Epidemiology of diabetic foot and management of foot problems in India.

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Abstract

Diabetes, the global epidemic, is rapidly increasing at an alarming rate. Developing countries like India harbor the majority of diabetic people, and by the year 2030 AD, India will have the largest number of diabetic patients. Diabetic foot is one of the common diabetic complications found in India. Both aerobic and anaerobic pathogens form the etiology for diabetic foot infection. Members of the Enterobacteriaceae family were the most prominent among the aerobes while members of the Genus Peptostreptococcus and Clostridium were most prominent among the anaerobes. Ulcers infected with anaerobic pathogens showed a longer healing time than ulcers infected with aerobic pathogens. Oxidative stress is one of the major markers of inflammatory response and oxidative stress markers such as lipid peroxidation, thiobarbituric acid reactive substance (TBARS), Superoxide Dismutase (SOD), Catalase, G Peroxidase, G-S Peroxidase, and plasma total antioxidant play a major role in the nonhealing of diabetic foot ulcers. Growth factors such as platelet-derived growth factor (PDGF), transforming growth factor (VEGF), and epidermal growth factor (EGF) are needed for normal wound repair, while proteases such as matrix metalloproteinase (MMP) and serine proteases found in chronic wounds delay the healing process.

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