

Open Access

Received: December 31, 2020; Accepted: January 14, 2021; Published: January 21, 2021

^{*}Corresponding author: Nagwa Thabet Elsharawy, Department of Biology, Collage of Science, University of Jeddah, Jeddah, Saudi Arabia, Tel: 00966582417929; E-mail: dr.nagwa2004@yahoo.com

being diabetic or at risk of developing diabetes, characterized by high plasma glucose concentrations as a result of the inability of the body to adequately produce or use insulin e ectively. e disease is diagnosed when there is impaired glucose tolerance and characterized by high plasma glucose concentrations [1-3].

In addition, guidelines are summarized for the speci c diagnosis of biochemistry in fasting, oral glucose tolerance tests as well as the usage of Hemoglobin A1c (HbA1c). e rising incidence of diabetes calls for targeted screening of risk populations for diabetes and prediabetes. is provides the foundation for the early implementation of interventions to prevent and prolong the development of diabetes in these risk categories. [14].

Types of diabetes mellitus

Diabetes mellitus has been categorized into 3 main types [1]. Type 1 diabetes mellitus is an autoimmune disease that much of the time starts with individuals a ected before they reach 40 and is classi ed as juvenile-onset or insulin-dependent diabetes mellitus. It is marked by self-destructing insulin, which produces beta cells in the pancreas by the body's immune system response. About 10-15 percent of all cases of diabetes mellitus Type 2 Diabetes Mellitus, (T2DM) are stated to be a formerly named diabetes mellitus that was non-insulation-dependent that is o en referred to as late-consumption diabetes. e peculiarity of this kind is its relative insulin de ciency and susceptibility to plasma glucose production which accounts for approximately 90% of all diabetes cases worldwide. e third type is Gestational Diabetes Mellitus (GDM), which is de ned by rst or rst diagnosed glucose sensitivity a er an oral glucose test in pregnancies a er an oral glucose tolerance test. Glucose resistance may be normal, but pregnant women with a family history of diabetes, elevated maternal age, obesity, and higher ethnicity can again be popular. ese mothers' babies are expected to become obese and have a poor glucose tolerance [4,10].

Complications of diabetes

Several complications associated with diabetes. Acute metabolic complications to mortality include unusually elevated blood glucose (hyperglycemia) diabetic ketoacidosis and low blood glucose coma (hypoglycemia). e long-term vascular problems of diabetes are the most damaging impact. ese problems are common and are at least partially triggered by the continual rise in blood glucose levels that contribute to blood vessel injury. In diabetes, the resultant conditions are categorized under "microvascular disorders" (because of disruption to tiny blood vessels). Microvascular complications involve neural damage or "neuropathy," eye or "retinopathy," and kidney disease termed "nephropathy" [5].

Macrovascular complications and microvascular complications:

e principal macrovascular complications include accelerated cerebrovascular disease and accelerated cardiovascular disease resulting in myocardial infarction stroke. While underlying etiology tends to be controversial, myocardial disease with diabetes now seems to be at least partially atherosclerosis independent. Other chronic diabetic problems is depression dementia and sexual dysfunction [5,15,16].

Neuropathy

More than half of all diabetes patients experience neuropathy, with a chance of one or more lower limb amputations for life projected to be up to 15 percent in certain communities. Ny (1)]TETEMC /P &Lang (en)73 (, w)-3 (i)12 (t)-6 (h)]Tvas etao aesuETEn,Sup to 159 (0(ce o)12.19 (1 d)7 (yl c

Page 3 of 8

Micro-organisms comprise both skin ulcers. e clinical diagnosis

Citation: Elsharawy NT, Turkistani JA, Al-Zahrani HAA (2021) Bacterial Infection in Diabetic Foot. J Clin Diabetes 5: 113.

Prevention of MRSA infection

Surgically

1. Consult a surgical consultant in selected mild and severe cases of DFIs.

2. In most situations, immediate surgical intervention is required abscesses, separation syndrome and nearly all deep tissue necrotizing infections.

3. In cases of osteomyelitis followed by so tissue in ammation, it is normally advisable to suggest surgical operation, so tissue envelope damaged, x-ray bone destruction incremental, or ulcer bone [6].

Antimicrobial therapy

1. Almost diabetic foot injuries are responsive to antimicrobial therapy, do not treat diabetic foot injuries clinically contaminated with antimicrobial therapy.

2. Choose antibiotic agents for care based on probable or con rmed causative pathogens, antibiotic resistance, clinical seriousness, DFI e ectiveness and costs.

3. For most so -tissue DFIs, antibiotic treatment lasts 1-2 weeks is generally acceptable.

4. Initially o er parenteral medication with most critical and some minor infections, then turn to oral care when the infection reacts [31,82-85].

- 34. Voss A, Loe f en F, Bakker J, Klasseen C, Wulf M (2005) *Staphylococcus aureus* in pig farming. Emerg Infect Dis 11: 1965-6.
- 35. Chambers HF, Deleo FR (2009) Waves of resistance: *Staphylococcus aureus* in the antibiotic era. Nat Rev Microbiol 7: 629–64.
- 36. Gunawardena ND, ThevanesamV, Kanakaratne N, Abeysekera D, Ekanayake A (2012). Molecular identification of methicillin resistance and virulence marker in Staphylococcus aureus. Sri Lankan Journal of Infectious Disease 2: 18-29.
- Iliyasu G, Dayyab FM, Abubakar S, Inuwa S, Tambuwal SH, et al. (2018) Laboratory-confrmed hospital-acquired infections: An analysis of a hospital's surveillance data in Nigeria. Heliyon 4: e00720.
- Davoodabadi F, Mobasherizadeh S, Mostafavizadeh K, Shojaei H, Havaei SA, et al. (2016) Nasal colonization in children with community acquired methicillinresistant *Staphylococcus aureus*. Adv Biomed Res 5: 86.
- 39. Lipsky BA, Berendt AR, Cornia PB, Pile JC, Peters EJG, et al. (2012) Infectious diseases society of America clinical practice guideline for the diagnosis and treatment of diabetic foot infections. Clin Infect Dis 54: 132–173.
- 40. Vardakas KZ, Horianopoulou M, Falagas ME (2008) Factors associated with treatment failure in patients with diabetic foot infections: an analysis of data from randomized controlled trials. Diabetes Res Clin Pract 80:344-51.
- 41. Saseedharan S, Sahu M, Chaddha R, Pathrose E, Bal A, et al. (2017) Epidemiology of diabetic foot infections in a reference tertiary hospital in India. Braz J Microbiol 49: 401-40.
- 42. Bader MS (2008) Diabetic foot infection. Am Fam Physician 78: 71-9
- Boucher HW, Talbot GH, Bradley JS, Edwards JE, Gilbert D, et al. (2009) Bad bugs, no drugs:no ESKAPE! an update from the Infectious Diseases Society of America. Clin Infect Dis 48: 1–12.
- 44. Echols RM (2011) Understanding the regulatory hurdles for antibacterial drug development in the post-Ketek world. Ann N Y Acad Sci 1241: 153–161.
- 45. Sutclife JA (2011) Antibiotics in development targeting protein synthesis. Ann N Y Acad Sci 124: 122-52.
- 46. Care A, Ladd E, Gnp FNP (2005) The use of antibiotics for viral upper respiratory tract infections: an analysis of nurse practitioner and physician prescribing practices in ambulatory care. J Am Acad Nurse Pract 17: 416-24.
- 47. Lipsky BA, Stoutenburgh U (2005). Daptomycin for treating infected diabetic foot ulcers: evidence from a randomized, controlled trial comparing daptomycin with vancomycin or semi-synthetic penicillins for complicated skin and skinstructure infections. J Antimicrob Chemother 55: 240–245.
- Vaudaux P, Ferry T, Uçkay I, François P (2012) Prevalence of isolates with reduced glycopeptide susceptibility in orthopedic device-related infections due to methicillin-resistant

J clin Diabetes, an open access journal

Citation: Elsharawy NT, Turkistani JA, Al-Zahrani HAA (2021) Bacterial Infection in Diabetic Foot. J Clin Diabetes 5: 113.