The Diabetic Foot Storm

Abstract: Since diabetes is considered to be an epidemic, so are its complications. A potential disturbing and devastating complication is diabetic foot that affects the mobility of patient in case amputation is done. With increasing prevalence of diabetes over years, there is also increase in diabetic foot complications. The foot is affected with variety of lesions like ulcers, abscess, cellulitis, gangrene etc and they can be limb threatening and in delayed cases life threatening. Hence prevention and awareness of this condition is essential to avoid patient ending up in disastrous outcomes. Distinct methods of awareness are practiced worldwide. The focus of this article is on a new term “Diabetic foot storm” introduced by the author based on problems in diabetic foot and to create awareness of this neglected complication of diabetes.

Keywords: Diabetic foot, Amputation, Storm, Amit Jain, Classification, Problems.

INTRODUCTION

The global prevalence of diabetic foot is around 8.8% (Atosona, A. & Larbie, C., 2019). It is believed that by year 2045, there will be 700 million people living with diabetes (Baker, N., 2020). One chronic complication of diabetes is diabetic foot.

Foot complications are common cause of hospitalization in diabetics and they often are associated with increased morbidity and mortality (Zubair, M., 2020). Around 24.4% of total health care cost in diabetic patients is related to diabetic foot complications (Al-Rubeaan, K. et al., 2015). Diabetic foot can lead to amputation which has a big social and financial impact and can be disastrous to the patient (Veerraju , S. G. et al., 2012).

Hence awareness of the diabetic foot problems and prevention of the foot complications become essential (Kasiya, M. M. et al., 2017).

One distinct way of awareness of the seriousness of diabetic foot among health care professionals was through the use of the term “Diabetic foot attack” (Vig, S. et al., 2014; Vas, P. R. J. et al., 2018). The author would like to introduce a new distinct focal term ‘Diabetic foot Storm’ to highlight the serious problems a person could be affected with once he develops foot complications.

PRE-EXISTING STORMS IN MEDICINE

We have often come across the word “storm” in medicine frequently. It is nothing but explaining a crisis in the course of the disease. This term is used focally for a particular condition or in general while describing the disease or scenario. One such example being the perfect storm being used commonly and this is considered to be an intense storm. Perfect storm is combination of events together that can produce a disastrous outcome (Collins, 2014). This term is used in different conditions like obesity, cancer, wounds/ulcer, diabetes, tuberculosis, etc frequently (Herndel, J. J. & Schug, T. T, 2013; Daly, B & Olopade, O, I, 2015; Nature, 2016; Murphy, C. et al., 2020; Cho, Y. & Yoon, K, H, 2020).

Some of the well known focal usage of storms includes thyroid storm seen in hyperthyroidism (Prabhawa, A. & Negara, K, S, 2018), cytokine storm seen in covid 19 (Ye, Q. et al., 2020), electrical storm in cardiac disease (Eifling, M., 2011), etc.

DIABETIC FOOT STORM

The author had recently classified the problems of diabetic foot into 6 categories (Jain, A, K, C, 2020) as shown in Figure 1. The preponderant problem is the diabetes itself that leads to diabetic foot. The current problems could be an ulcer, gangrene, cellulitis, abscess, etc. The concurrent problems that are associated include ischemic heart disease, hypertension, chronic kidney disease, etc. Some problems in foot are recurrent in nature like ulcers and cellulitis. Patients
can have subsequent problems like stump complications that can follow prosthesis usage, bed sores if patients remain immobile following amputation and even early mortality can occur following amputation. All these problems are further supplemented by increased cost of treatment, job loss, psychological problems etc (Jain, A, K, C, 2020).

**Figure 1:** Amit Jain’s classification of problems of diabetic foot. A diabetic foot storm in the patient’s life is said to have occurred if the patient has 5 or more of these problems.

We believe that once a patient has gone through any of the above 3 problems, then he or the health care professional should be warned of a diabetic foot storm. Once he encounters and has gone through any of the 4 problems, then there is an impending storm and once a patient has any of the 5 problems or more, then he has to be considered to have gone through a diabetic foot storm (Figure 2).

**Figure 2:** Pathway towards the diabetic foot storm
CONCLUSION

Diabetic foot problems are enormous and the best strategy is prevention rather than treating it. This can be done through education, bringing awareness and screening of the foot. The introduction of the term ‘diabetic foot storm’ is one such attempt to bring awareness of this dangerous condition. The various key elements in this diabetic foot storm include the preponderant, current, concurrent, recurrent, subsequent and supplement problems. Once patient has any of the 4 stated problems, then there is an impending storm and once there are 5 or more problems, then the patient is considered to have gone through the diabetic foot storm.

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Note: A Boolean search was done using words diabetic foot storm in Pubmed and Google scholar to look if anyone had used it earlier and rationale of it and we couldn’t find in the first 100 articles. The rationale of using diabetic foot storm is well explained in this article and is based on the new classification of problems in diabetic foot.

REFERENCES