

Original research article

ENT complaints in Covid positive Diabetic and non-diabetic patients: A prospective study

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Abstract

Introduction: Covid -19 positive patients come with various ENT complaints during admission like sore throat, nasal discharge, nasal block, ear block ,hard of hearing, headache and rarely loss of smell and taste many of them are surprisingly diabetic and recently detected new onset diabetic patients with high blood sugar level with normal HbA1C

Aim: To compare the presenting ENT complaints in RTPCR positive Covid diabetic patients with RTPCR positive COVID in non diabetic patients and analyse them

Materials & Methods: This Prospective study was carried out over a period of 8 months, from April 2020 to Nov 2020 in the Covid outpatient department in Government Medical College and ESI Hospital, Coimbatore. 9840 patients with co morbidities presented at Covid OPD and the inclusion criteria is met by 2171 patients, male 1300(59%), female 871 (41%). Total 9868 patients without any co morbidities presented at covid op of which similar number of patients 2171 taken randomly for comparison. The most common ENT disorder in males were sorethroat, nasal block and nasal discharge followed by sneezing headache and HOH and interestingly in females apart from symptoms described as males, they reported loss of smell and loss of taste along with voice change. We have taken five most frequent complaints in both groups and compared with each other. Other complaints were grouped 'as miscellaneous complaints'.

Conclusion: In male group there were more complaints in nasal block in diabetic than non diabetic. Rest of the complaints like sore throat, nasal discharge, headache and hard of hearing difference is non significant between the two groups. In female group comparison, diabetics had more sore throat, nasal block than the non diabetics. Interestingly non diabetics had more number of loss of smell and taste than the diabetic group as covid is a pro thrombotic hyper coagulable disease the impact is more in diabetic patients with microvascular complications

Keywords: RTPCR covid positive, Diabetic ,non diabetic patient, ENT complaints,

Introduction

Diabetes mellitus ranks first among all other co morbidity in debilitating the patient by multisystem involvement. It involves almost all the organs including sensitive ones like inner ear, eyes, kidneys and damaging nerves and end organs by damaging microcirculation. Each year about 300 million people join this critical group and this number is predicted to rise even more by urban practises. India being the diabetic capital now has raising number of younger

diabetic patients and their alarming complications. It poses a major public health problem here. By the end of 2019, our world suffered a Pandemic wave of Covid 19 with so many life losses and whoever recovered from severe involvement had residual complication with decreased quality of life We are seeing patients with permanent loss of hearing, chronic cases of anosmia, altered taste and tinnitus in the post Covid follow up OPD and in regular ENT OPD as covid is a pro thrombotic hyper coagulable disease the impact is more in diabetic patients with microvascular complications

These complaints are more seen in diabetic patients-uncontrolled due to pandemic economic crisis, drug induced or probably disease induced. In this study we highlighted the commonest presenting symptoms with prompted questionnaires with responses to all the complaints in otorhinolaryngology in a tertiary referral centre for Covid in all diabetic patients. Similar protocol were done to non diabetic patients for compariso

2. Materials and Methods

This was an observational Prospective comparison study, carried out over a period of eight months from April, 2020 to Nov, 2020.

The study was conducted in Government ESI medical college and hospital, Coimbatore , Tamilnadu , India. This hospital is a designated hospital to cater all Covid positive cases from Coimbatore and two other neighbouring districts- Ooty and Tiruppur

Study was conducted while admitting and registering the Covid patients at the Covid ward as well as covid OPD. The study population was from the diabetic patients who were Covid positive (RT-PCR) at the time of admission within the period of study and control group taken as non diabetic covid positive patients.

Group A- During the period, 2171 diabetic patients met the inclusion criteria for this study. Males were slightly predominant than females. Overall subjects' mean age was 46.3 (20-80) years, while mean age of the male subjects was 41.2(20-80) years and the females at 48.8(24-76) years.

Group B- during this period of study total of 9868 non diabetic patients were covid positive patients admitted and same number as group A, 2171 patients were selected randomly for this study

Both types of diabetes- with oral drugs and insulin were included in the study. Age from 20 to 80 years were included. Patients while recording history, prompted questions were asked about the ENT complaints and response from patient himself was recorded.

Selection Criteria

1. All cases were covid I9 positive as proved by RTPCR test.
2. 2171 patients in diabetic(Group A) and 2171 non diabetic (Group B) selected.
3. All patients had SpO2 above 92% in room air
4. Group A -All diabetics whether on oral drug, Insulin or combination were selected in group A. Only patients with Random sugar more than 200 mg/dl and were included(previously known diabetic also newly detected diabetes).

Exclusion Criteria

1. The cases with multiple morbidities like hypertension, heart disease, kidney failure were

excluded.

2. Those cases with severe disease requiring ICU care and assisted ventilation were excluded in the study.
3. Age below 20 years and above 80 years were excluded.
4. Patients with similar complaints before the pandemic were excluded
5. Those who are not willing for the study.

While admitting the patients, a set of questions regarding the complaints were asked and the patients' response is recorded for data. Variables asked are sore throat, nasal block, nasal discharge headache and diminished hearing are marked for individual comparison, whereas complaints like alteration in taste and smell, tinnitus, change in voice are included as miscellaneous variable

3 .Discussion

Table 1: Demographical Data of subjects for Analysis

MONTH	DIABETIC			NON-DIABETIC		
	Male	Female	Total	Male	Female	Total
April20	139	85	224	139	85	224
May 20	7	5	12	7	5	12
Jun20	129	107	236	129	107	236
Jul 20	415	278	693	415	278	693
Aug 20	279	202	481	279	202	481
Sep20	115	117	232	115	117	232
Oct 20	118	62	180	118	62	180
Nov 20	98	15	113	98	15	113
Total	1300	871	2171	1300	871	2171

Table 2: distribution of symptoms – in numbers and percentage

COMPLAINTS	DIABETIC		NON-DIABETIC	
	Male	Female	Male	Female
Sore throat	806(62%)	523(60%)	754(58%)	470(54%)
Nasal block	793(61%)	505(58%)	715(55%)	436(50%)
Nasal discharge	754(58%)	453(52%)	715(55%)	436(50%)
Headache	663(51%)	348(40%)	624(48%)	348(40%)
Hard of hearing	273(21%)	174(20%)	234(18%)	157(18%)
Miscellaneous	325(25%)	305(35%)	364(28%)	348(40%)

Results of Group A

Marked as in as in table 2, all complaints male were more than females except in miscellaneous group.

Results of Group B

Marked as in as in table 2, all complaints male were more than females except in miscellaneous group.

By chi square test with regards to the complaints between group A and group B, the following observations noted.

COMPLAINTS	MALE GROUP	FEMALE GROUP
Sore throat	NON SIGNIFICANT 0.5637	SIGNIFICANT 0.3915
Nasal block	SIGNIFICANT 0.3901	SIGNIFICANT 0.2572
Nasal discharge	NON SIGNIFICANT 0.6687	NON SIGNIFICANT 0.7731
Headache	NON SIGNIFICANT 0.6714	NON SIGNIFICANT >9999
Hard of hearing	NON SIGNIFICANT 0.5924	NON SIGNIFICANT 0.7185
Miscellaneous	NON SIGNIFICANT 0.6308	SIGNIFICANT 0.4652

Significant p value is seen in nasal block in male group . Significant p value is seen in sore throat, nasal block and Miscellaneous group in female group.(Non diabetic had more loss of smell and taste).

Conclusion:

From the above study it inferred that there are significant differences in the complaints of sore throat, Nasal block and alteration in smell and taste between diabetics and non diabetics group. The increase prevalence of these complaints seen in diabetic group may be due to increased blood sugar, decreased immunity due to uncontrolled diabetes. as covid is a pro thrombotic hyper coagulable disease the impact is more in diabetic patients with micro vascular complication. The loss of smell and taste was not perceived well by diabetic group is probably due to nerve involvement secondary to hyperglycemia. Healthcare providers should be aware of this potential risk and monitor blood sugar levels closely and identify the diseases early as well as advice tight control of blood sugar to prevent morbidity and mortality in diabetic patients

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