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A study of acute dyspnoea cases with causes other than COVID-19 in current pandemic of COVID-19.

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ABSTRACT:

BACKGROUND:-At present the whole world is fighting against a common enemy of mankind 'COVID 19'.The infection is spreading at a very fast rate and engulfing economy and medical resources of every country leading to an environment of fear as well as agony in both medical fraternity as well as common people. Shortness of breath is one of the most prominent features of presentation of COVID 19 at a healthcare facility. Since dyspnoea can have a number of common causes beside COVID 19, it is very important to differentiate a case of dyspnoea by a primary physician at peripheral healthcare system itself to avoid unnecessary referral and burden on healthcare system.

AIM:- To develop an idea about assessment of a case of acute dyspnoea by a primary physician at emergency room.

OBJECTIVES:- 1.To classify the dyspnoeic patients according to cause of dyspnoea after evaluation and investigations. 2. To test 'suspected' patients for COVID by truenat method.

MATERIALS AND METHODS:-100 patients with presentation as acute onset dyspnoea were studied at a tertiary care centre emergency room of Medicine department at Atal Bihari Vajpayee government medical college Vidisha. They were evaluated for cause of dyspnoea and screened by COVID expert team. Throat swab for suspected patients were taken. Inclusion criteria: patients with acute onset of dyspnea with or without fever/cough, age between 12 to 90 years. Exclusion criteria: age<12 years, known case of COVID 19. Data was collected in form of tables and analyzed.

RESULTS:- Most of the patient (67%) were in 41 to 70 years of age group with maximum (30%) in 51 to 60 years age group. 53% patients had respiratory cause of dyspnoea (all 13 selected patients had negative test for truenat for COVID). 36% had cardiac cause, 6% severe anaemia with pulmonary oedema, 2% diabetic ketoacidosis, 2% chronic kidney disease with pulmonary oedema and 1% patient had liver abscess with septicaemia.

INTERPRETATION AND CONCLUSION:-A primary physician at emergency room of a healthcare facility should suspect the present epidemic while dealing with a case of dyspnoea but should also search for other possible common causes of dyspnoea to avoid unnecessary burden of COVID battery of tests and delay in treatment of disorders other than COVID 19.

KEYWORDS:-COVID-19, dyspnoea,presentation, Primary physician,other causes.

I. INTRODUCTION:-

The whole world is currently suffering from both the disease and the fear factor spread by a member of corona virus family currently called SARS COV-2 (severe acute respiratory syndrome corona virus 2) and the disease called COVID-19 (corona virus disease 2019, WHO 2020a). At the end of year 2019, many cases of acute respiratory illness of unknown aetiology were noted in population residing near local sea food market in Wuhan, capital of Hubei province in China led to the now global pandemic of SARSCoV-2. Most of the patients were reporting with fever and dyspnoea and the initial etiologic assumption was viral in nature. [1,2]. Till date it is spreading fast from person to person throughout the world. Initially themajorityofinitialCOVID-19caseswereassociatedwithtravelto Hubei Province, China; however, a growing number of cases due to person-to-persontransmission have been reportedbothinandoutside ofChina[3, 4,5,6]. COVID -19 has put a huge burden on healthcare system of every affected country as well as an

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economic burden due to lock down. A lot of cases are getting admitted at corona suspect wards of every designated hospital increasing cost burden in form of PPE kits, transportation, truenat test for COVID-19 reporting and RT-PCR testing procedures. The symptoms of COVID-19 are similar to other viral upper respiratory illnesses and include fever, cough, fatigue, myalgia and dyspnoea [7,8,9].While few patients reported nausea vomiting diarrhea and new onset anosmia.

As we know acute onset dyspnea is a complaint which we have been seeing at emergency wards since our days of medical school. Every physician has encountered with it. But in current scenario where the COVID -19 has dramatic and varied ways of presentation but dyspnea remains one of the most characteristic ways of presentation especially when associated with hypoxia at rest or on exertion. As per need of the time every case of acute onset dyspnea should be taken as corona suspect unless proved otherwise and we should rule out covid-19 by proper history taking, physical examination and available radiological, serological and other supportive tests. Also there is a vast variety of illnesses which can present as acute onset dyspnea with or without fever or cough. Having a good hold of differential diagnosis at emergency department will not only help a physician to reach at most probable diagnosis but also save a patient from unnecessary and compulsory routine procedures and battery of tests for COVID -19 due to epidemic Performa obligations thus unnecessary delay in appropriate therapy for other possible disease can be avoided. In this study we have documented the clinical presentation of patients with dyspnea at emergency room of our hospital and noted the provisional diagnosis based on history, physical examination and investigations. We have studied the possible differential diagnosis. The results are expected to provide an idea about possible etiology of dyspnea of a particular patients based on his/her presentation.

II. MATERIALAND METHODS:

This was an observational, cross sectional and hospital based study of 100 randomly selected patients attending emergency room of Atal Bihari Vajpayee medical college and hospital Vidisha (M.P.) from October 2020 to November 2020(2 months). After taking a thorough clinical history as per predefined Performa, proper clinical examination we performed all relevant investigations including chest x ray, ECG, routine blood study, keeping an eye over patient's past clinical documents. Patients were categorized according to cause of dyspnea. All patients were screened by an expert COVID team and they took throat swab sample of 13 patients for detection of corona virus gene E by true naat beta test for covid19. Inclusion criteria: patients with acute onset of dyspnea with or without fever/cough, age between 12 to 90 years. Exclusion criteria: age<12 years, known case of COVID 19. Informed verbal consent was obtained before data collection. Ethical clearance was taken from the college committee.The consistency and completeness of the collected data were checked manually and then coded, cleaned, and entered by using SPSS trial version 20 software for further analysis.

III. RESULTS:-

There were total 100 patients out of them 55 were male and 45 were female. We divided all patients into age groups of 10years interval ranging from 12 years to 100 years of age.[Table no.-1]

Table no.1. Showing distribution of cases according to age groups**.**

AGE GROUP in years	NUMBER OF CASES
12 to 20	07
21 to 30	10
31 to 40	11
41 to 50	15
51 to 60	30
61 to 70	22
71 to 80	03
81 to 90	01
91 to 100	01

Here we can see most of the patient (67%) were in 41 to 70 years of age group with maximum (30%) in 51 to 60 years age group.

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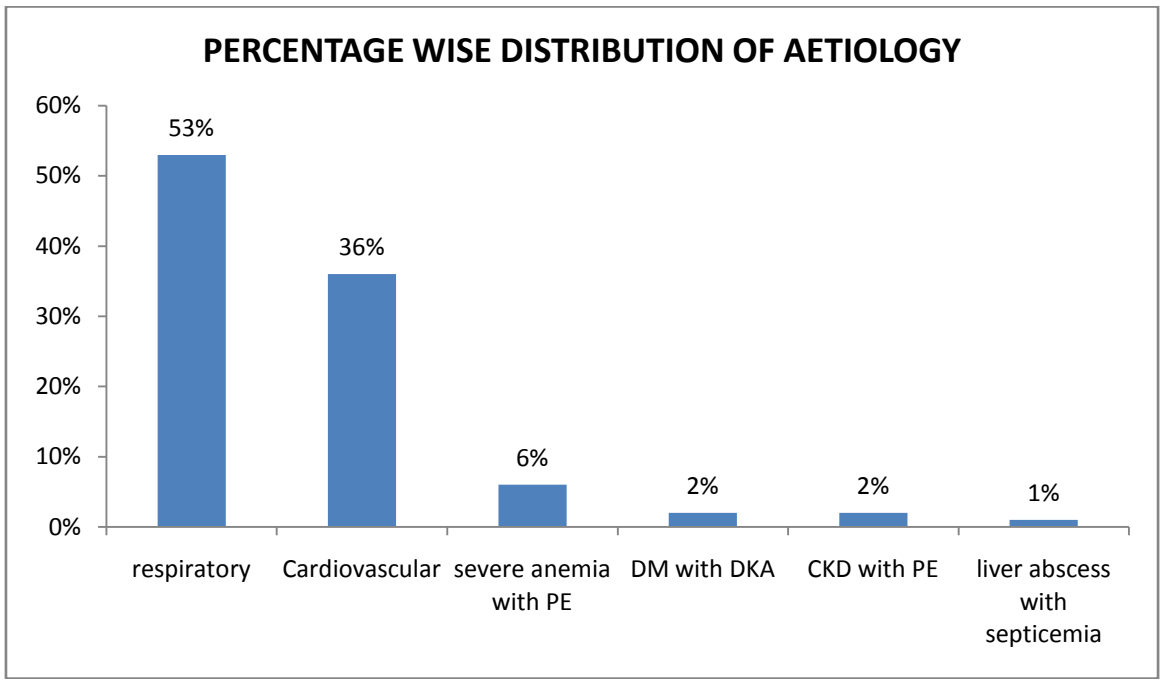
Fig no.1.- Distribution of aetiology percentage wise after evaluation of cases



DM = diabetes mellitus.
CKD = chronic kidney disease
PE = pulmonary edema
*All those patients who were screened for COVID 19 were negative for corona virus gene detection by true naat method.

IV. DISCUSSION:-

Dyspnoea is a frequent cause of emergency room visits accounting for as many as 3-4 million visits per year. Dyspnoea can arise from a diverse array of pulmonary, cardiac, hematological and other diseases with systemic effects. Elucidation of particular symptoms may point toward a specific etiology and/or mechanism driving dyspnoea. As per our observations we had 55 males and 45 females out of total 100 patients. Though we got patients from all age groups but most of the patients were from middle age group 41 to 70 years. This may be due to more prevalence of COAD, heart disease, increased outdoor mobility and habit of smoking. After analysis of possible etiologies,we got 53% of cases due to respiratory system related illnesses namely old pulmonary tuberculosis with sequel, new pulmonary Tuberculosis, chronic obstructive airway diseases, upper/lower respiratory tract infections, interstitial lung diseases. Cardiovascular causes comprised of 36% of cases study which were heart failure due to structural heart diseases, heart failure due to old MI/AF/dilated cardiomyopathy, acute coronary syndrome/ac.LVF or accelerated hypertension. Severe anaemia resulting in pulmonary oedema led to dyspnoea in 6% of cases. Other less common causes were diabetic ketoacidosis (2%), CKD with pulmonary oedema (2%) and liver abscess with septicaemia (1%). As we know dyspnoea is symptom with vast variety of presentation ranging from subjective sensation of shortness of breath to severe acute respiratory distress syndrome and from mild to fatal outcome. Since at this time dyspnoea is the matter of great concern for both patient and a physician. As all cases of COVID19 do not present with dyspnoea similarly all patients of dyspnoea are not due to COVID19. Entry of a dyspnoeic patient in emergency room should start with a brief clinical history, past history and relevant clinical examination by attending doctor to reach to a provisional diagnosis to start treatment promptly whether at PHC, CHC or a tertiary care centre. Our COVID team also screened 13 patients but throat swab of all 13 patients came out to be negative for corona virus gene.

V. CONCLUSION:-

Watching the current scenario of tremendous spread of COVID 19 as pandemic it is very important to pick up the active cases as much as possible to limit the spread in community and to healthcare personal.

On the other hand it is also equally important to find out the on-going disease process, exacerbation or new disease entity to avoid unnecessary protocols/investigations if the patients directly go to COVID19 isolation ward which may take the precioushours of initial evaluation and management of actual underlying cause. This delay may result into increased morbidity and mortality of patients who require management by other specialities like cardiology, haematology, nephrologists etc. It requires a focused clinical history taking by a primary physician at peripheral healthcare system or at emergency room of a tertiary care centre including a clear contact, travel, area of residence at a hotspot for COVID 19, past medical history is a must followed by screening by an expert COVID team. As in our study we saw out of 100 patients suspected patients for COVID19 were only 13 in number, also all of them tested negative for detection of corona virus gene E by true naat method. Thus it can be said that as all patients of COVID19 do not present with dyspnoea also every patient of dyspnoea is not due to COVID 19 infection.

CONLICTS OF INTEREST: - None

REFERENCES:-

[1]. News Scan for Dec 31. CIDRAP.http://www.cidrap.umn.edu/news-perspective/2019/12/news-scan-dec-31-2019; 2019, Accessed date: 18 March2020.

[2]. CHPcloselymonitorsclusterofpneumonia casesonMainland.https://www.info. gov.hk/gia/general/201912/31/P2019123 100667.htm, Accessed date: 18 March 2020.

[3]. CDC.HANArchive00426|HealthAlertNet work(HAN).https://emergency.cdc.gov/ha n/han00426.asp.Published February 11, 2020.

[4]. Accessed March 19,2020 CDC.2019NovelCoronavirus(2019-nCoV) situationsummary. CentersforDisease Control and Prevention.https://www.cdc.gov/coronav irus/2019-ncov/summary. html. Published February 11, 2020. Accessed March 18, 2020..

[5]. McIntoshK.In:HirschM,BloomA,editors. Coronavirusdisease2019(COVID-19). Date; February 2020. https://www.uptodate.com/contents/coro navirus-disease-2019-covid-19/print.

[6]. CDC. 2019 Novel Coronavirus (2019-nCoV) transmission.Centers for Disease Con- trol and Prevention.https://www.cdc.gov/coronavir us/2019-ncov/about/transmission.html.Published February 11, 2020.Accessed March 12,2020.

[7]. CDC. 2019 ovel Coronavirus (2019-nCoV) frequently asked questions and answers. Centers for Disease Control and Prevention.https://www.cdc.gov/coronavir us/2019-ncov/faq.html.Published February 11, 2020.Accessed March 18,2020.

[8]. CDC.HANArchive00426|HealthAlertNet work(HAN).https://emergency.cdc.gov/ha n/han00426.asp.Published February 11, 2020.Accessed March 19,2020.

[9]. CDC.2019NovelCoronavirus(2019nCoV)symptoms.CentersforDiseaseControlan dPrevention.https://www.cdc.gov/corona virus/2019-ncov/about/symptoms.html. Published February 11, 2020.Accessed March 19,2020.