

Prevalence of Wound Complications Due to Diabetes in Patients Undergoing Abdominal Surgery

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ABSTRACT

Objective: The main objective of the study is to analyze the wound complications due to diabetes in patients undergoing abdominal surgery.

Study Design: Cross sectional study

Place and Duration of Study: This study was conducted at the Anatomy Department, Swat Medical College, Swat during March 2020 to August 2020.

Materials and Methods: A wide range of routine stomach medical procedures aside from those done in crisis were remembered for the investigation.

Results: The data was collected from 120 patients. The mean age of the complete example was 55.5 years. Most of the example was male (51.1%), non-smokers (95.6%) and didn't have hypertension (67.8%). The normal span after conclusion of diabetes mellitus was 6.1 (SD 6.3) a long time.

Conclusion: It is concluded that it is difficult to treat the wound complication in diabetic patients. It can be difficult to differentiate local soft tissue infection and inflammation from osteomyelitis.

Key Words: Wound, Complications, Diabetes, Foot ulcer, Abdominal

Citation of article: Ali L, Badar A. Prevalence of Wound Complications Due to Diabetes in Patients Undergoing Abdominal Surgery. Med Forum 2021;32(3):112-114.

INTRODUCTION

Diabetic wound complications are the most common cause of non-traumatic lower extremity amputations in the industrialized world. The danger of lower furthest point removal is 15 to multiple times higher in diabetics than in people who don't have diabetes mellitus. Moreover, twisted confusions are the most successive purpose behind hospitalization in patients with diabetes, representing up to 25 percent of all diabetic confirmations in the United States and Great Britain¹.

By far most of diabetic injury intricacies bringing about removal start with the development of skin ulcers. Early recognition and suitable treatment of these ulcers may forestall up to 85 percent of removals. For sure, one of the illness counteraction goals sketched out in the "Healthy People 2000" task of the U.S². Division of Health and Human Services is a 40 percent decrease in the removal rate for diabetic patients. Family doctors have an indispensable part in guaranteeing that patients with diabetes get early and ideal care for skin ulcers³.

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Received: September, 2020

Accepted: November, 2020

Printed: March, 2021

Patients with diabetes may likewise be at higher danger of antagonistic occasions while going through a medical procedure. This is a significant concern since it is assessed that the greater part of the diabetic population will need at any rate 1 surgery during their lifetime⁴. Postoperative complexities stretch emergency clinic stay, increment the financial weight, and increment mortality. Hyperglycemia, hypoglycemia, and huge glyceic changeability all disturb the infection conditions of patients and increment the occurrence of carefully related unfriendly events⁵.

Stomach a medical procedure is one of the commonest Surgery acted in optional care just as tertiary care showing clinics everywhere on the world. Normally the difficulty rate in controlled settings isn't extremely high and wound recuperating happen in up to 14 days with practical recuperation of practically all the patients with no premorbid factors⁶. Normal injury inconveniences of different sorts of stomach medical procedures incorporate dying, injury herniation, wound disease and so forth Numerous variables incline the people towards the injury inconveniences and postponement in the recuperation. Foundational sicknesses including diabetes incline the person towards the injury inconveniences going through the stomach surgeries⁷.

MATERIALS AND METHODS

This cross sectional study was conducted in Swat Medical College, Swat during March 2020 to August 2020. The data was collected with the permission of ethical committee of hospital.

Exclusion criteria: Hypothyroidism, pernicious anemia, discopathy, harm since they can likewise prompt neuropathy, and lower appendage edema and congestive cardiovascular breakdown, since they can meddle with the appraisal of neuropathy in assessment and length of diabetes under 5 years in patients with type I on the grounds that in this period neuropathy has still not created were avoided from this examination. Patients who were going through second a medical procedure in under one month time were additionally avoided.

Inclusion criteria: All the patients age range 20 to 60 years and suffering from type II DM were included in this study.

Collection of data:

The data was gathered through a questionnaire. A wide range of routine stomach medical procedures aside from those done in crisis were remembered for the investigation. A survey including age, sex, BMI, diabetes term, sort of treatment, HbA1C, distortion, neuropathy indications, vascular manifestations, history of twisted, reason of stomach a medical procedure, past preparing with respect to wound care, smoking, history of retinopathy and nephropathy was finished for all patients. Post-usable agony was additionally estimated through visual simple score. The patients were assessed for deformation: contractured toe, unmistakable metatarsal heads and Halux valgus. Questions with

respect to indications of neuropathy and vascular issue including deadness and shivering of toes and legs, torment and feeling hot or cold sensation in the legs, discontinuous claudication, rest torment, dainty skin, shiny and somewhat blue skin staining and wound ulcer or removal were asked from the patients.

Statistical analysis:

The data was collected and analysed using SPSS version 19.

RESULTS

The data was collected from 120 patients. The mean age of the complete example was 55.5 years. Most of the example was male (51.1%), non-smokers (95.6%) and didn't have hypertension (67.8%). The normal span after conclusion of diabetes mellitus was 6.1 (SD 6.3) a long time. The lion's share didn't have fringe neuropathy (81.1%), missing fringe beats (90.0%), pre-ulcerous states (90.0%), insensitive (89.9%), crevices on feet (64.4%), nail pathology (97.1%), injury disfigurement (93.3%) or incapacity (94.4%). The larger part were on treatment with diet and oral enemy of diabetic prescription (90.0%).

Longer duration of illness and high BMI also had significant association with the presence of wound complication among the patients undergoing abdominal surgery as summarized in table 02.

Table No.1: Risk factors for developing wound in patients with diabetes mellitus

Characteristic	Cases n(%)	Univariate statistics		Multivariate statistics	
		Odds ratio (95% CI)	P-value	Adjusted odds ratios (95% CI) ¹	P-value
Gender- Male	22 (48.9)	0.84 (0.37-1.91)	0.673	0.83 (0.36-1.90)	0.652
Age- Over 55 years	25 (55.6)	1.20 (0.52-2.74)	0.673	1.21 (0.53-2.78)	0.652
Body mass index >25	24 (54.5)	0.88 (0.38-2.03)	0.759	1.27 (0.55-2.95)	0.578
Hypertension on treatment with ACEI	10 (22.2)	0.39 (0.16-0.98)	0.042	0.29 (0.10-0.80)	0.018
Smoker	2 (4.4)	2.00 (0.18-22.89)	0.570	2.47 (0.21-29.76)	0.477
Duration of diabetes in years >3	28 (62.2)	1.72 (0.74-3.99)	0.203	1.20 (0.52-2.78)	0.669
Treated with anti-hyper-glycemic medication or insulin	33 (82.5)	2.36 (0.82-6.76)	0.106	2.39 (0.82-6.92)	0.11
Treated with insulin	8 (17.8)	9.51 (1.14-79.60)	0.014	11.05 (1.29-94.54)	0.028
Undergoing abdominal surgery	34 (18.9)	2.39 (0.92-5.76)	0.01	2.39 (0.92-5.76)	0.06

Table No.2: The correlated factors relating to presence of wound complications among the Patients with type II diabetes undergoing abdominal surgery

Parameters	p-value	Odds Ratio	Confidence Interval	
			Lower	Upper
Age (ref. is >30 years)	0.552	0.883	0.373	2.095
Duration of illness (ref. is <5 years)	<0.001	13.088	3.978	43.066
Gender (ref. is male)	0.540	1.239	0.612	2.511
Education (ref. is ≥ matriculate)	0.340	0.684	0.313	1.493
BMI (ref. is BMI <24)	<0.001	4.228	1.998	8.947

DISCUSSION

Wound ulcers is a disabling complication and not uncommon among people with diabetes mellitus. The incapacity and conceivable movement to the misfortune (removal) of digits and appendages make it a difficult issue⁸. This investigation endeavored to analyze the danger factors for twisted ulceration because of stomach a medical procedure in sort II DM patients. Wound heartbeats were utilized in the clinical appraisal, and their nonattendance is normally connected with an ABI of <0.769. Past examinations indicated that a higher bit of patients with tumors, cracks, and cardiovascular and cerebrovascular infections was found in the diabetic population than in the ordinary population and along these lines a higher part of patients with diabetes mellitus was seen in those requiring careful treatments¹⁰.

General a medical procedure was autonomously connected with postoperative antagonistic occasions in patients with diabetes, contrasted and elective muscular medical procedure. General a medical procedure covers a wide assortment of medical procedure types to a wide assortment of organs, a significant number of them being fundamental organs (e.g., throat, stomach, little inside, colon, liver, pancreas, gallbladder, and bile ducts)¹¹.

CONCLUSION

It is concluded that it is difficult to treat the wound complication in diabetic patients. It can be difficult to differentiate local soft tissue infection and inflammation from osteomyelitis. Special attention should be paid to the individuals with longer duration of illness.

Author's Contribution:

Concept & Design of Study: Liaqat Ali
 Drafting: Adnan Badar
 Data Analysis: Adnan Badar, Liaqat Ali
 Revisiting Critically: Liaqat Ali, Adnan Badar
 Final Approval of version: Liaqat Ali

Conflict of Interest: The study has no conflict of interest to declare by any author.

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