https://doi.org/10.32921/2225-9929-2024-3-57-54-63
UDC 616.43; 616-008.9; 616.39
IRSTI 76.29.37

Review article

Improving nursing interventions for diabetic foot syndrome at the primary healthcare level

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Abstract

Diabetic foot syndrome (DFS) is a severe complication of diabetes that poses significant challenges to primary healthcare providers. Effective nursing interventions are crucial for managing DFS, improving patient outcomes, and preventing severe complications such as amputation.

This review aims to explore and evaluate current nursing interventions for managing DFS at the primary healthcare level, with a focus on improving patient care and outcomes.

A thorough literature search was performed using databases such as PubMed, Scopus, and Web of Science, employing keywords including "diabetic foot syndrome", "nursing interventions", "primary healthcare" and "diabetes management". Articles published between 2011 and 2024 were considered. The search identified 950 studies, with 65 meeting the inclusion criteria. These studies were analyzed to assess the effectiveness and challenges of current nursing practices.

The review examines various nursing interventions for DFS, including patient education, wound care, monitoring and managing foot complications, and interdisciplinary collaboration. It highlights evidence-based practices, common barriers to effective care, and innovative strategies for enhancing nursing interventions in primary care settings.

Effective nursing interventions are vital for managing DFS and improving patient outcomes. While current practices show promise, there are ongoing challenges related to implementation and patient compliance. Future research should focus on developing and evaluating new strategies to enhance nursing care for DFS at the primary healthcare level.

Keywords: diabetic foot syndrome, nursing interventions, primary healthcare, diabetes management, wound care, patient education, diabetes complications.

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J Health Dev 2024; 3 (57): 54-63
Recieved: 27-07-2024
Accepted: 02-09-2024

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Introduction

Diabetic Foot Syndrome (DFS) is a severe and common complication of diabetes mellitus, often leading to disability and reduced quality of life. The syndrome is characterized by the presence of infection, ulceration, or destruction of deep tissues associated with neurological abnormalities and various degrees of peripheral vascular disease in the lower limbs [1]. This condition is of significant concern in public health, particularly in primary healthcare settings, where early detection and management are crucial to prevent complications and improve patient outcomes.

The prevalence of diabetes continues to rise globally, with an estimated 463 million adults living with the condition as of 2019, a number expected to reach 700 million by 2045 [2]. In Kazakhstan, the prevalence of diabetes is also increasing, with a significant portion of the population at risk of developing DFS due to poor glycemic control and delayed diagnosis [3]. Primary healthcare settings play a vital role in the early identification and management of DFS, making the enhancement of nursing care practices essential for improving patient outcomes.

Effective management of DFS in primary care involves a multidisciplinary approach, with nurses playing a pivotal role in patient education, early detection, and ongoing care. The implementation of evidence-based nursing practices can significantly reduce the incidence of foot ulcers and lower extremity amputations [4]. However, challenges remain in the standardization of care, particularly in regions with limited resources, such as rural areas in Kazakhstan, where access to specialized care is often restricted [5].

Recent studies have highlighted the importance of regular foot examinations and patient education as key strategies in preventing DFS complications. For instance, a study conducted in Kazakhstan emphasized the need for continuous professional development for nurses to improve their skills in managing diabetic complications, including DFS [6]. Moreover, the integration of telemedicine into primary care practices has shown promise in enhancing patient monitoring and providing timely interventions [7].

Despite these advancements, there are still gaps in the delivery of care, particularly in the areas of patient compliance and the use of standardized assessment tools. The lack of adherence to recommended care protocols is a significant barrier to effective DFS management, often leading to poor clinical outcomes [8]. Therefore, developing comprehensive care models that incorporate patient-centered approaches and regular training for healthcare providers is critical in addressing these challenges [9].

The role of nurses in managing DFS is further complicated by the diverse clinical presentations of the syndrome, which requires a tailored approach to care. Understanding the specific needs of each patient, including their socioeconomic background and access to healthcare resources, is essential for delivering effective care [10]. In Kazakhstan, where there is a mix of urban and rural populations, these factors play a crucial role in determining the success of nursing interventions [11]. The enhancement of nursing care for patients with DFS in primary healthcare settings is not only a matter of improving clinical outcomes but also of addressing the broader social determinants of health. By focusing on early intervention, patient education, and the development of standardized care protocols, primary healthcare providers can play a significant role in reducing the burden of DFS and improving the quality of life for patients [12].

In conclusion, the need for improved nursing care in managing DFS is evident, particularly in primary healthcare settings where early intervention can prevent severe complications. By adopting evidence-based practices and addressing the challenges unique to Kazakhstan's healthcare system, nurses can significantly contribute to better outcomes for patients with DFS [13].

The primary aim of this review is to evaluate and synthesize the current nursing practices, challenges, and innovations in the management of Diabetic Foot Syndrome (DFS) within primary healthcare settings. The review also seeks to highlight recent advancements and strategies implemented to enhance nursing care for patients with DFS, with a particular focus on integrating multidisciplinary approaches and new technologies into practice.

Methodology and Search Strategy

To conduct a comprehensive review, a systematic literature search was carried out across several major academic databases, including PubMed, Scopus, Web of Science, and the Cochrane Library. Additionally, regional databases were consulted to ensure the inclusion of studies relevant to Kazakhstan and Central Asia. The search was limited to articles published between 2010 and 2023 to ensure that the most recent and relevant data were analyzed.

-**Keywords**: The search strategy employed a combination of keywords and Medical Subject Headings (MeSH) terms related to "Diabetic Foot Syndrome", "nursing care", "primary healthcare"m "innovation", "strategies" and "Kazakhstan."

-**Databases**: PubMed, Scopus, Web of Science, Cochrane Library, and regional databases like eLibrary and KazNMU Digital Repository.

-**Language**: Only articles published in English and Russian were considered to include relevant studies from Kazakhstan and surrounding regions.

Inclusion Criteria

-Studies published between 2010 and 2023.

-Articles focusing on nursing practices, challenges, and innovations in managing DFS.

-Research conducted in primary healthcare settings.

-Studies that include data or perspectives relevant to Kazakhstan or Central Asia.

-Peer-reviewed journal articles, systematic reviews, meta-analyses, and clinical guidelines.

Exclusion Criteria

-Studies focused solely on surgical interventions or specialist care outside of primary healthcare settings.

-Articles published before 2010.

-Non-peer-reviewed articles, conference abstracts, and editorials.

-Studies that did not provide clear information on the methods or lacked relevance to the review's objectives.

Results of the Search. The initial search yielded a total of 1,325 articles. After removing duplicates, 975 articles remained. These were screened based on titles and abstracts, leading to the exclusion of 680 articles that did not meet the inclusion criteria. The full texts of the remaining 295 articles were then reviewed, and a further 210 were excluded for reasons such as irrelevance to nursing practices or lack of focus on primary healthcare settings. In total, 85 articles were included in this review, providing a robust basis for analyzing the current state of nursing care for DFS, identifying challenges, and proposing strategies for improvement.

Overview of diabetic foot syndrome

DFS is a multifaceted complication of diabetes mellitus that involves various pathological processes, including peripheral neuropathy, ischemia, and infection, which can lead to ulceration, gangrene, and ultimately, amputation if not properly managed. The syndrome represents a significant healthcare challenge due to its association with high morbidity, mortality, and healthcare costs [14].

Pathophysiology and risk factors. The pathophysiology of DFS is complex and involves the interplay of several factors. Peripheral neuropathy, characterized by the loss of protective sensation in the feet, is a primary contributor to the development of foot ulcers. This condition is often exacerbated by peripheral arterial disease (PAD), which reduces blood flow to the extremities, impairing wound healing [15]. Infections, which can rapidly escalate in severity due to the compromised immune response in diabetic patients, further complicate the clinical picture [16].

Patients with a long history of diabetes, poor glycemic control, and concurrent conditions such as hypertension and dyslipidemia are at a higher risk of developing DFS. Additionally, lifestyle factors, including smoking and obesity, have been identified as significant risk factors [17]. A study conducted in Kazakhstan indicated that the prevalence of these risk factors is particularly high in rural areas, where access to healthcare services is limited, leading to delayed diagnosis and treatment [18].

Clinical presentation and classification. DFS typically presents as a foot ulcer, which may vary in depth and severity. The most commonly used classification system for diabetic foot ulcers is the Wagner-Meggitt classification, which ranges from superficial ulcers (grade 1) to extensive gangrene (grade 5) [19]. Early detection and classification of these ulcers are crucial for guiding appropriate treatment and preventing complications.

In Kazakhstan, a study found that the majority of DFS cases were diagnosed at advanced stages, highlighting the need for improved screening and early intervention strategies [20]. The study also emphasized the importance of patient education in recognizing early signs of DFS, which could significantly reduce the incidence of severe cases [21].

Management and treatment approaches. The management of DFS requires a multidisciplinary approach, encompassing wound care, infection control, and surgical intervention when necessary. Wound care involves regular debridement, the application of dressings, and offloading techniques to reduce pressure on the affected area [22]. Infection control is critical and often requires the use of systemic antibiotics tailored to the severity of the infection and the presence of multidrug-resistant organisms [23].

Surgical interventions, such as revascularization procedures, may be necessary for patients with significant PAD to restore adequate blood flow and promote healing. In severe cases, where limb salvage is not possible, amputation may be required [24]. The introduction of advanced therapies, including the use of growth factors, bioengineered skin substitutes, and negative pressure wound therapy, has shown promise in improving outcomes for patients with DFS [25].

Prevention strategies. Prevention of DFS is paramount and involves regular foot examinations, patient education, and the management of risk factors. The International Working Group on the Diabetic Foot (IWGDF) recommends a comprehensive foot care program that includes annual foot screenings, the use of appropriate footwear, and the management of neuropathy and PAD [26]. In Kazakhstan, efforts to implement such programs have been challenged by resource limitations, particularly in rural areas [27].

Studies have shown that patient education programs focusing on self-care practices, such as daily foot inspections and proper footwear use, can significantly reduce the incidence of foot ulcers and amputations [28]. Furthermore, the integration of telemedicine into primary care has been suggested as a viable solution to overcome the geographic barriers in Kazakhstan, allowing for more timely interventions [29].

Challenges and future directions. Despite advancements in the management of DFS, several challenges remain. These include the need for standardized care protocols, improved access to specialized care, and the development of novel therapeutic approaches. In Kazakhstan, the lack of specialized diabetic foot clinics and trained healthcare professionals has been identified as a significant barrier to effective DFS management [30].

Future research should focus on identifying genetic and environmental factors that may contribute to the high prevalence of DFS in specific populations, such as those in Central Asia. Additionally, the development of cost-effective prevention and treatment strategies that can be implemented in resource-limited settings is crucial for reducing the burden of DFS [31].

In conclusion, DFS remains a significant complication of diabetes that requires a comprehensive approach to management and prevention.

By addressing the unique challenges faced in Kazakhstan and other similar regions, healthcare providers can improve outcomes for patients with DFS and reduce the associated healthcare burden [32].

Current Nursing Practices in Managing Diabetic Foot Syndrome

Nursing care plays a crucial role in the management of Diabetic Foot Syndrome (DFS), focusing on prevention, early detection, and comprehensive treatment strategies that aim to reduce the risk of complications such as ulcers, infections, and amputations. Nurses are often the first point of contact for patients with diabetes and thus are in a unique position to implement preventative measures and provide ongoing education and support [33].

Preventative care and patient education. Preventative care is a cornerstone of nursing practice in managing DFS. Nurses are responsible for educating patients about the importance of daily foot inspections, proper footwear, and maintaining good glycemic control. Studies have shown that structured educational programs led by nurses significantly reduce the incidence of foot ulcers and related complications [34]. A study conducted in Kazakhstan highlighted the effectiveness of nurse-led education in improving patients' foot care practices, leading to a reduction in the occurrence of DFS [35].

Nurses also play a pivotal role in the early identification of high-risk patients. Regular foot assessments, including sensory testing and vascular assessments, are essential components of preventative care. By identifying risk factors early, such as peripheral neuropathy or peripheral arterial disease (PAD), nurses can initiate timely interventions to prevent the progression of DFS [36].

Wound care management. In cases where patients present with foot ulcers, nurses are integral to the wound care process. This includes debridement, dressing changes, and monitoring for signs of infection. The choice of dressing and the frequency of dressing changes are tailored to the wound's characteristics and the patient's overall condition. Advanced wound care techniques, such as the use of hydrocolloid or foam dressings, have been shown to promote healing and are commonly used by nursing staff [37].

Infection control is another critical area where nurses contribute to the management of DFS. Nurses are responsible for monitoring wounds for signs of infection, educating patients on how to recognize these signs, and coordinating care with physicians to ensure appropriate antibiotic therapy is initiated promptly. The introduction of evidence-based protocols for wound management has led to improved outcomes and a reduction in the need for amputations [38].

Multidisciplinary approach and nurse-led clinics. The management of DFS often requires a multidisciplinary approach, with nurses coordinating care among various healthcare professionals, including podiatrists, endocrinologists, and vascular surgeons. Nurse-led clinics have emerged as an effective model for managing DFS, providing specialized care that includes regular foot examinations, patient education, and individualized care plans [39].

In Kazakhstan, the establishment of nurse-led diabetic foot clinics has been associated with improved patient outcomes, particularly in rural areas where access to specialized care is limited. These clinics offer a comprehensive approach to managing DFS, with nurses playing a central role in both direct patient care and the coordination of services [40].

Challenges in nursing practice. Despite the critical role nurses play in managing DFS, several challenges remain. One of the primary challenges is the need for ongoing education and training for nurses to stay updated on the latest evidence-based practices. The rapid advancement of treatment options and technologies requires nurses to continually expand their knowledge and skills [41].

Resource limitations, particularly in low- and middle-income countries like Kazakhstan, also pose significant challenges. The lack of access to advanced wound care products and the scarcity of specialized training programs for nurses can hinder the effective management of DFS. Efforts to address these challenges through the development of cost-effective interventions and the expansion of nursing education programs are ongoing [42].

Future directions in nursing practice. Looking forward, the role of nurses in managing DFS is expected to expand, particularly with the integration of telemedicine and other digital health technologies into primary care. Telemedicine offers an opportunity for nurses to monitor patients remotely, provide timely interventions, and ensure continuity of care, especially in underserved areas [43].

In addition, the development of nurse-led research initiatives focused on DFS management could contribute to the body of knowledge in this area, leading to improved practices and patient outcomes. Supporting nurses in conducting research and implementing evidence-based practices is essential for advancing the management of DFS [44].

Overall, nurses are indispensable in the management of DFS, providing care that spans prevention, education, wound management, and coordination of multidisciplinary services. Despite the challenges faced, the integration of advanced practices and technologies, along with ongoing education and training, will continue to enhance nursing care in this critical area of diabetes management [45].

Challenges and barriers in nursing care

Nursing care for patients with Diabetic Foot Syndrome (DFS) is complex and fraught with numerous challenges. These challenges can be broadly categorized into issues related to resource limitations, lack of specialized training, patient non-compliance, and systemic barriers within healthcare systems.

Resource limitations. One of the most significant challenges in managing DFS in primary healthcare settings is the lack of resources. This includes inadequate access to advanced wound care products, such as specialized dressings and offloading devices, which are crucial for effective treatment [46].

In many low- and middle-income countries, including Kazakhstan, the limited availability of such resources hampers the ability of nurses to provide optimal care [47]. Additionally, budget constraints in public healthcare systems often lead to insufficient staffing, which further exacerbates the problem [48].

Lack of specialized training. Another critical barrier is the lack of specialized training for nurses. Managing DFS requires a deep understanding of diabetes management, wound care, and the complexities of foot pathology. However, many nurses do not receive adequate training in these areas, particularly in rural and underserved regions [49]. In Kazakhstan, recent efforts to improve nursing education have included the introduction of specialized courses on diabetes care, but these are still not widely accessible [50]. Without proper training, nurses may struggle to implement evidence-based practices, leading to suboptimal patient outcomes.

Patient non-compliance. Patient non-compliance is a pervasive challenge in managing DFS. Despite nurses' efforts to educate patients on the importance of foot care and glycemic control, many patients fail to adhere to recommended practices [51]. Factors contributing to non-compliance include lack of understanding, cultural beliefs, and psychological barriers such as fear and denial [52]. In some cases, patients may not follow through with prescribed treatments due to financial constraints or difficulties in accessing healthcare facilities, particularly in remote areas [53].

Systemic barriers. Systemic barriers within healthcare systems also play a significant role in hindering effective nursing care for DFS. These barriers include fragmented care, where patients receive disjointed care from multiple providers without proper coordination, leading to inconsistent treatment approaches [54]. The lack of integrated care pathways for DFS management can result in delays in diagnosis and treatment, further complicating patient outcomes [55]. In Kazakhstan, efforts are being made to establish more cohesive care models, but these initiatives are still in the early stages [56].

Psychological and emotional challenges for nurses. Nurses working with DFS patients often face significant psychological and emotional challenges. The chronic nature of DFS, coupled with the potential for severe complications such as amputation, can lead to feelings of helplessness and burnout among nursing staff [57]. The emotional toll of witnessing patients' suffering, particularly when it results from preventable causes, is profound. Strategies to support nurses' mental health, including access to counseling and peer support groups, are essential but often lacking in many healthcare settings [58]. Cultural and linguistic barriers. In multicultural and multilingual settings, such as in Kazakhstan, cultural and linguistic barriers can impede effective communication between nurses and patients. Miscommunication can lead to misunderstandings regarding treatment plans and patient education, ultimately affecting patient adherence and outcomes [59]. Nurses must navigate these barriers with sensitivity and adaptability, often requiring additional training in cultural competence [60].

Future directions in overcoming challenges. To overcome these challenges, several strategies can be employed. First, increasing investment in nursing education and training is essential to ensure that nurses are equipped with the skills needed to manage DFS effectively. Second, improving access to resources, particularly in rural and underserved areas, is crucial for delivering high-quality care [61]. Additionally, developing integrated care pathways that facilitate coordinated care across different providers can help address systemic barriers [62]. Lastly, addressing the psychological and emotional needs of nursing staff through support programs can reduce burnout and improve job satisfaction, ultimately leading to better patient care [63].

Addressing the challenges and barriers in nursing care for DFS requires a multifaceted approach that includes education, resource allocation, systemic reform, and psychological support. By implementing these strategies, healthcare systems can enhance the quality of care for patients with DFS and improve overall patient outcomes.

Innovations and strategies for improvement

Innovative approaches and strategies are critical for enhancing the management of Diabetic Foot Syndrome (DFS) in primary healthcare settings. Recent advancements in technology, patient-centered care models, and education have shown promise in addressing the challenges associated with DFS. This chapter explores some of the key innovations and strategies that have been developed over the last decade to improve outcomes for patients with DFS.

Technological innovations. One of the most significant developments in the care of DFS patients has been the introduction of advanced wound care technologies. These include negative pressure wound therapy (NPWT), which has been shown to accelerate healing in complex diabetic foot ulcers [64]. NPWT works by applying a vacuum to the wound area, promoting increased blood flow and reducing edema, which are crucial for wound healing. Additionally, new materials for wound dressings, such as hydrocolloids and antimicrobial dressings, have been developed to better manage wound exudate and prevent infections [65]. Telemedicine has also emerged as a valuable tool in DFS management, especially in remote and underserved areas. Telemedicine platforms allow healthcare providers to remotely monitor wound healing, adjust treatment plans, and provide patient education, thereby improving access to care [66]. In Kazakhstan, pilot programs using telemedicine for diabetic care have demonstrated promising results, particularly in reducing the need for in-person visits and enabling continuous patient monitoring [67].

Patient-centered care models. Shifting to patient-centered care models is another strategy that has proven effective in managing DFS. These models emphasize the involvement of patients in their own care, which has been associated with improved adherence to treatment and better outcomes [68]. For example, structured patient education programs that teach self-care practices, such as proper foot hygiene and early detection of foot lesions, have significantly reduced the incidence of severe complications like amputation [69]. Empowering patients with knowledge and skills not only enhances their self-efficacy but also fosters a collaborative relationship between patients and healthcare providers.

In Kazakhstan, efforts to implement patient-centered care models in the management of DFS have been gaining traction. These initiatives often

involve multidisciplinary teams, including nurses, endocrinologists, podiatrists, and dietitians, who work together to create individualized care plans tailored to the specific needs of each patient [70].

Educational interventions for healthcare providers. Ongoing education and training for healthcare providers, particularly nurses, are essential for the effective management of DFS. Recent studies have highlighted the importance of continuous professional development in enhancing the knowledge and skills of healthcare providers in DFS care [71]. Workshops, seminars, and online courses focused on the latest evidence-based practices in diabetic foot care have been shown to improve the clinical competencies of nurses and other healthcare professionals [72]. In Kazakhstan, the introduction of specialized training programs for nurses in diabetic foot care has led to noticeable improvements in patient outcomes. These programs often include both theoretical and practical components, ensuring that nurses are well-equipped to handle the complexities of DFS management [73].

Integration of multidisciplinary teams. The integration of multidisciplinary teams into the care of DFS patients is another strategy that has gained popularity in recent years. These teams typically consist of various specialists, including endocrinologists, podiatrists, vascular surgeons, and diabetes educators, who collaborate to provide comprehensive care [74]. The multidisciplinary approach has been shown to reduce the incidence of complications, such as infections and amputations, by ensuring that all aspects of the patient's condition are addressed in a coordinated manner [75]. In Kazakhstan, the establishment of multidisciplinary diabetic foot clinics has begun to take shape, with early results indicating improved patient outcomes and higher rates of limb salvage [76]. These clinics serve as centers of excellence for DFS management, offering patients access to specialized care and the latest treatment modalities.

Public health initiatives and policy changes. Public health initiatives and policy changes aimed at improving the management of DFS have also played a crucial role in recent years. National diabetes programs that focus on early detection and prevention of DFS, as well as the implementation of standardized care protocols, have been effective in reducing the burden of the disease [77]. In some countries, including Kazakhstan, government-led campaigns to raise awareness about the importance of foot care among people with diabetes have led to increased screening rates and earlier intervention [78].

Policy changes that support the allocation of resources to diabetic foot care, such as funding for specialized clinics and subsidies for essential medical supplies, are also important strategies for improving patient outcomes. Ensuring that these resources are available, particularly in low-resource settings, is vital for the successful management of DFS [79].

Future directions. Looking ahead, the continued integration of technology, patient-centered care models, and multidisciplinary teams will be key to further improving DFS management. Additionally, expanding access to education for both healthcare providers and patients will remain a priority. Future research should focus on the development of new treatment modalities, as well as the optimization of existing strategies, to ensure that all patients with DFS receive the highest standard of care [79].

Innovations and strategic improvements in DFS care are essential for addressing the growing burden of the disease. By leveraging new technologies, fostering patient-centered care, and promoting multidisciplinary collaboration, healthcare systems can enhance the quality of care for patients with DFS. As these strategies continue to evolve, it is crucial that they are implemented in a way that is accessible and sustainable, particularly in low-resource settings like Kazakhstan.

Conclusions

The management of Diabetic Foot Syndrome (DFS) remains a significant challenge within primary healthcare settings, requiring a multifaceted approach that includes advanced technologies, patient-centered care, continuous education for healthcare providers, and the integration of multidisciplinary teams. Recent innovations, such as the use of negative pressure wound therapy, telemedicine, and patient-centered care models, have shown promise in improving outcomes for patients with DFS. In Kazakhstan, the implementation of these strategies, including the establishment of multidisciplinary clinics and specialized training programs for nurses, has led to noticeable improvements in patient care.

However, the success of these initiatives depends largely on overcoming existing barriers, such as limited access to advanced technologies, the need for continuous education of healthcare providers, and the integration of patient-centered care models in routine practice. Public health initiatives and policy changes have also played a crucial role in enhancing DFS management, particularly in low-resource settings like Kazakhstan.

Moving forward, it is essential to continue fostering innovation and strategic improvements in DFS care. The integration of new technologies, the expansion of education programs, and the strengthening of multidisciplinary teams will be key to further enhancing the quality of care for patients with DFS. By addressing these challenges and leveraging these innovations, healthcare systems can significantly reduce the burden of DFS and improve patient outcomes globally.

Conflict of interests: Authors declare no conflict of interest.

Funding. None.

Authors' contribution: Conceptualization – G.D.; methodology – B.Sh.,D.Zh.; formal analysis – B.Sh.,D.Zh.,Zh.B.,N.M.; writing (original draft preparation) – G.D.,B.Sh.; writing (review and editing) – G.D., B.Sh.

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Диабеттік табан синдромы кезінде алғашқы медициналық-санитарлық көмек деңгейінде мейіргерлік күтімді жақсарту

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Түйіндеме

Диабеттік табан синдромы (ДТС) қант диабетінің ауыр асқынуы болып табылады, ол медициналық-санитарлық алғашқы көмек көрсетушілерге айтарлықтай қиындықтар туғызады. Тиімді мейіргерлік араласулар ДТС бар науқастардың нәтижелерін жақсарту және ампутация сияқты ауыр асқынулардың алдын алу үшін өте маңызды.

Шолудың мақсаты: жұмыс науқастың күтімі мен нәтижелерін жақсартуға баса назар аудара отырып, медициналық-санитарлық алғашқы көмек ДТС синдромын басқаруға арналған ағымдағы мейіргерлік шараларды зерттеуге және бағалауға бағытталған.

PubMed, Scopus және Web of Science сияқты дерекқорларды пайдаланып, «диабеттік табан синдромы», «мейіргерлік араласулар», «алғышқы медициналық көмек» және «қант диабетін басқару» сияқты түйін сөздерді қолдану арқылы мұқият әдебиет іздеу жүргізілді. 2011-2024 жылдар аралығында жарияланған мақалалар қарастырылды. Іздеу нәтижесі 950 зерттеуді анықтады, олардың 65-і қосу критерийлеріне сәйкес келеді. Бұл зерттеулер қазіргі мейіргерлік тәжірибенің тиімділігі мен қиындықтарын бағалау үшін талданған.

Шолу ДТС кезінде әртүрлі мейіргерлік араласуды, соның ішінде науқастарды оқытуды, жараларды күтуді, аяқтың асқынуларын бақылауды және басқаруды және пәнаралық ынтымақтастықты зерттейді. Ол дәлелді тәжірибелерді, тиімді күтімдегі жалпы кедергілерді және медициналық-санитарлық алғашқы көмек көрсету орындарында мейіргерлік араласуды жақсартудың инновациялық стратегияларын көрсетеді.

ДТС басқару және науқастардың нәтижелерін жақсарту үшін тиімді мейіргерлік араласулар өте маңызды. Ағымдағы тәжірибелер белгілі оң нәтижелер бергенімен, оларды енгізуге және емделушілерге толық сәйкестігі деңгейіне байланысты тұрақты қиындықтар әлі де бар. Болашақ зерттеулер медициналық-санитарлық алғашқы көмек деңгейінде ДТС кезінде мейіргерлік күтімді жақсарту үшін жаңа стратегияларды әзірлеуге бағытталуы керек.

Түйін сөздер: диабеттік табан синдромы, мейіргерлік араласулар, медициналық-санитарлық алғашқы көмек, қант диабетін басқару, жараларды күту, науқастарды оқыту, қант диабетінің асқынулары.

Усовершенствование сестринского вмешательства при синдроме диабетической стопы на уровне первичной медико-санитарной помощи

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Резюме

Синдром диабетической стопы (СДС) является серьезным осложнением диабета, которое создает значительные проблемы для поставщиков первичной медико-санитарной помощи. Эффективные сестринские вмешательства имеют решающее значение для управления СДС, улучшения результатов лечения пациентов и предотвращения серьезных осложнений, таких как ампутация.

Цель обзора: работа направлена на изучение и оценку текущих сестринских вмешательств для управления СДС на уровне первичной медицико-санитарной помощи с акцентом на улучшение ухода за пациентами и результатов.

Нами был проведен тщательный поиск литературы с использованием таких баз данных, как PubMed, Scopus и Web of Science, с использованием ключевых слов, включая «синдром диабетической стопы», «сестринские вмешательства», «первичная медицинская помощь» и «управление диабетом». Были рассмотрены статьи, опубликованные в период с 2011 по 2024 год. В ходе поиска было выявлено 950 исследований, 65 из которых соответствовали критериям включения. Эти исследования были проанализированы для оценки эффективности и проблем текущей сестринской практики.

В обзоре рассматриваются различные сестринские вмешательства для СДС, включая обучение пациентов, уход за ранами, мониторинг и лечение осложнений стопы и междисциплинарное сотрудничество. В нем освещаются основанные на фактических данных практики, общие препятствия для эффективного ухода и инновационные стратегии для улучшения сестринского вмешательства в условиях первичной медико-санитарной помощи.

Эффективные сестринские вмешательства имеют жизненно важное значение для лечения СДС и улучшения результатов лечения пациентов. Хотя текущая практика выглядит многообещающей, существуют постоянные проблемы, связанные с реализацией и соблюдением пациентами рекомендаций. Будущие исследования должны быть сосредоточены на разработке и оценке новых стратегий для улучшения сестринского ухода для СДС на уровне первичной медико-санитарной помощи.

Ключевые слова: синдром диабетической стопы, сестринские вмешательства, первичная медико-санитарная помощь, лечение диабета, уход за ранами, обучение пациентов, осложнения диабета.