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Enhancing general physicians' awareness for prompt specialist referral in a treatable rare pathology

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Abstract--Background: This study aimed to assess the awareness of general physicians regarding treatable rare pathologies and their referral practices. Methods: A cross-sectional study design was employed in Combined Military Hospital (CMH), Peshawar, involving 100 general physicians practicing in various healthcare settings. Data was collected through surveys and interviews conducted between June 2022 and December 2022. Results: The survey results showed that only 45% of general physicians had adequate knowledge of treatable rare pathologies, while 35% had limited awareness and 20% were uncertain. Barriers to awareness included limited formal education, lack of updated guidelines and resources, time constraints, and heavy workloads. Conclusion: This study highlights the need for interventions to enhance general physicians' awareness of treatable rare pathologies and improve their referral practices. Collaboration between general physicians and specialists, provision of updated

guidelines and resources, and patient education initiatives are crucial for optimizing patient outcomes in cases of treatable rare pathologies.

Keywords---physicians, rare pathologies, time constraints, interventions.

Introduction

In the realm of healthcare, the prompt identification and referral of patients with rare pathologies to the appropriate specialists is crucial for ensuring optimal patient outcomes. However, in the case of treatable rare pathologies, such as those with specific and effective interventions, a lack of awareness among general physicians can lead to delayed or missed referrals, resulting in potential harm to patients and missed opportunities for early intervention (Casazza et al., 2012). The field of rare pathologies encompasses a diverse range of conditions, often characterized by their low prevalence (Hodges et al., 2001), complex symptomatology, and limited research and treatment options. Despite their rarity, much rare pathology has well-defined diagnostic criteria and targeted treatments available, which can significantly improve patient prognosis if identified and addressed early on. General physicians, as the first point of contact for patients, play a crucial role in recognizing the symptoms and signs that may indicate the presence of a rare pathology and making appropriate referrals to specialists (Vandeborne et al., 2019; McConnell et al., 1999). However, studies have shown that general physicians often lack the necessary knowledge and awareness about specific rare pathologies, leading to delays in diagnosis and referral. This knowledge gap can be attributed to a variety of factors, including the limited exposure to rare pathologies during medical education (Benz et al., 2022), the rapidly evolving nature of medical knowledge, and the overwhelming workload faced by general physicians in primary care settings. As a result, patients with treatable rare pathologies may experience prolonged suffering and suboptimal outcomes. To address this critical issue, this research aims to enhance general physicians' awareness of treatable rare pathologies and promote prompt specialist referrals. By identifying the key barriers and challenges faced by general physicians in recognizing and referring rare pathologies (Dudding et al., 2015), we can develop targeted interventions and educational strategies to bridge the knowledge gap and improve patient care. By equipping general physicians with the necessary tools, resources, and guidelines for early identification and referral, we can facilitate timely access to specialized care, potentially saving lives and reducing long-term morbidity associated with treatable rare pathologies (Ahmad et al., 2006).

This study will employ a mixed-methods approach, including surveys, interviews, and educational interventions, to gather data from general physicians across various healthcare settings. The findings will not only shed light on the current level of awareness and challenges faced by general physicians but also inform the development of tailored educational programs and interventions to address these gaps effectively (Hodges et al., 2001; Pang et al., 2017). Ultimately, the research aims to contribute to the overall improvement of healthcare outcomes for patients with treatable rare pathologies by promoting early diagnosis and specialist referral.

through enhanced general physician awareness (Alawi et al., 2019). By facilitating collaboration between general physicians and specialists, we can establish a more efficient and comprehensive healthcare system that maximizes the potential for timely interventions, leading to improved patient outcomes and quality of life (Schoen et al., 2006).

Methodology

Study Design: A cross-sectional study design was employed to assess the awareness of general physicians in Combined Military Hospital (CMH), Peshawar regarding treatable rare pathologies and their referral practices.

Study Period: The study was conducted over a period of seven months, from June 2022 to December 2022.

Study Population: The target population for this research comprised 100 general physicians practicing in various healthcare settings.

Sampling: Convenient sampling was utilized to select participants from different geographical locations.

Inclusion Criteria: General physicians with a minimum of two years of practice experience actively involved in patient care were included in the study.

Data Collection: Surveys: A self-administered questionnaire was developed based on the existing literature and validated measurement tools. The questionnaire consisted of multiple-choice and open-ended questions aimed at assessing the general physicians' knowledge and awareness of treatable rare pathologies, as well as their referral practices. The surveys were distributed among the selected general physicians, who were given a sufficient time frame to complete and return them.

Interviews: Semi-structured interviews were conducted with a subset of the participating general physicians. The interviews provided an opportunity to explore the factors influencing their referral practices and identify any barriers or challenges they faced in recognizing and referring treatable rare pathologies. The interviews were audio-recorded with the consent of the participants and transcribed for further analysis.

Data Analysis

Quantitative Analysis: Descriptive statistics, such as frequencies and percentages, were calculated to summarize the survey responses.

Qualitative Analysis: The open-ended questions from the surveys were analyzed thematically to identify recurring themes and patterns in the participants' narratives. The interview transcripts were coded, and thematic analysis was conducted to identify key findings and insights.

The methodology employed in this study aimed to assess the awareness of general physicians regarding treatable rare pathologies and their referral practices. By utilizing surveys and interviews, both quantitative and qualitative data were collected to gain a comprehensive understanding of the research topic. The analysis of the data will provide valuable insights into the knowledge gaps and challenges faced by general physicians in recognizing and referring treatable rare pathologies, ultimately contributing to the development of targeted interventions and educational programs to enhance patient care.

Results

Participant Characteristics: A total of 100 general physicians participated in the study, representing various healthcare settings. The majority of participants had more than two years of practice experience, with a range of 2 to 15 years. The sample included both male and female physicians, with an average age of 35 years.

Awareness of Treatable Rare Pathologies: The survey results indicated that general physicians had varying levels of awareness regarding treatable rare pathologies. When asked about their familiarity with specific rare conditions, only 45% of participants demonstrated adequate knowledge, while 55% had limited awareness or were unsure.

Referral Practices: Regarding referral practices, the survey revealed that 60% of general physicians reported referring suspected rare pathologies to specialists in a timely manner, while 40% admitted to experiencing delays in referrals. The most common reasons for delays included uncertainty in diagnosis (25%), lack of clear referral guidelines (15%), and limited access to specialized care (10%).

Barriers and Challenges: During the interviews, several barriers and challenges influencing referral practices were identified. The lack of formal education and training on rare pathologies was highlighted by 70% of participants. Many general physicians expressed the need for updated guidelines and educational resources specifically addressing treatable rare pathologies. Additionally, time constraints and heavy workloads were reported as barriers, with 45% of participants indicating difficulties in devoting sufficient time to each patient case.

Qualitative Themes: Thematic analysis of the open-ended survey questions and interview transcripts identified key themes. Participants emphasized the importance of collaboration between general physicians and specialists in managing rare pathologies effectively. They expressed a desire for improved communication channels and access to multidisciplinary teams for expert advice. Furthermore, participants highlighted the significance of patient education and awareness to facilitate early recognition and timely referral.

The results indicate a need for interventions to enhance general physicians' awareness of treatable rare pathologies and improve their referral practices. Strategies should focus on providing targeted education and training on rare conditions, including updated guidelines and resources. Collaboration between general physicians and specialists should be fostered to facilitate seamless referral processes and ensure optimal patient outcomes. Patient education initiatives should be implemented to promote early recognition of symptoms and encourage patients to seek timely medical attention. It is important to acknowledge the limitations of this study. The sample size may not represent the entire population of general physicians, potentially limiting the generalizability of the findings. Self-reported data may be subject to bias, and the study design does not allow for causal inferences.

The findings highlight the need for interventions to enhance general physicians' awareness and improve referral practices for treatable rare pathologies. Addressing barriers such as knowledge gaps, limited access to specialized care, and time constraints is crucial. By providing targeted education, fostering collaboration, and promoting patient awareness, healthcare systems can work towards ensuring timely specialist referrals, ultimately improving patient outcomes in cases of treatable rare pathologies.

Table 1: Awareness of Treatable Rare Pathologies among General Physicians

Awareness Level	Percentage of General Physicians
Adequate Knowledge	45%
Limited Awareness	35%
Uncertain	20%

The table presents the awareness levels of treatable rare pathologies among the general physicians who participated in the study. The data shows that only 45% of the general physicians demonstrated adequate knowledge of treatable rare pathologies. This indicates that a significant proportion of the participants, 35%, had limited awareness or was unsure about these rare conditions. This finding highlights the need for interventions and educational initiatives to enhance general physicians' knowledge and awareness of treatable rare pathologies, ultimately improving patient care and outcomes.

Discussion

The findings of this study shed light on the awareness levels of treatable rare pathologies among general physicians and their referral practices. The results revealed that a significant proportion of general physicians had limited knowledge or were unsure about these rare conditions, indicating a need for interventions to enhance their awareness and understanding (Dudding et al., 2015; Sardella et al., 2007). The study identified several barriers and challenges that contribute to the lack of awareness among general physicians. The most prominent barrier reported was the limited formal education and training on rare pathologies. Medical education programs often focus on more prevalent conditions, and rare pathologies receive less attention. This knowledge gap can hinder the ability of general physicians to recognize and appropriately refer patients with treatable rare pathologies (Leandro et al., 2014).

Inadequate access to updated guidelines and educational resources also emerged as a barrier. General physicians expressed the need for clear referral guidelines specific to rare pathologies. Providing comprehensive and up-to-date resources would assist physicians in making informed decisions and ensuring timely referrals. Collaboration between general physicians and specialists is vital to address this issue (Aymé et al., 2008), as specialists can contribute their expertise and provide guidance on diagnosing and referring patients with rare conditions. Time constraints and heavy workloads were reported as additional barriers to prompt referrals. General physicians often face significant pressure to manage a high volume of patients, leaving limited time for in-depth assessments and consultations (Adachi et al., 2023). Overcoming this challenge requires a

reevaluation of healthcare systems to allocate sufficient time and resources for general physicians to thoroughly evaluate patients and consider the possibility of rare pathologies.

The study highlighted the importance of collaboration between general physicians and specialists. Participants emphasized the need for improved communication channels and access to multidisciplinary teams to seek expert advice and facilitate seamless referrals (Griggs et al., 2009). Creating platforms for regular interaction and consultation with specialists would enhance the ability of general physicians to identify and refer patients with treatable rare pathologies in a timely manner. Patient education and awareness were also identified as crucial factors in improving the early recognition of symptoms and encouraging patients to seek appropriate medical attention (Nout et al., 2023; Stephenson et al., 2000). Increasing patient awareness of rare pathologies and their potential treatments could lead to earlier presentations and more timely referrals by general physicians. While the study provides valuable insights into the awareness levels and referral practices of general physicians, it is important to acknowledge its limitations. The sample size and sampling method may limit the generalizability of the findings. Self-reported data may be subject to bias, and the study design does not establish causal relationships (Mikos et al., 2020; Agarwal et al., 2022). Future research could employ larger, more diverse samples and longitudinal designs to further explore the factors influencing general physicians' awareness and referral practices.

Conclusion

This research emphasizes the urgent need to enhance general physicians' awareness of treatable rare pathologies and improve their referral practices. The study revealed a significant knowledge gap among general physicians, with many lacking adequate familiarity with specific rare conditions. Barriers such as limited education and training, inadequate access to guidelines and resources, time constraints, and heavy workloads were identified as key challenges. To address these issues, interventions should focus on providing targeted education, facilitating collaboration between general physicians and specialists, and promoting patient education and awareness. By bridging the knowledge gap and improving referral practices, healthcare systems can optimize patient outcomes and ensure timely access to specialized care for individuals with treatable rare pathologies.

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