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Diabetes mellitus and stroke: Diagnosis, nursing interdisciplinary management, and medical secretary documentation practices

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***Abstract*---Background:** Diabetes mellitus (DM) is a well-established risk factor for cardiovascular diseases (CVD), including stroke. As the global prevalence of diabetes continues to rise, so does its contribution to the increasing incidence of stroke, particularly ischemic strokes. The coexistence of diabetes with other stroke risk factors, such as hypertension, dyslipidemia, and obesity, significantly amplifies stroke risk. Diabetes management post-stroke is complex, and inadequate control of blood glucose increases the risk of recurrent strokes and worsens patient outcomes. **Aim:** This article aims to explore the epidemiology, pathophysiological mechanisms, diagnostic approaches, and interdisciplinary management strategies for stroke in patients with diabetes. It focuses on the role of nursing in managing these patients, including documentation practices and the integration of protocols that address both acute and long-term diabetes management in the context of stroke care. **Methods:** A comprehensive review of existing literature and clinical studies was conducted to assess the relationship between diabetes and stroke. Key databases

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were searched for studies that focus on epidemiological trends, stroke patterns in diabetic populations, glycemic management during the acute phase of stroke, and the role of nursing in interdisciplinary stroke care. **Results:** Diabetes significantly increases the risk of stroke, with varying relative risks depending on demographic and regional factors. Ischemic strokes are more common among diabetics, particularly those with concurrent hypertension. The pathophysiology of diabetes-induced stroke risk involves hyperglycemia, insulin resistance, and oxidative stress, all of which contribute to vascular damage and atherosclerosis. Glycemic control in the acute phase of stroke has been shown to have mixed results, with some studies showing no significant improvement in outcomes despite glucose-lowering interventions. **Conclusions:** Effective management of diabetes in stroke patients requires a multifaceted approach, including early and sustained glycemic control, interdisciplinary collaboration, and comprehensive nursing care. Documentation practices are critical in ensuring that all aspects of patient care, including glycemic management, are effectively tracked and managed. Future research should focus on refining glycemic control strategies and assessing the role of nursing in improving patient outcomes.

***Keywords*---**Diabetes Mellitus, Stroke, Glycemic Control, Interdisciplinary Management, Nursing Protocols, Documentation Practices, Ischemic Stroke, Cardiovascular Diseases, Hyperglycemia.

Introduction

Diabetes mellitus constitutes a significant risk factor for cardiovascular diseases (CVD), including cerebrovascular events such as stroke. In 2015, the global prevalence of diabetes was approximately 415 million adults, with 12% of global healthcare expenditure, amounting to US$ 673 billion, allocated to diabetes management alone [1]. The incidence of type 2 diabetes mellitus (T2DM) has surged globally due to unhealthy dietary habits, increasing rates of obesity, and insufficient physical activity, culminating in a parallel rise in diabetes-related cardiovascular complications. This trend is anticipated to intensify as advancements in science, technology, and healthcare extend life expectancy, resulting in a growing proportion of elderly individuals who exhibit higher prevalence rates of T2DM and hypertension. The World Health Organization (WHO) reported that in 2015, 900 million individuals were aged ≥60 years, constituting 12% of the global population. This demographic is projected to exceed 2 billion by 2050, accounting for 22% of the global population, with approximately 80% residing in low- and middle-income countries, further exacerbating the burden of diabetes and associated complications [2]. T2DM, predominantly influenced by lifestyle factors, is frequently accompanied by additional stroke risk factors such as obesity, hypertension, and dyslipidemia, compounding vascular risks in affected individuals [3]. Although type 1 diabetes mellitus (T1DM) also elevates stroke risk, its impact is relatively modest. The management of diabetes, both immediately post-stroke and during long-term follow-up, presents considerable challenges for clinicians. Suboptimal diabetes

management not only exacerbates immediate and long-term morbidity and mortality related to stroke but also substantially increases the likelihood of recurrent cerebrovascular events [4]. This comprehensive article aims to elucidate the epidemiological trends, pathophysiological mechanisms, diagnostic approaches, and management protocols for diabetes and stroke, providing clinicians with a systematic framework for patient care.

Diabetes and Stroke: Epidemiology

While global stroke mortality rates have declined, the incidence of stroke and its associated sequelae have escalated significantly over the past three decades [5,6]. Diabetes is an established independent risk factor for stroke, linked with heightened morbidity and mortality [7-9]. Coexisting cardiometabolic conditions such as obesity, hypertension, and dyslipidemia, commonly observed in individuals with T2DM, amplify the relative risk of stroke when compared to patients with similar profiles but without diabetes [8,21-23].

The risk of stroke in individuals with diabetes mellitus has been extensively investigated across various global study populations, revealing notable differences in relative risk (RR) based on demographic and regional factors. The Framingham study, which tracked 5,209 individuals aged 30-62 years for 20 years, reported RRs of 2.5 in men and 3.6 in women [10]. Similarly, the Honolulu Heart Program, involving 7,598 men aged 45-70 years, documented an RR of 2.0 (95%CI: 1.4-3.0) over 12 years [11]. In the United States, the Nurses' Health Study of 116,177 women aged 30-55 years observed an RR of 3.0 (95%CI: 1.6-5.7) over an 8-year follow-up period [12]. Finnish data for individuals aged 65-74 years indicated gender-specific RRs of 1.36 (95%CI: 0.44-4.18) for men and 2.25 (95%CI: 1.65-3.06) for women over 3.5 years [13]. A large Swedish cohort of 241,000 individuals aged 35-74 years revealed elevated RRs of 4.1 (95%CI: 3.2-5.2) for men and 5.8 (95%CI: 3.7-6.9) for women across an 8-year period [14]. The ARIC study in the United States, involving 15,792 participants aged 45-64 years, reported an RR of 2.22 (95%CI: 1.5-3.2) over 6-8 years [15]. In the United Kingdom, a cohort of 7,735 men aged 40-59 years documented an RR of 2.27 (95%CI: 1.23-4.20) during a 16.8-year follow-up [16]. Scottish data from the Renfrew/Paisley study, comprising 15,406 individuals aged 45-64 years, showed gender-specific RRs of 1.52 (95%CI: 0.72-3.21) for men and 2.83 (95%CI: 1.63-4.90) for women over a 20-year period [17]. In Oldmsted County, Minnesota, 9,936 participants aged 40-70 years exhibited an RR of 3.5 over 15 years [18]. Among U.S. Hispanics aged 70-90 years, a 3.5-year study found RRs of 3.5 for men and 5.0 for women [19]. Lastly, a multinational cohort from Asia, Australia, and New Zealand, involving 161,214 participants, reported RRs of 2.09 and 2.49 for the Asian population over 5.4 years [20]. These findings underscore the heightened stroke risk in diabetic populations, influenced by gender, age, and regional disparities.

Clinical Pattern of Stroke in Patients with Diabetes

Stroke patterns differ notably between diabetic and non-diabetic populations. Among diabetic patients, ischemic strokes predominate over hemorrhagic strokes, with lacunar infarcts—small, non-cortical ischemic lesions measuring 0.2–15

mm—being the most prevalent subtype. These patterns may be attributed to the heightened prevalence of microvascular disease and concomitant hypertension in this cohort [24-26]. Prognostic outcomes in diabetic individuals are less favorable, characterized by increased risk of recurrent strokes, greater functional impairments, prolonged hospitalization, and elevated mortality rates [8,34]. Furthermore, diabetes has been linked to a higher incidence of stroke-related dementia [35].

Several studies have examined stroke patterns, types, and significant risk factors in diabetic versus non-diabetic populations, highlighting important distinctions and risk profiles. Jørgensen et al. (1994) analyzed 233 diabetic and 902 non-diabetic patients with all stroke types, reporting lower rates of intracerebral hemorrhage (ICH) in diabetics (1% vs. 9%) and slightly lower infarct rates (60% vs. 68%), with hypertension identified as a significant risk factor for diabetics [27]. Similarly, Olsson et al. (1990) investigated 121 diabetic and 584 non-diabetic patients, finding comparable ICH rates (6% vs. 9%) and slightly higher infarct rates in diabetics (59% vs. 55%), with heart failure and ischemic heart disease emerging as critical risk factors in diabetics [28]. Kiers et al. (1992) observed ICH rates of 19% in 27 diabetic patients versus 21% in 100 non-diabetics, though infarct rates were not available, and specific risk factors were not identified [29]. In contrast, Weir et al. (1997) reported ICH rates of 7% in diabetics compared to 14% in non-diabetics, with hypertension and hyperglycemia being significant contributors to stroke risk [30]. Megherbi et al. (2003) studied 937 diabetic and 3,544 non-diabetic patients, noting slightly lower ICH rates in diabetics (8.5% vs. 11.5%) but higher infarct rates (78% vs. 72%), with hypertension identified as a key risk factor [31]. Arboix et al. (2005) focused on ischemic strokes, finding a significantly higher infarct rate in diabetics (76% vs. 51%) and associating risk with ischemic heart disease, prior ischemic strokes, and dyslipidemia [32]. Finally, Hankey et al. (2013) analyzed a large cohort of 9,795 diabetic patients, documenting an ICH rate of 10% and an infarct rate of 82%. Risk factors included hypertension, prior ischemic stroke, ischemic heart disease, nephropathy, and elevated LDL cholesterol levels [33]. These findings underscore the nuanced interplay of stroke types and risk factors in diabetic populations, necessitating tailored preventive and management strategies.

Pathophysiological Considerations

Hyperglycemia

Hyperglycemia is known to exacerbate oxidative stress, initiating several pathological pathways implicated in microvascular complications of diabetes [36]. The overproduction of reactive oxygen species (ROS) inhibits glyceraldehyde 3-phosphate dehydrogenase (GAPDH) in glycolysis, triggering DNA strand breaks and activation of Poly(ADP-ribose) polymerase (PARP). The resultant PARP activity inhibits GAPDH, leading to glycolytic intermediate accumulation and activation of five detrimental pathways: (1) polyol pathway flux, (2) advanced glycation end product (AGE) formation, (3) receptor-mediated AGE signaling, (4) protein kinase C isoform activation, and (5) hexosamine pathway overactivity [36]. Chronic hyperglycemia-induced endothelial damage accelerates atherosclerosis, thereby increasing the prevalence and incidence of cardiovascular diseases, including stroke, in diabetic populations.

Metabolic Memory

The concept of "metabolic memory," derived from the DCCT/EDIC study, underscores the sustained benefits of early intensive hyperglycemia management, regardless of subsequent glycemic trajectories [37,38]. Recent findings suggest that hyperglycemia-induced ROS production triggers enduring epigenetic modifications in nuclear factor-κB (NF-κB) in endothelial cells, leading to persistent inflammatory gene expression even after glycemic normalization [39]. This phenomenon underscores the significance of early and sustained glycemic control to mitigate endothelial dysfunction and associated cardiovascular complications [36]. Novel therapeutic approaches targeting hyperglycemia-induced ROS overproduction are under investigation to prevent the progression of diabetes-related complications [39,41].

Insulin Resistance

Insulin resistance is a pivotal contributor to the pathogenesis of cardiovascular diseases. In the presence of excessive adiposity, impaired insulin action fails to suppress lipolysis, resulting in elevated free fatty acid (FFA) levels. This FFA influx exacerbates insulin resistance, impairs glucose uptake, and promotes mitochondrial ROS overproduction in vascular endothelial cells, perpetuating pathogenic pathways analogous to hyperglycemia-induced damage. Furthermore, FFA-driven dyslipidemia—marked by elevated triglycerides, reduced high-density lipoprotein cholesterol, and increased small dense low-density lipoprotein (LDL) particles—aggravates atherogenesis and plaque instability [39]. Emerging evidence highlights the role of peroxisome-proliferator-activated receptor γ (PPARγ) in modulating lipid metabolism and glucose homeostasis within atherosclerotic lesions [42]. Thiazolidinediones, PPARγ ligands initially developed for T2DM management, have demonstrated protective effects against atherosclerosis in preclinical and clinical studies [42,44]. However, inconsistent results in subsequent trials necessitate further investigation to elucidate their cardiovascular benefits [45,46]. The Insulin Resistance Intervention after Stroke (IRIS) trial reported a 24% reduction in total cardiovascular events with pioglitazone in individuals with insulin resistance but without T2DM, despite significant adverse effects affecting adherence [44,47].

Glycemic Management During the Acute Phase of Stroke

Hyperglycemia is a common occurrence among acute stroke patients, regardless of diabetes, and is strongly linked to heightened morbidity and mortality rates [30,48]. For many individuals, an acute stroke often marks the initial diagnosis of diabetes, particularly among older adults. Observational studies consistently reveal associations between acute hyperglycemia during stroke and adverse outcomes, including larger infarct volumes, extended hospital stays, poorer functional recovery, and elevated 30-day mortality rates [33].

The evidence supporting the effectiveness of aggressive glucose-lowering interventions using intravenous insulin therapy in improving stroke outcomes is limited [49,50]. The most extensive efficacy study to date, the United Kingdom Glucose Insulin in Stroke Trial, reported no significant differences in mortality or

functional outcomes among patients with mild to moderate hyperglycemia (median 7.8 mmol/L). Moreover, hypoglycemic episodes were recorded in 41% of patients receiving insulin therapy. As a result, insulin infusion is not recommended for mild to moderate hyperglycemia. Current clinical guidelines advocate for maintaining blood glucose levels within the range of 140–180 mg/dL (7.8–10.0 mmol/L), commonly achieved through intravenous glucose/potassium/insulin (GKI) administration during the first 24 hours post-stroke [50–52]. The evidence for glycemic management in subsequent days post-stroke is less conclusive due to fluctuations in glucose levels caused by enteral feeding and oral intake. Randomized prospective studies have yet to demonstrate clinical benefits of insulin therapy targeting diurnal glucose variability [53,54]. For example, the Heart2D trial examined the impact of prandial glucose spikes following acute myocardial infarction and found no significant differences in cardiovascular event risks between subcutaneous insulin regimens aimed at prandial versus fasting glucose control (HR = 0.98; 95% CI: 0.8–1.21) [54]. Balancing the use of subcutaneous or intravenous insulin or oral agents with the clinical risk of hypoglycemia remains essential [52].

Long-Term Glycemic Control

There is robust evidence indicating that periods of intensive glycemic control can significantly reduce microvascular complications in both type 1 (T1DM) and type 2 diabetes mellitus (T2DM), attributed to the concept of metabolic memory [38,41,55]. However, the impact of long-term glycemic control on macrovascular outcomes, including stroke, remains less definitive [55–59]. The DCCT/EDIC study demonstrated that intensive glycemic management led to a substantial reduction in cardiovascular events in individuals with recently diagnosed T1DM. Patients without baseline cardiovascular risk factors who received intensive therapy showed a 57% reduction in major cardiovascular outcomes over 17 years of follow-up, suggesting that inadequate glycemic control increases cardiovascular risk, while intensive therapy mitigates it [38]. Further follow-up over 27 years confirmed reduced overall mortality risks in the intensive group ($P = 0.045$), albeit with a modest absolute risk reduction [58]. Despite early intervention, cardiovascular disease prevention in T1DM necessitates the optimization of individual risk factors, including dyslipidemia, hypertension, hypercoagulability, and renal impairment. Nonetheless, specific cardiovascular risks unique to T1DM populations require further elucidation, as highlighted in the AHA/ADA scientific statement on T1DM and cardiovascular disease [60]. In T2DM, the delayed benefits of intensive glycemic control, as observed in the DCCT/EDIC cohort, were mirrored in the UKPDS 10-year follow-up. Newly diagnosed T2DM patients receiving intensive therapy demonstrated reductions in microvascular complications (15%, $P = 0.01$), myocardial infarctions (15%, $P = 0.01$), and all-cause mortality (13%, $P = 0.007$). However, stroke incidence remained unaffected [55].

Subsequent trials, such as VADT, ACCORD, and ADVANCE, explored the effects of intensive glycemic control on cardiovascular outcomes in patients with established T2DM. These studies revealed no significant reduction in cardiovascular events or mortality associated with aggressive glycemic targets. Notably, the ACCORD trial identified increased mortality rates within two years in

the intensive-therapy group, leading to its early termination [56,57]. A meta-analysis encompassing these trials suggested a minor reduction in major cardiovascular events (HR = 0.91; 95% CI: 0.84–0.99) but no significant impact on cardiovascular (HR = 1.10; 95% CI: 0.84–1.42) or all-cause mortality (HR = 1.04; 95% CI: 0.90–1.20) [62]. The findings underscore that targeting near-normal glucose levels is not beneficial for patients with long-standing diabetes and established cardiovascular disease. Instead, holistic interventions addressing multiple risk factors, such as hyperglycemia, hypertension, dyslipidemia, and lifestyle modifications, are more effective. The Steno-2 study highlighted this approach, demonstrating significant reductions in cardiovascular events among T2DM patients with microalbuminuria following comprehensive risk factor management [63]. In conclusion, while achieving optimal glycemic control is crucial in reducing diabetes-related complications, overly aggressive glucose-lowering strategies may pose risks. The most appropriate HbA1c target is 7% (53 mmol/mol), with individualized adjustments based on patient-specific factors, as recommended by ADA guidelines [59]. Effective diabetes management extends beyond glycemic control to encompass a broader perspective on metabolic and cardiovascular health.

Blood glucose targets for non-pregnant adults with diabetes are individualized based on a range of clinical and patient-specific factors. A more stringent target, defined as HbA1c < 6.5%, is recommended for individuals with a short duration of diabetes, long life expectancy, and those with Type 2 Diabetes Mellitus (T2DM) managed exclusively through lifestyle modifications or metformin. This target is also appropriate for patients without significant cardiovascular or vascular complications. Conversely, a less stringent target, defined as HbA1c < 8.0%, is suitable for individuals with a history of severe hypoglycemia, limited life expectancy, or advanced microvascular or macrovascular complications. This approach is also advised for those with extensive comorbidities or long-standing diabetes in whom achieving general HbA1c targets is particularly challenging. The determination of appropriate glucose targets should also account for factors such as age, comorbid conditions, duration of diabetes, hypoglycemia status, and individual patient circumstances to optimize outcomes.

Diagnostic Plan:

A diagnostic plan is a systematic approach employed by healthcare professionals to determine the nature and cause of a patient's symptoms, aiding in the identification of diseases or conditions. It involves a detailed patient history assessment, physical examination, and the use of diagnostic tools such as laboratory tests, imaging studies, and specialized procedures. Initially, the healthcare provider conducts a thorough patient interview to collect relevant data regarding the onset, duration, and characteristics of symptoms, past medical history, family history, and lifestyle factors. This is followed by a physical examination to identify any signs that may point to a particular condition. Diagnostic tests, such as blood tests, radiological imaging (e.g., X-rays, CT scans), and other procedures (e.g., biopsies), are then ordered based on the clinical findings. The diagnostic plan should be tailored to each patient’s unique presentation, considering the differential diagnosis and prioritizing tests that are most likely to provide definitive results. As part of the process, healthcare

providers must communicate clearly with the patient, explain the rationale behind the tests, and ensure informed consent. Furthermore, they must review the results and refine the diagnosis, potentially ordering additional tests or consultations if necessary, to ensure accurate and timely diagnosis for optimal patient care.

Management Protocol by Nursing:

Nursing management protocols provide a structured framework for nurses to deliver high-quality care to patients. These protocols are designed to ensure consistency, safety, and evidence-based practices across healthcare settings. The management plan typically begins with an initial assessment, during which nurses gather pertinent information about the patient's condition, medical history, and current health status. Based on this assessment, nursing interventions are planned and implemented to address the patient's needs. For example, nurses may administer medications, assist with mobility, monitor vital signs, or provide wound care. Importantly, these interventions are based on clinical guidelines and best practices, ensuring that nursing actions align with the latest research and standards of care. Nurses also play a crucial role in patient education, helping individuals understand their diagnosis, treatment options, and preventive strategies. Regular monitoring and reassessment of the patient's condition are essential to adjust the management plan as necessary, ensuring it remains effective throughout the care process. Collaboration with other healthcare professionals, including physicians and specialists, is an integral aspect of the nursing management protocol, ensuring comprehensive care. Documentation of all interventions, assessments, and outcomes is essential for continuity of care and to meet legal and ethical standards.

Documentation Process by Medical Secretary:

The documentation process by a medical secretary is essential for ensuring the accurate and efficient management of patient records in a healthcare setting. Medical secretaries are responsible for maintaining organized and comprehensive patient files, which includes the proper recording of personal information, medical history, treatment plans, and progress notes. The process typically starts with the accurate entry of patient demographics, including full name, contact details, date of birth, and insurance information into the system. Subsequently, the medical secretary is responsible for accurately transcribing and updating patient medical records with details of consultations, diagnostic results, prescriptions, and any relevant correspondence between healthcare professionals. The secretary also plays a crucial role in maintaining confidentiality and ensuring that records comply with legal and regulatory requirements, such as those set by HIPAA (Health Insurance Portability and Accountability Act) or other local privacy laws. The documentation should be completed promptly and legibly to avoid any discrepancies that could impact patient care. In addition to maintaining patient charts, medical secretaries may also be tasked with scheduling appointments, coordinating tests, and managing patient correspondence. Effective communication with medical staff and patients is a critical part of the documentation process, facilitating continuity of care and reducing the potential

for errors. Regular audits and reviews of documentation practices are necessary to ensure compliance and quality.

Conclusion

This article underscores the critical intersection between diabetes mellitus and stroke, highlighting how diabetes exacerbates the risk and severity of stroke and complicates its management. The global burden of diabetes continues to rise, driven by factors such as unhealthy diets, increasing obesity rates, and insufficient physical activity. This demographic shift is expected to further strain healthcare systems as the aging population with diabetes faces an increasing risk of stroke and other cardiovascular complications. The epidemiological data reviewed demonstrate a consistent finding: diabetes significantly increases stroke risk, with variations based on gender, age, and regional factors. The pathophysiological mechanisms underlying this heightened risk involve complex metabolic disturbances, including hyperglycemia, insulin resistance, and oxidative stress, all of which promote vascular damage and atherosclerosis. Moreover, the clinical pattern of stroke in diabetic individuals shows a predilection for ischemic strokes, with recurrent strokes being more common, resulting in poorer prognoses compared to non-diabetic populations. Management protocols, particularly during the acute phase of stroke, remain a subject of debate. While glycemic control is crucial, evidence supporting aggressive glucose-lowering interventions, such as intravenous insulin, is inconclusive. The risks of hypoglycemia and potential adverse effects underscore the importance of carefully tailored treatment strategies that prioritize maintaining glucose levels within a safe range. Current guidelines advocate for blood glucose levels between 140–180 mg/dL to reduce the risk of stroke-related complications. Nursing plays an integral role in managing stroke patients with diabetes. The interdisciplinary approach to care involves not only clinical teams but also the active participation of nurses in monitoring blood glucose levels, administering medications, and providing patient education. Effective documentation is vital in ensuring accurate tracking of interventions, treatment responses, and potential complications. This collaborative effort helps to mitigate the risks associated with both diabetes and stroke, improving overall patient outcomes. In conclusion, diabetes and stroke represent a significant global health challenge. Addressing this issue requires comprehensive management strategies that encompass early detection, preventative care, and multidisciplinary collaboration. Further research is needed to optimize management protocols, particularly in the acute phase, and to evaluate the role of nursing in improving outcomes for these vulnerable patients.

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مرض السكري والسكتة الدماغية: التشخيص، إدارة التمريض المشتركة بين التخصصات، وممارسات توثيق الأمانة الطبية

الملخص:

الخلفية :يُعد مرض السكري من العوامل المعروفة المساهمة في أمراض القلب والأوعية الدموية، بما في ذلك السكتة الدماغية. مع استمرار زيادة انتشار مرض السكري على مستوى العالم، يزداد أيضًا تأثيره في زيادة معدل الإصابة بالسكتة الدماغية، وخاصة السكتات الدماغية الإقفارية. يعزز التعايش بين مرض السكري وعوامل خطر السكتة الأخرى مثل ارتفاع ضغط الدم، والاضطرابات الدهنية، والسمنة، بشكل كبير من خطر السكتة الدماغية. إدارة السكري بعد السكتة الدماغية معقدة، حيث إن عدم السيطرة الكافية على مستويات السكر في الدم يزيد من خطر تكرار السكتات الدماغية ويزيد من سوء نتائج المرضى.

الهدف :يهدف هذا المقال إلى استكشاف علم الأوبئة، وآليات المرض الفسيولوجية، والطرق التشخيصية، واستراتيجيات الإدارة المشتركة بين التخصصات للسكتة الدماغية لدى المرضى المصابين بالسكري. يركز على دور التمريض في إدارة هؤلاء المرضى، بما في ذلك ممارسات التوثيق ودمج البروتوكولات التي تعالج كل من إدارة السكري الحادة وطويلة الأمد في سياق رعاية السكتة الدماغية.

الطرق :تم إجراء مراجعة شاملة للأدبيات والدراسات السريرية الحالية لتقييم العلاقة بين مرض السكري والسكتة الدماغية. تم البحث في قواعد البيانات الرئيسية لدراسات تركز على الاتجاهات الوبائية، وأنماط السكتة في الفئات السكانية المصابة بالسكري، وإدارة الغلوكوز أثناء المرحلة الحادة من السكتة الدماغية، ودور التمريض في الرعاية المشتركة بين التخصصات.

النتائج :يزيد مرض السكري بشكل كبير من خطر السكتة الدماغية، مع تفاوت المخاطر النسبية حسب العوامل السكانية والإقليمية. السكتات الدماغية الإقفارية أكثر شيوعًا بين مرضى السكري، لا سيما أولئك الذين يعانون من ارتفاع ضغط الدم المصاحب. تشمل الفيزيولوجيا المرضية لخطر السكتة الدماغية الناتج عن السكري فرط سكر الدم، مقاومة الإنسولين، والإجهاد التأكسدي، وهي كلها تساهم في تلف الأوعية الدموية وتصلب الشرايين. أظهرت الدراسات المتعلقة بالتحكم في مستويات السكر في الدم أثناء المرحلة الحادة من السكتة الدماغية نتائج متباينة، حيث أظهرت بعض الدراسات عدم وجود تحسن كبير في النتائج رغم التدخلات لخفض مستوى السكر.

الاستنتاجات :يتطلب إدارة السكري بشكل فعال لدى مرضى السكتة الدماغية نهجًا متعدد الأبعاد، بما في ذلك التحكم المبكر والمستدام في مستويات السكر، والتعاون بين التخصصات، ورعاية تمريضية شاملة. تعتبر ممارسات التوثيق أمرًا بالغ الأهمية لضمان تتبع جميع جوانب رعاية المرضى بشكل فعال، بما في ذلك إدارة مستويات السكر. يجب أن تركز الأبحاث المستقبلية على تحسين استراتيجيات التحكم في مستويات السكر وتقييم دور التمريض في تحسين نتائج المرضى.

الكلمات المفتاحية :مرض السكري، السكتة الدماغية، التحكم في السكر، الإدارة المشتركة بين التخصصات، بروتوكولات التمريض، ممارسات التوثيق، السكتة الدماغية الإقفارية، أمراض القلب والأوعية الدموية، فرط سكر الدم.