



NANDHA PHARMA ALERT

An Exclusive Newsletter from Drug Information Center,
NANDHA COLLEGE OF PHARMACY,
(B.Pharm - NBA Accredited) Koorapalayam, Erode- 52, Tamilnadu.
Phone: 73737 11224, E-MAIL: dicnandha@gmail.com

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a past medical history for the same complaint. He was diagnosed with COVID-19 and was symptomatically treated for the same meanwhile developed pain over the first quadrant teeth and swelling with the same area. He was diagnosed in a local hospital with acute right maxillary sinusitis by the Department of ENT and did not resolve after the antibiotics course. Later he was referred to a faciomaxillary surgeon and was advised for a CBCT of the maxilla it revealed aggressive osteolytic lesions with respect to the right maxilla. So a biopsy was done ,curettage and saucerization was performed, and the sample was sent for histopathological examination which in turn confirmed as fungal osteomyelitis . History of paresthesia was present in the same region. Then the patient came to our hospital with no relief of pain and also the radiation of pain towards the zygoma region at the right side. The patient was also a known case of hypertension and type II diabetes mellitus and was under medication for the same . Onextraoral examination gross facial asymmetry was noted with swelling extending from the infraorbital rim til zygomatic bone anteroposteriorly and medial canthus of the eye till the alar base of the nose of the right side . The swelling was firm ,tender on palpation,non- erythematous ,non-fluctuant and was devoid of any surface change .The reduction in the mouth opening was noticed . intraoral examination revealed a large defect involving the first quadrant ,with no active pus discharge, Medically the treatment was started by administering insulin and iv liposomal amphotericin B 5 mg/kg/day. Surgical resection via Weber Ferguson approach according to the involvement of midface bone as shown in the CT scan was done. Later antifungal drug was changed to oral Itraconazol 200 mg , 2 months post discharge patients has not shown any signs of reinfection. These case reports were transcribed in the view of documenting cases of oral and maxillofacial pathologies in association with COVID 19 infection,in COVID 19 infected lungs epithelial cell produce IL8 and IL-6 , IL8 is a chemoattractant for neutrophils and T cells. Infiltration of inflammatory cell in a massive amount owing to lymymphopenia was absorbed in the lungs of severe COVID 19 patients, in severe cases thrombosis and pulmonary embolism were other prominent symptoms along with respiratory distress . these patients also showed elevated D-DIMER and fibronigen levels. The function of endothelial includes promotion of vasodilation fibrinolysis and anti aggregation , COVID 19 patients hypercoagulable profile indicates a significant endothelial injury. This will increase miceovascular permeability facilitating bacterial invasion.

Mr.Kaviarasan, III B.Pharm

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RECENT ADVANCES IN GREEN TECHNOLOGY AND INDUSTRIAL REVOLUTION 4.0 FOR A SUSTAINABLE FUTURE

In today's world of climate change and amid the COVID-19 pandemic,a realization has dawned upon the world to protect the planet and people's health. The pandemic has affected many social,economic, political, and environmental challenges (McNeely2021).There is a clear awareness about global environmental issues like global warming, acid rain, ozone layer depletion ,the increasing list of endangered species,and incidences of forest fires in the Amazon.There have also been several protocols and agreements signed by the world's governments like the Kyoto Protocol and the Paris Agreement.However,even till now,proper actions have not been taken, and the government also not been able to engage people to follow and practice environmentally friendly habits daily.

VERICIGUAT

INTRODUCTION:

Vericiguat is a soluble guanylate cyclase stimulator used to reduce heart failure related hospitalization and cardiovascular death in patients with chronic systolic heart failure

MECHANISM OF ACTION:

Heart failure(HF) involves, amongst other morphologic and physiologic changes, the impaired synthesis of nitric oxide (NO) and decreased activity of soluble guanylate cyclase (sGC).Functioning normally, NO binds to sGC and stimulates the synthesis of intracellular cyclic guanosine monophosphate (cGMP), a second messenger involved in the maintenance of vascular tone, as well as cardiac contractility and remodeling.

DOSAGE FORM AND STRENGTHS:

Tablet-2.5mg, 5mg, 10mg

PHARMACOKINETICS:

ABSORPTION

Following the administration of 10mg of vericiguat by mouth once daily , the average steady-state Cmax and AUC in patients with heart failure 350mcg/L and 6,680mcgh/L ,respectively, with a Tmax of 1 hour.

VOLUME OF DISTRIBUTION

In healthy subjects the steady state volume of distribution of vericiguat is approximately 44litres.

PROTEIN BINDING

Vericiguat is extensively (-98%) protein –bound in plasma, primarily to serum albumin.

METABOLISM

Vericiguat is primarily metabolized via phase II conjugation reaction with CYP-mediated oxidative metabolism comprising a small (less than 5%) portion of its overall biotransformation.

ROUTE OF ELIMINATION

Following the oral administration of radio labeled vericiguat, approximately 53% of the administered radioactivity was recovered in the urine and 45% of in the feces.

HALF-LIFE

In patients with heart failure, the half life of vericiguat is 30 hours.

CLEARANCE

Vericiguat is low-clearance drug ,with an observed plasma clearance of 1.6L/h in healthy volunteers and 1.3 L/h in patients with systolic heart failure.

ADVERSE REACTIONS:

The following adverse drug reactions and incidences are derived from product labeling unless otherwise specified:

Cardiovascular:Hypotension(16%)

Gastrointestinal :Dyspepsia(3%)(Armstrong 2020)nausea(4%)(Armstrong 2020)

Hematologic& oncologic :Anemia(10%)

MONITORING PARAMETERS

Daily weights, BP ; evaluate pregnancy status prior to use ; a negative pregnancy test is required prior to starting treatment in patients who could become pregnant.

CASE REPORT:

Diabetes mellitus (DM) is one of the major causes morbidity at the global level, becoming one of the risk factors for certain infectious diseases owing to the development of an immunocompromised state.

Osteomyelitis is an inflammatory condition involving the bone that usually initiates from the medullary cavity, rapidly involving the Haversian systems, and extending to the periosteum of the area

CASE REPORT: 34-year-old male patient reported to our hospital with a complaint of continuous pain and swelling over the right side of the midface since 2 months. The patient gave