

“PROSPECTIVE LONGITUDINAL STUDY OF CORRELATION BETWEEN HbA₁C, WAGNERS ULCER GRADING AND RISK OF AMPUTATIONS IN DIABETIC PATIENTS IN SHRIDHARMASTHALAMANJUNATHESHWARA HOSPITAL DHARWAD.”

By

Dr Akshaykumar Kyatannavar R



**SHRI
DHARMASTHALA
MANJUNATHESHWARA
UNIVERSITY**

Dissertation Submitted to the
ShriDharmasthalaManjunatheshwara University, Dharwad, Karnataka,

In partial fulfilment of the requirements for the degree of

MASTERS OF SURGERY

in

GENERAL SURGERY

Under the guidance of

Dr Sameer Ahmed

Professor



**Department of General Surgery
SDM College of Medical Sciences and Hospital, Dharwad**

2019-2022

ABSTRACT

“PROSPECTIVE LONGITUDINAL STUDY OF CORRELATION BETWEEN HBA₁C, WAGNERS ULCER GRADING AND RISK OF AMPUTATIONS IN DIABETIC PATIENTS IN SHRIDHARMASTHALAMANJUNATHESHWARA HOSPITAL DHARWAD.”

Keywords: diabetic foot, wagner’s ulcer grading, amputations

Introduction:

Diabetic being one of the commonest disease has various dreadful complications. Glycosylated hemoglobin (HbA₁c) is an excellent tool to determine the long term (120days)glycemic control in diabetic patients. There are various studies done in western countries that outline diabetic foot, its pathogenesis and various factors associated. The main aim of our study is to assess the relative risk of amputation (Ray/Below knee/Above knee amputation) in correlation to HbA₁C and Wagner’s ulcer grading in diabetic patients.

Aim of the Study:

1. Primary objective is to assess the relative risk of amputation (Ray/Below knee/Above knee amputation) in correlation to HbA₁C
2. To assess the correlation of HbA₁C values with Wagner's diabetic foot ulcer grading
3. To assess the risk of amputation with each Wagner's diabetic foot ulcer grade

Methods:

To assess the relative risk of amputation in correlation to HbA₁C and Wagner's ulcer gradig, a prospective longitudinal study done on a total of 59 patients admitted in SDM Hospital, Dharwad, under the Department of General Surgery. Glycosylated haemoglobin (HbA₁C) was measured and the Wagner's ulcer grade was assessed. Foot x-ray and arterial Doppler was done and the data analysed. Statistical significance was calculated using Chi Square test, Pearman and Spearman tests.

Result:

There was a significant positive correlation between Wagner's grading and advanced age. It was observed that there was no significant correlation between Wagner's grading and glycated hemoglobin (HbA₁c), duration of diabetes. There was a significant positive correlation between Wagner's grading and Procedure Type, with p value >0.0001.

Conclusion:

There was statistically significant positive correlation between Wagner's grading and advanced age. There was a significant positive correlation between Wagner's grading and Procedure Type.

However, it was observed that there was no significant correlation between Wagner's grading and glycosylated hemoglobin (HbA1c), and duration of diabetes.

To sum up we can conclude that, poor glycemic control (HbA1C) is an important risk factor for diabetic ulceration which leads to subsequent infection and amputations.

Hence, Grading of the diabetic foot according to Wagner's classification is necessary and helps in choosing appropriate treatment.