ta and analysis determines the severity and outcomes of COVID-19 for sustaining its growth for advancement in treatment and preventive medical care.

Conclusion

1. Men and women can be equally affected with COVID-19 disease.

2. We found in this group super highly increased levels of CRP, LDH and Ferritin. Other parameters we analysed like D-dimer and ESR was with moderately high and is in need of adequate medical care.

3. One the basis of analysis by subgroups of age, the study concludes with gender and age influence on disease progression and severity stating that CRP levels is highly severe in 40–60 y.o and moderately severe in 60–80 y.o, Ferritin levels in men is higher than female with both genders specifically affects severely in 60-80 y.o patients. LDH levels affects as severe course in 40–60 y.o and other groups remain mild and moderately high. ESR levels in men has highly affected than in female. ESR in men with severe course seen within 40–60 y.o and in female remains severe with 60–80 y.o patients. D-dimer levels indicates severe course in 60–80 y.o whereas other age groups has moderately high levels.

4. Age and gender wise explanation may help us determine the necessary to broad spectrum study of patients with comparison to their diagnostic values. This helps in determining the outcomes of the disease and to improve future treatment modalities.

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NON-ALCOHOLIC FATTY LIVER DISEASE IN PATIENTS WITH DIABETES MELLITUS

Tsitko E. V., Addipalli Maanasa

Scientific supervisor: Ph.D., Associate Professor *E. G. Malaeva*

Educational Establishment
«Gomel State Medical University»
Gomel, Republic of Belarus

Introduction

Non-Alcoholic Fatty Liver Disease (NAFLD) is the most prominent cause of liver disease worldwide, with global estimated prevalence of 25,24 %. It is associated with considerable clinical burden with the potential development of advanced fibrosis, liver cirrhosis, and hepatocellular carcinoma. NAFLD has long been regarded as a liver manifestation of metabolic syndrome. Type 2 Diabetes Mellitus (T2DM) is highly connected with NAFLD progression and is commonly acknowledged as an independent predictor of moderate-severe liver fibrosis, in addition to overall and liver-related mortality. In this report, up to 79,5 % of T2DM patients were found to have NAFLD and of more concern and 15 % reported with clinically significant fibrosis. There is an increasing awareness of the high index of suspicion for NAFLD and Non-Alcoholic Steatohepatitis (NASH) in patients with T2DM. The gold standard for diagnosis and staging of NAFLD is liver biopsy, which is not very well accepted by patients due to its invasive nature and consequently potential risks, and the accuracy is limited by sampling er-

rors and its variations from other diseases. This has largely limited its use in investigating the true prevalence of severe form of NAFLD and liver fibrosis in large data's. Therefore, to a certain extent, it has been rectified with the development of transient elastography (TE), which is now a well-established non-invasive modality to assess hepatic steatosis and fibrosis. It has high accuracy and has been utilized in assessing NAFLD fibrosis in community-based large populations. The prevalence of T2DM forecasted to increase exponentially from 7,3 % in 2020 to 25 % in 2050 and therefore the burden of NAFLD is also anticipated to be considerable in the coming decades.

Aims

The aim of the present article was to determine the prevalence, clinical spectrum, and risk factors of NAFLD among T2DM patients in association with liver fibrosis and hepatic steatosis through a prospective study.

Materials and Methods of research

This article carries out a prospective clinical study among T2DM patients. The data were collected from the Endocrinology and Gastroenterology department of Fortis Malar Hospital, Adyar, India. In this clinical study 35 patients with T2DM (41–70 years) were enrolled in the assessment for NAFLD. Therefore, The Data was carried out as means, medians and standard deviation and analysed statistically by Analysis of Variance ANOVA.

Results and Discussion

A total of 35 patients with T2DM were enrolled with typical symptoms and any one of the following present: 1) random plasma glucose greater ≥ 11.1 mmol/L (200 mg/dL); 2) fasting plasma glucose ≥ 7,0 mmol/L (126 mg/dL); 3) 2-hour post-challenge plasma glucose ≥11.1 mmol/L. We used Controlled Attenuated Parameter (CAP) and Liver Stiffness Measurement (LSM) to define the presence of hepatic steatosis and liver fibrosis. Overall, 25 (79,5 %) enrolled T2DM patients median CAP was 302,5 (258–346) dB/m, ≥S1 hepatic steatosis and 10 (15 %) enrolled T2DM patients median LSM was 5,6 (4,6–7,5) kPa, ≥ F3 liver fibrosis. This increased CAP and LSM is highly suggestive for NAFLD. Using Spearman and regression tests, correlation analysis was performed between NAFLD and HbA1C level and it was 7,2 % (6,7–8,1 %). This correlation is used to define the relationship between NAFLD and DM severity.

Using ANOVA, Anthropometric assessment and Laboratory analysis we assessed the comorbidities for NAFLD. The mean values of BMI (27,2 vs 23,27 kg/m^2, $p < 0,001$), waist circumference (88,12 vs 78,44 cm, $p < 0,001$), diastolic blood pressure (76,13 vs 73,40 mmHg, $p = 0,037$), ALT (34,08 vs 22,01 IU/L, $p < 0,001$), and AST (27,38 vs 22,27 IU/L, $p = 0,002$) were significantly higher in NAFLD. Considering these comorbid conditions, higher proportions of NAFLD with T2DM patients were hypertensive, obese and had metabolic syndrome. These subjected patients were more likely to drink at least 1 packet of soft drink or sweetened drink per week, but not observed in fast food or coffee ingestion.

Factors associated with increased liver stiffness: For increased liver stiffness there is a number of risk factors which includes male gender, smoker, higher BMI, waist circumference, fasting glucose, CAP value, ALT and AST levels, lower platelet level, comorbidity of hypertension, and obesity. Only higher AST level (55,02 vs 30,78 IU/L, $p = 0,006$), CAP (302,5 vs 258, $p = 0,044$), lower platelet level (220,07 vs 266,55, $p = 0,017$), and concomitant history of hypertension (86,67 vs 81,27 %, $p = 0,029$) were independent risk factors.

Our results demonstrated a remarkably high proportion of NAFLD among T2DM patients and the prevalence of increased liver stiffness suggestive of ≥ F3 liver fibrosis was 15 % among 10 patients' with T2DM which was much higher than that of the general population. The substantial numbers of subjects with increased liver stiffness are concerning, especially since there are usually no associated symptoms. However, massive screening of subjects with diabetes may also not be feasible or

cost effective. Therefore, it is important to identify accompanying additional risk factors which assist in selection of a high-risk group for further investigation. We also confirmed that higher AST and CAP values, lower platelet, and hypertension were independently factors for increased liver stiffness in our T2DM patient. Beside there are limitations of our demonstration, it includes a cross-sectional nature and absence of histological data using Transient Elastography (TE, Fibro Scan), a simple and fast modality, to evaluate hepatic steatosis and fibrosis in this cross-sectional report. But this single TE result in our cross-sectional report may not be a true reflection of patient's fibrosis status as it can be confounded by several factors such as obesity, alcohol/food consumption, or patient dependence. Nevertheless, TE has been endorsed as an alternative to liver biopsy by international guidelines in guiding clinical management of chronic liver disease, including NAFLD. Therefore, TE may be a valid and accurate modality in assessing NAFLD fibrosis in a community-based population where liver biopsy is not practical for all.

Conclusion

NAFLD was highly prevalent in our T2DM patients. In particular, patients with higher AST and CAP values, lower platelet count or comorbidity of hypertension have higher risk for increased liver stiffness and should be considered for further assessment. The clinical burden from NAFLD-related complications is expected to be considerable, because T2DM is known to be an accelerating factor for NAFLD progression and associated with increased mortality. NAFLD is largely an asymptomatic condition and only manifests at late stage of liver disease. Indeed, the general population may not be familiar with the risks associated with NAFLD, particularly in disabled subjects. In addition, the perceived lack of treatment for NAFLD by the patients may add a further barrier to timely diagnosis and intervention. Consequently, improving public awareness of NAFLD and education of risk recognition and pre-empirical treatment in selective populations such as T2DM patients may alleviate the onslaught of the NAFLD epidemic.

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PSEUDOMEMBRANOUS COLITIS

Tsitko E. V., Fernando Hirunya

Scientific adviser: Ph.D., Associate Professor *E. G. Malaeva*

Educational institution
«Gomel State Medical University»
Gomel, Republic of Belarus

Relevance

Pseudomembranous colitis is an inflammatory condition of the colon characterized by elevated yellow-white plaques that coalesce to form pseudomembranes on the mucosa, inflammation (swelling, irritation) of the large intestine. Patients with the condition commonly present with abdominal pain, diarrhea, fever, and leukocytosis. In many cases, it occurs after taking antibiotics. Using antibiotics can cause the bacterium *Clostridium difficile* (*C. difficile*) to grow and infect the lining of the intestine, which produces the inflammation. Certain antibiotics, like penicillin, clindamycin, the cephalosporins and the fluoroquinolones, make *C. difficile* overgrowth more likely because pseudomembranous colitis is often associated with