

Case Study

AMIT JAIN’S CODING SYSTEM FOR DIABETIC FOOT ULCER

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Abstract: Diabetic foot is a common complication of diabetes and based on the new modern Amit Jain’s classification for diabetic foot complications, it encompasses various pathological lesions like abscess, cellulitis, necrotizing fasciitis, wet gangrene, ulcers, etc. There are various classifications for ulcer in diabetic foot. Each has its own merits and demerits. The author in this article proposes new coding systems for these ulcers that are similar to TNM staging used in cancers. Apart from forming a common language, these coding systems also aims in standardizing and improvising the diabetic foot practice around the world which has been the very purpose of Amit Jain’s system of practice for diabetic foot.

Key Words: Diabetic Foot, Ulcer, Classification, Amit Jain, Law, Coding

INTRODUCTION

There has been a rapid rise in incidence of diabetes and also its associated complication [1]. The prevalence of diabetes mellitus has risen to an epidemic proportion in country like India [2]. Diabetic foot is undoubtedly most significant complication that has significant complication that has social and economic problem affecting patient’s quality of life [3].

Foot ulcers are one of the common complications seen in diabetic foot. For years, majority of clinicians focused only on foot ulcers until the recent new Amit Jain’s classification for diabetic foot complications was proposed that encompassed almost all lesions seen universally in diabetic foot and made us look beyond ulcers in today’s scenario of diabetic foot [4, 5, 6, 7]. Subsequently, a principle and practice for diabetic foot [8, 9] was developed that encompasses various classification system. Amit Jain’s classification for diabetic foot ulcer [10] is one of the components of this system. According to this new classification, the diabetic foot ulcers can be classified into 3 simple classes [Table 1] namely Simple, Complex and Complicated diabetic foot ulcers [10].

Class 1 diabetic foot ulcers	Simple ulcers
Class 2 diabetic foot ulcers	Complex ulcers
Class 3 diabetic foot ulcers	Complicated ulcers

Table 1 showing the Amit Jain’s classification of diabetic foot ulcers

The Amit Jain’s diabetic foot ulcer classification also addresses the infection [Infected Ulcer], peripheral arterial

disease [Ischemic ulcer] and neuropathy [Trophic ulcer/ Charcot foot ulcer].

AMIT JAIN’S SAC CODING SYSTEM

The aim of Amit Jain’s system of practice for diabetic foot has been to improvise and standardize the diabetic foot practice around the world and give diabetic foot specialty its due importance like any other specialty as the author has observed over years of working and teaching, that diabetic foot is often neglected by clinicians at all level.

Classification of the diabetic foot has several goals and one such goal is an improved communication and use of common language [11].

There are various classifications for diabetic foot ulcers like Wagners-Meggitt classification, University of Texas classification, SAD classification, SINDABAD classification, Amit Jain’s classification for diabetic foot ulcers, PEDIS classification etc [3, 12, 13, 14]. Each of these classifications was proposed with some purpose and has their own merits and demerits.

There has recently been attempt to equate diabetic foot to TNM staging used in Cancers [15, 16, 17]. The author had proposed in 2013 [15], a grading system for debridement for the first time in similar lines to TNM system which was later modified in the year 2016 [16].

The author proposes a new coding system for diabetic foot ulcers exclusively called Amit Jain’s S.A.C coding for

diabetic foot ulcer classification. This is to ensure a uniform approach towards an ulcer. Today many clinicians have a habit of addressing foot problems in diabetics either plainly as diabetic foot or diabetic foot ulcer without giving any specification unlike other clinical conditions like carcinoma breast where they need to mention even the TNM staging.

SIZE [S]	ANATOMICAL REGION INVOLVED [A]	AMIT JAIN'S CLASS OF ULCER [C]
S1 - < 2 cm	A1 - Forefoot	C1 - Class 1 diabetic foot ulcers
S2 - 2cm – 4cm	A2 - Midfoot	C2 - Class 2 diabetic foot ulcers
S3 - > 4 cm	A3 - Hindfoot	C3 - Class 3 diabetic foot ulcers

Table 2 showing Amit Jain's SAC coding system for Amit Jain's classification for diabetic foot ulcer

In this new coding system [Table 2], 'S' stands for size of ulcer and is grouped into S1, S2, S3, 'A' stands for anatomical region involved and is grouped into A1, A2, A3 and 'C' stands for class of ulcer [Amit Jain's classification for diabetic foot ulcers] and it's already divided into 3 classes and can be labeled as C1, C2, C3. This new Amit Jain's coding [Figure 1 and 2] can henceforth be easily employed for diabetic foot ulcers as a common language just like TNM staging for cancers.



Figure 1 showing infected ulcer over 3rd toe of right foot. Patient had history of wound over 3rd toe from past 2 months and pus discharge from 4 days. As per Amit Jain's SAC coding system it is S1A1C3.



Figure 2 showing an Ischemic ulcer that occurred after trauma.

It is around 8 cm in size, located in heel and is not infected belonging to Amit Jain's class 2 diabetic foot ulcer. As per Amit Jain's SAC coding it is S3A3C2.

ADVANTAGES OF THE NEW CODING SYSTEM

- 1] It is extremely simple
- 2] Easy to remember by health care professionals treating diabetic foot
- 3] It can be used in clinical practice day in and day out
- 4] It would form a standard communication tool in diabetic foot ulcer among health care professional in different regions
- 5] It will improvise diabetic foot practice which is still neglected in most countries
- 6] Since it's an open coding system, even future new classification for ulcer could also be coded in similar lines retaining the 'S' and the 'A' component.
- 7] It can be used as a teaching tool to disseminate the knowledge of diabetic foot

EXCLUSION CRITERIA



Figure 3 showing a healing ulcer. This is an atypical site of an ulcer. There was an abscess which was debrided and patient now has a healing ulcer. Such ulcers are not included in the coding system.

All the post operative debrided cases which gradually over time may form healing ulcer [Figure 3], although placed in class 1 diabetic foot ulcer when they are healing for completion of categorization, they should not be coded as they are iatrogenic wounds that can result following surgery for abscess, necrotizing infection etc. They can be extensive large wounds, may involve all anatomical regions and may involve leg too. Hence they are not included in the coding system.

AMIT JAIN'S SAS CODING SYSTEM

SAC coding system was proposed keeping in mind the Amit Jain's classification for diabetic foot ulcer which is classified into 3 simple classes [10]. There is other common classification for ulcers like Wagner's and University of Texas where the ulcers are classified into stages [4, 11, 12, 13]. In such scenario, one can then use it as SAS coding where 'S' stands for size, 'A' stands for anatomical part involved and 'S' stands for stage of ulcer like S1, S2, S3 when one uses Wagner's classification or S1A, S1B, etc when University of

Texas classification is used. It shall depend upon the clinician which ulcer classification he wants to follow. Automatically if there is any grading classification for ulcer then coding can be SAG coding and so on and so forth.

AMIT JAIN'S LAW OF CODING

This law states that *“Irrespective of whichever diabetic foot ulcer classification is used and its concurrent coding like SAC coding, SAS coding, etc or any subsequent modification made in these coding system, all of them shall remain Amit Jain's coding system for diabetic foot ulcer”*.

This law was stated to avoid any plagiarism or any subsequent naming of any modification of the coding system that can be derived from above new concept and all coding's for diabetic foot ulcers like SAC, SAS, SAG, etc shall be uniformly remain Amit Jain's coding system for diabetic foot ulcers for now and for future.

CONCLUSION

There exists various classifications for diabetic foot ulcers and many are easy to use with each having their own merits and demerits. It's time to have a uniform coding for these classifications. Apart from class/stage of ulcer, the size and the locations are 2 important factors that have huge impact on outcome. It's high time we have a uniform coding for diabetic foot ulcer similar to TNM staging used in cancers. The advantage of Amit Jain's coding is its flexibility which allows a clinician to use which ever ulcer classification he wants to use be it Wagner's, University of Texas or Amit Jain's classification, retaining the size of ulcer and anatomical region involved thereby leading to different type of coding system like SAC, SAS, etc coding system

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