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COVID 19: AN OVERVIEW OF PRESENT SCENARIO

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ABSTRACT

We can't even believe that an epidemic outbreak in china will wipe out a large population. COVID-19 is a new type of coronavirus that causes the disease where 'CO' implies corona, 'VI' indicates virus, and 'D' denotes diseases. There are many misconceptions on management; co morbidities even make risk in COVID 19. Majority of the deaths are marked in aged individuals with co morbid conditions. The spotting of benefits and detriments of current practice is really meaningful. Many of the research works point out the high incidence of covid attack in men with worse outcomes. At the same time, co morbidities such as hypertension, diabetes, COPD, obesity has a remarkable role. Proper care among the risk group people shelters from this killer disease. Relevant research works point out many of the drugs that are practising in our day to day life is ineffective in front of this pandemic. The purpose of vaccines behalf of other management in community spread is appreciable.

KEYWORDS: COVID 19, co morbidity, vaccines.

INTRODUCTION

It has been over seven months since the primary case of coronavirus was detected in china's metropolis zone. Across the world, we have lost many of our folk to the killer malady. Assorted medicine is touted as a cure for COVID19; however health workers are trying their best to come back, which claims an influential success over this pandemic.[1] Recent studies on COVID annunciate similar prevalence for both sexes while marking worse outcomes and death in men, independent of age.[2] World health organization weekly report shows death about 90% in people above 65 years, where 57% are men, inside 66% death alms by cardiovascular co morbidity.[3] Many interventional studies have been going around the world

in the current scenario for this infectious disease, on a par with treatment. It is highly important to know about the pros and cons of these medications.

CO MORBIDITIES AND RISK MANAGEMENT

In our present world, most of the diseased people face co morbid condition at elderly period, while it plays a vital role in determining the quality of life. A study conducted in the early outbreak of COVID 19 in china enrolling 1590 positive patient's points out a high-risk prevalence for hypertension followed by diabetes. In referral to multiple co morbidity behalf of age and smoking status COPD endangered over diabetes, hypertension, and malignancy.[4][5] In addition to this, some studies remarks about obesity besides the readmission of the patient with a median time of 3 days.[6] As supporting evidence to this upcoming news report reveals 66.3% of COVID death had co morbidities in West Bengal.[7]

CARDIOVASCULAR DISEASES

COVID 19 patients with cardiovascular co morbidities are vulnerable. People with cardinal heart disease and diabetes are 12 times plausible to death and six-time more expected to be hospitalized.[8] The majority of the critical cases consist of myocardial infarction with more than 25%, which treated with angiotensin-converting enzyme inhibitors and angiotensin receptor blockers.[9][10] Habitually SARS- Cov-2 breaks the peptide bond between the amino acid, eventually releases S protein with help of serine proteases, and attached to the transmembrane angiotensin-converting enzyme 2 (alpha homolog) results in type II reaction which ends up in cardiomyopathy.[11] Recent ongoing studies postulate aspirin has the effects of inhibiting virus replication, anti-platelet aggregation, anti-inflammatory, and anti-lung injury. This may conventionally trim the severity of COVID patients, reduced hospitalization, and cardiovascular complications.[12]

DIABETICS

Hyperglycaemia can worsen immune system malfunction, leading to a failure to stop the spread of foreign pathogens in diabetic individuals, leaving it quite prone to infection. Up-coming studies point out more than 20% of diabetic individuals are at intensive care.[13] Virus glue to the dipeptidyl peptidase domain IV (DPP IV) receptor on pulmonary alveolar cells exhibiting diabetic association with weight loss and considerably higher pulmonary inflammation in experimented mice.[14] Patients with diabetics had poor outcomes when compared with other of the same criteria.[15] Diabetic ones are observed with low forced vital capacity (FVC) and forced expiratory volume (FEV1) with an increase in plasma glucose

level.[16] Patients are managed with DPP IV inhibitors on the other hand insulin treatments. Other medication alike sodium-glucose co-transporter 2(SGLT 2) and glucagon-like peptide-1 receptor agonist (GLP-1RA) are concealed due to high risk.[17] People who had metabolic surgeries will be secured from hyperglycaemic events at the same time risk of infection and complication remains dubious.[18]

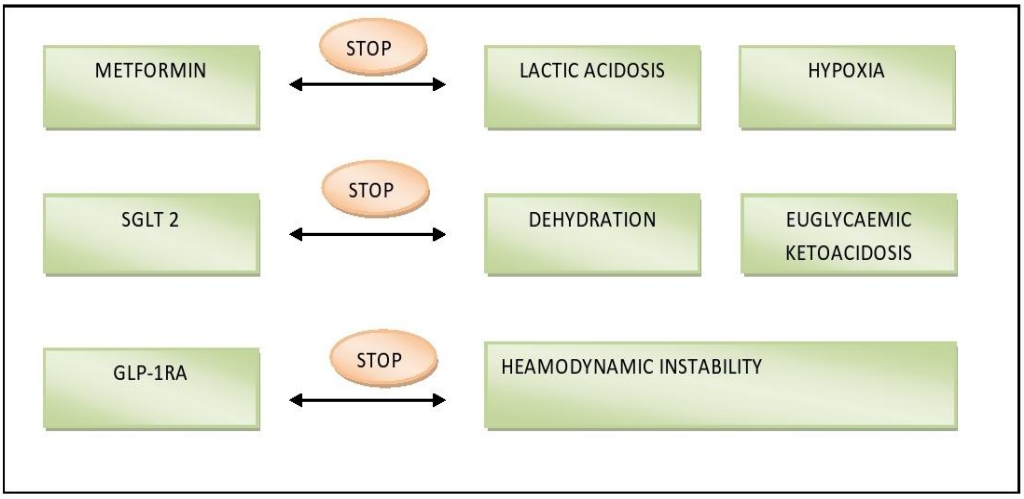

Fig 1: drugs that should be withheld in COVID 19 patients in diabetic treatment.

CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

COVID 19 lends possible severity and mortality on COPD patients. The estimated prevalence of 2% along with 9% was observed in COPD patients to that of smokers. Besides, they reveal smokers are 1.45 times more deadly affected to the disease.[19] COPD shows an increased liability of around fivefold over COVID patients.[20] Pidotimod an immunostimulant that enhances immunoglobulins and T-lymphocytes with an equipped immune response may have possible consideration on exacerbation of COPD.[21] Live evidence from case a report implies the unforeseen effect of pidotimod dispersible tablet reduce the severity.[22] A significant reduction in exacerbation of COPD, hospitalization, and frequent visit along with rapid recovery mention the safety and efficacy of this magic drug. To a certain extends they diminish the use of antibiotics.[23] Even their safeties have been proven among the paediatric population too.[24][25]

CURRENT TRENDS IN COVID MANAGEMENT

Corticosteroid therapy was considered as one among the common followed by antiviral agents, arbidol hydrochloride, chloroquine finally convalescent plasma therapy.[26]

- Corticosteroids a boon or a curse?

Even though steroid therapy ranks before COVID management the majority of the available studies don't support this utterly.[27] A study conducted in China among 31 patients admitted due to severe acute respiratory coronavirus measuring outcome as virus clearance time has no alliance with steroid therapy.[28] This pays way to the wide controversy on the efficacy and safety of the drug in treatment.[29] Steroids can maintain glucose levels by antagonizing insulin in our body.[30] As mentioned earlier diabetes one of the obligatory risks among SARS CoV 2 patients.

- Antivirals really against SARS CoV 2 ??

Remdisivir one of the antiviral in clinical use neither reduced nor improved the mortality of COVID patients.[31] Fact sheet for health care providers emergency use authorization implies this drug pursue serious and unexpected events including hypersensitivity and anaphylactic reaction, increased risk of transaminase elevation, risk of reducing antiviral activity with chloroquine and hydroxychloroquine.[32] IV administration itself isn't impossible to deliver exponential clinical efficiency. Accordingly, dry powder inhalation may be considered in combination with IV administration of this particular drug.[33] A life saving promising antiviral drug hasn't been approved by the FDA except remdisivir based on emergency use authorization.[34] An upcoming prospective cohort study on the combination of antivirals such as nitazoxanid, ribavirin, and ivermectin unfold new promises.[35] Another interventional combination favipiravir along with umifenovir is in breach.[36] Broad-spectrum antivirals like arbidol hydrochloride act by inhibiting the trimerization of SARS CoV 2 resulting in the formation of the less infectious and immature virus.[37] One of the exhilarating interventions on two anti-inflammatory drugs celecoxib and carprofen at 50μM shows inhibitory activity 11.9 and 4% on an individual basis.[38]

- Do vaccines a vow therapy

Contemporarily no vaccines have been used specifically targeting SARS CoV 2.[39] Challenging events in a large population remains uncertain. SARS CoV vaccines activate antibody neutralizing; safeguard the transmission of infection in conjunction with safety.[40] A vaccine employs differential action including live pathogen vaccine (LVP) inoculation; bypassing respiratory sites on other hand inhibiting virus replication with convalescent plasma inoculated from the host.[41] Certain studies done on the recombinant Adenovirus type-5 vectored COVID vaccine are well endurable over COVID.[42] Phase one trials on

"covax" vaccine patients developed antibodies and T killer cells which is effectively tolerated.[43]

CONCLUSION

Further studies contributing data on the historical pattern of COVID in the diabetic patient as well as CVD must be familiarized. Ongoing plight, vaccination shed a light on all over the world. Present circumstances many of us may face barriers in our day to day life as a part of "lockdown". Proper care management among the high prevalence group shelters from COVID19. Social distancing is one among the effective opponent towards COVID, on the current context; this may not be commercial anymore. In such circumstances immunization plays an integral part.

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