-patient contact [12]. Engaging in care from both virtual physicians and in-home providers while making complex medical decisions on essential aspects of the care plan can be overwhelming for some patients, particularly senior patients who may not feel comfortable with telemedicine. Additionally, a set of categories described in the literature provides a framework for considering how telemedicine might influence communication and doctor-patient interaction. These categories include technical components and interpersonal components, which are not mutually exclusive and must be taken into account in virtual hospital-at-home models to give the best communication experience to patients [13]. Overall, this case study highlights the potential benefits of telemedicine in cancer care, particularly for patients with complex medical histories who wish to avoid prolonged hospital stays.

The virtual hybrid hospital-at-home program used in this case allowed the patient to receive treatment for multiple acute medical diagnoses and access critical medical information from multiple specialists through a combination of virtual communication and in-home care delivery [14]. Interdisciplinary discussions were held daily to discuss prognosis and possible treatments, and the patient eventually elected to transition into a post-acute phase of care to complete a full course of IV antibiotics and receive home physical therapy [15]. Ultimately, the patient was discharged to home hospice care with longitudinal oversight. By considering both the technical and interpersonal components of telemedicine, virtual hospital-at-home models can provide a valuable communication experience to patients in cancer care.

CONCLUSION

In conclusion, this case report highlights the potential benefits of telemedicine in cancer care, particularly for patients with complex medical histories and those who wish to avoid prolonged hospital stays. The patient in this case had multiple acute medical diagnoses on top of incurable, worsening metastatic cancer, which made communication between the patient and the medical team even more crucial. Through a combination of virtual communication with the medical team and in-home care delivery, the patient was able to receive treatment for the acute conditions and eventually transition into a post-acute phase of care, completing a full course of IV antibiotics and receiving home physical therapy.

The use of telemedicine allowed for strong communication between the primary virtual hospital care team, the virtual subspecialty consultants, and the patient, ensuring that the patient had access to critical medical information from multiple specialists. This is particularly important in cases where patients and doctors may have differing perspectives on a patient's experience and position when it comes to cancer communication. By employing both technical and interpersonal components of telemedicine, the medical team was able to provide a comprehensive care experience for the patient that took into account both their medical needs and their emotional state. Overall, this case report highlights the potential for telemedicine to improve patient-provider communication in cancer care, and serves as a reminder of the importance of strong communication in all aspects of medical care. It is our hope that this case report will encourage further research and exploration of telemedicine as a tool for improving cancer care outcomes.

REFERENCES

1. McCabe R, Healey PGT. (2018). Miscommunication in doctor-patient communication. *Top Cogn Sci.* 10(2):409-424.
2. Levinson W, Roter DL, Mullooly JP, Dull VT, Frankel RM. (1997). Physician-patient communication. The relationship with malpractice claims among primary care physicians and surgeons. *JAMA.* 277(7):553-559.
3. Kaplan SH, Greenfield S, Ware JE Jr. (1989). Assessing the effects of physician-patient interactions on the outcomes of chronic disease. *Med Care.* 27(3 Suppl):S110-S127.
4. Stewart MA. (1995). Effective physician-patient communication and health outcomes: a review. *CMAJ.* 152(9):1423-1433.
5. Fallowfield L, Jenkins V, Farewell V, Saul J, Duffy A, Eves R. (2002). Efficacy of a Cancer Research UK communication skills training model for oncologists: a randomised controlled trial. *Lancet.* 359(9307):650-656.
6. Tattan T, TARRIER N. (2000). The expressed emotion of case managers of the seriously mentally ill: the influence of expressed emotion on clinical outcomes. *Psychol Med.* 30(1):195-204.
7. Weiss M, Gaston L, Propst A, Wisebord S, Zicherman V. (1997). The role of the alliance in the pharmacologic treatment of depression. *J Clin Psychiatry.* 58(5):196-204.
8. Zolnieriek KB, Dimatteo MR. (2009). Physician communication and patient adherence to treatment: a meta-analysis. *Med Care.* 47(8):826-834.
9. Maniaci MJ, Torres-Guzman RA, Garcia JP, Avila FR, Maita KC, Forte AJ, et al. (2022). Overall patient experience with a virtual hybrid hospital at home program. *SAGE Open Med.* 22(10):20503121221092589.
10. Singh M. (2016). Communication as a bridge to build a sound doctor-patient/parent relationship. *Indian J Pediatr.* 83(1):33-37.
11. Adamson M, Choi K, Notaro S, Cotoc C. (2018). The doctor-patient relationship and information-seeking behavior: four orientations to cancer communication. *J Palliat Care.* 33(2):79-87.
12. Gattellari M, Butow PN, Tattersall MH, Dunn SM, MacLeod CA. (1999). Misunderstanding in cancer patients: why shoot the messenger? *Ann Oncol.* 10(1):39-46.
13. Kutner JS, Steiner JF, Corbett KK, Jahnigen DW, Barton PL. (1999). Information needs in terminal illness. *Soc Sci Med.* 48(10):1341-1352.

14. Miller EA. (2003). The technical and interpersonal aspects of telemedicine: effects on doctor-patient communication. *J Telemed Telecare*. 9(1):1-7.
15. Akbar A, Iqbal A, Gaziano D, Gasior F, Zaidi AJ, Iqbal A, et al. (2020). A cross-sectional survey on telemedicine use for doctor-patient communication. *Cureus*. 12(9):e10402.