

# Medi-Update

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**PARUL SEVASHRAM HOSPITAL**

**PARUL INSTITUTE OF MEDICAL SCIENCES & RESEARCH**

# FIGHTING THE BLACK ENEMY - MUCORMYCOSIS

Covid is here to stay. It will take time to get rid of this virus from the face of earth and alongwith covid-19, comes many diseases to face as a complimentary suffering. Doctors had already speculated pulmonary fibrosis, but last year came the terror of MUCORMYCOSIS.

Fungus rhizopus and mucor are mainly of the order Mucorales. It is potentially lethal angio invasive fungal infection predisposed by diabetes mellitus, corticosteroids, immunosuppressive drugs, primary and secondary immunodeficiency, hematological malignancies. Certain risk factors yet not proven are use of unsterile water in humidifiers, overuse of zinc therapy, iron overload.

Currently at our institute 5 cases of mucormycosis have been operated, all of which had involvement on left side of face, were diabetics post covid.

**RED FLAG SIGNS** for patients discharged after covid treatment are:

- one sided facial swelling
- headache, facial pain, eye ache
- nasal or sinus congestion
- black lesions on nasal bridge, blackish or blood stained nasal discharge, black lesions inside the mouth
- loss of vision

**PREVENTIVE MEASURES** that could be taken during and after covid treatment :

- use of sterile water in humidifiers during oxygen therapy
- proper cleaning and sterilization of tubings
- judicious use of steroids
- disinfection of floors in hospitals
- strict control of diabetes
- wear n95 mask at home
- avoid direct contact with lot of dust
- clean skin injuries well with soap and water

Following is the proposed staging system of ROCM - RHINO ORBITAL CEREBRO MUCOMYCOSIS, it follows the general anatomical progression of ROCM from point of entry ( nasal mucosa ) to the paranasal sinuses, orbit and brain, and severity in each of these anatomical locations.

## **STAGE 1 : Involvement of nasal mucosa**

- 1a- limited to middle turbinate
- 1b- involvement of inferior turbinate or ostium of nasolacrimal duct
- 1c- involvement of nasal septum
- 1d- bilateral nasal mucosal involvement

# FIGHTING THE BLACK ENEMY - MUCORMYCOSIS

## STAGE 2 : Involvement of paranasal sinuses

- 2a- one sinus
- 2b- two ipsilateral sinuses
- 2c- more than two ipsilateral sinuses and/or palate/oral cavity
- 2d- bilateral paranasal sinus involvement or involvement of zygoma or mandible

## STAGE 3 - Involvement of orbit

- 3a- nasolacrimal duct, medial orbit, vision unaffected
- 3b- diffuse orbital involvement ( more than 1 quadrant or more than two structures ) , vision unaffected
- 3c- central retinal artery or ophthalmic artery occlusion or superior ophthalmic vein thrombosis; involvement of superior orbital fissure, inferior orbital fissure, orbital apex, loss of vision
- 3d- bilateral orbital involvement

## STAGE 4 - Involvement of CNS

- 4a- focal or partial cavernous sinus involvement and/or involvement of cribriform plate
- 4b- diffuse cavernous sinus involvement and/or cavernous sinus thrombosis
- 4c- involvement beyond the cavernous sinus, involvement of the skull base, internal carotid artery occlusion, brain infarction
- 4d- multifocal or diffuse CNS disease

## MANAGEMENT PLAN

All suspected mucormycosis patients undergo diagnostic nasal endoscopy along with contrast enhanced MRI orbit with PNS with brain.

The ENT department thereby performs FESS - functional endoscopic sinus surgery with more radical approach removing the medial wall of maxillary sinus, with standby Maxillofacial surgeon from Dental department to plan for TOTAL MAXILLECTOMY if needed. The Ophthalmology department monitors for progression of the disease involving 6th cranial nerve, 3rd cranial nerve, 2nd cranial nerve - suggestive of spread to orbital apex supported by MRI findings. This calls for ORBITAL EXENTERATION under the watch of Oculoplastic surgeon.

Meanwhile the Medicine department under the guidance of Infectious disease consultant charts out the medical management involving the dosing of antifungals (conventional amphotericin B, liposomal amphotericin B, posaconazole) and strict control of diabetes.

Inculcating a protocol based strategy by a multidisciplinary team and prioritized Code - Mucor approach may be the key to success in fighting this BLACK ENEMY. Amen .....

-Dr Saudhan Desai

Department of Ophthalmology

# WHATS UP WITH MEDICAL FIELD

## 1. 2-DEOXY D GLUCOSE: THE SAVIOUR AGAINST COVID 19?

Humans became infected by Covid-19 in September 2019 that led to a pandemic, which as of early January 2021 had caused 84 million confirmed infections with at least 1.8 million deaths.

On May 1, the Drug Controller General of India (DCGI) approved a drug called 2-deoxy-d-glucose (2-DG) for emergency use among people with moderate and severe COVID-19. The drug is developed by Institute of Nuclear Medicine and Allied Sciences (INMAS) of Defence Research & Development Organisation (DRDO) in collaboration with Dr Reddy's Laboratories.

The idea of possibility of it being useful in treatment of COVID 19 originated from reports that poorly controlled blood glucose levels are associated with highest COVID-19 mortality rates pointing towards connection of COVID-19 with regulation of metabolism in the host.

SARS-CoV-2's entry, replication and exacerbated immune response are aided by aerobic glycolysis. IL-1 $\beta$  processing is regulated through generation of 3-phosphoglycerate, a by-product of glycolysis. The metabolic transcription factor - hypoxia inducible factor-1 $\alpha$  (HIF-1 $\alpha$ ), a master regulator of glycolysis and inflammatory response is also strongly induced in SARS-CoV-2 infected monocytes. Thus, glycolysis is a significant step in viral entry, replication and induction of proinflammatory cytokines in COVID 19 disease. Anti covid effect of 2DG has been related to inhibition of glycolysis as well as lactate dehydrogenase A (LDH-A) inside the COVID 19 infected cells.

Research on 2-DG goes as far back as 1956, it has been found to have some therapeutic value as an anticancer and antiviral agent but hasn't been approved to treat any diseases yet. It is currently mostly used in diagnostic testing and research-related activities.

That 2-DG may reduce the infectivity and virulence of nCOVID-19 was first reported in an in silico analysis.<sup>4</sup> Later another study suggested that 2-DG can be an effective adjuvant to Low dose radiation therapy (LDRT) to inhibit viral replication and preventing lung damage.

Based on the successful in vitro study, permission was granted for Phase II trial to test the safety and efficacy of the drug in Covid-19 patients. The Phase II trial was conducted in May 2020 in which significantly favourable trend (2.5 days difference) was seen in terms of median time to achieve normalisation of specific vital signs parameters when compared to standard of care (SoC). Phase III trials were then conducted on 220 patients between December 2020 to March 2021 at 27 COVID hospitals in various states of India. Data from the phase 3 clinical trial was released in a press release stating that in the 2-DG arm, a "significantly higher proportion of patients improved symptomatically and became free from supplemental oxygen dependence (42% vs 31%) by Day 3 in comparison to SoC."

However, the trials had small sample size and were open label studies. Also there was no objective parameter to define primary endpoint in phase II trial. For Phase-3 trial also, the CTRI entry did not record any primary endpoint. The results also have not been published anywhere as yet.

# WHATS UP WITH MEDICAL FIELD

Regarding safety, according to the CTRI entries, 2-DG's dosages in phase 2 and phase 3 trials were 63 and 90 mg/kg per day respectively. Although in present trials, no adverse effects were reported in the press release, in a previous study, reversible hyperglycemia (100 %), gastrointestinal bleeding (6 %) and reversible grade 3 QTc prolongation (22 %) were reported as adverse effects of 2DG at the dose of 63mg/kg/day.

Based on the encouraging results reported regarding efficacy and safety, the drug got approval for emergency use in moderate to severe COVID illness. One of the benefits of the drug is that it is a generic molecule and an analogue of glucose, which means it could be easily produced and be made available across the country. It will be available in powdered form in a sachet that needs to be consumed orally after dissolving in water. Priced at Rs 990 per sachet, it will be available in 2.34g sachets to be consumed twice a day for 5-7 days. Ready to be released for use in mid June, we now wait for the post marketing performance of the drug.

- **Dr Arti Muley**

Department of Medicine.

## 2. POST COVID SURGICAL COMPLICATIONS

Since December 2019, Novel Coronavirus disease (covid 2019) has emerged as an unknown entity for human kind, to which the human race has never been exposed before.

Although COVID-19 presents primarily as a lower respiratory tract infection transmitted via air droplets. Lung involvement is the most common serious manifestation of the disease, ranging from asymptomatic disease or mild pneumonia, to severe disease associated with hypoxia. Among patients with COVID-19, underlying cardiovascular comorbidities including hypertension, diabetes and especially cardiovascular disease, has been associated with adverse outcomes.

We all are sailing in uncharted territory, where as the time progresses more and more patients have been reported and experienced of having multiorgan involvement.

Here is an attempt to record the experiences & explain extra pulmonary effects of covid 19 with respect to the Department of Surgery.

### 1) **Gastrointestinal and liver involvement:**

Gastrointestinal symptoms are frequently encountered and may persist for several days. The underlying pathophysiologic mechanism for the occurrence of digestive symptoms is thought to be related to the virus's affinity for ACE2 receptors located in specific enterocytes in the ileum and colon. Binding to primary intestinal epithelial cells also raises the question on whether the virus can be transmitted through the faecal-oral route, which currently remains unconfirmed. There are case reports where patients presented with only GI symptoms such as recurrent abdominal pain and diarrhea and no respiratory involvement, & turned out to be RT PCR positive on stool swab testing and negative nasal swabs even on repeated testing, such possibilities to be kept in mind. The most common symptom reported is loss of appetite. Vomiting, nausea, diarrhea and abdominal pain can also be the primary presentation. Other major complications include diverticular perforation, mesenteric vascular ischemia leading to obstruction and gangrene of bowel, rectus muscle hematoma, activation of latent abdominal tuberculosis.

- Mesenteric ischemia is part of generalised hypercoagulable state during covid 19 infection, which can lead to mesenteric arterial or venous thromboembolism, that can further lead to bowel ischemia, gangrene, intestinal obstruction, intra abdominal abscess formation, peritonitis etc.
- Rectus muscle hematoma was also reported following therapy with blood thinners, antiplatelet drugs.
- As steroid therapy is widely used, chances of re activation of abdominal tuberculosis is also there, should be kept in mind if a patient is previously treated with AKT.

For minor symptoms patients can be treated at home with routine medicines of nausea, pain, diarrhoea. In severe cases proper investigations with sonography, CT scan, Angiography and referral to specialist may be required, as timely surgical intervention is important.

### 2) **Peripheral Vascular involvement :**

Limb ischemia following arterial or venous thromboembolism is increasingly reported nowadays

# WHATS UP WITH MEDICAL FIELD

even after many days of recovery from covid 19 pneumonia. Cases varying from skin blackening to limb gangrene are reported requiring urgent surgical intervention ranging from debridement to amputation. Use of blood thinners and anti platelet drugs for prolonged periods following recovery are advised for patients who are at high risk of developing thrombosis.

Treating doctor should have high suspicion for such events and patients must be referred to the proper center on time so that limb saving surgery can be performed.

### 3) **Cardio-Thoracic complications :**

Worldwide cases are reported of having myocardial infarction, pulmonary embolism following covid 19 infections. As more and more patients with severe pneumonia disease require BIPAP support for a longer period of time, there is data suggesting higher incidence of pneumothorax and subcutaneous emphysema requiring Inter costal drainage for the same. Requirement of Tracheostomy for prolonged intubation has also increased.

### 4) **Other Systems :**

Involvement of other organs such as Renal Artery thrombosis leading to renal infarcts, splenic infarct and abscess formation, a vascular necrosis of head of femur following use of high doses of steroids etc are there. Proper case documentation and investigation regarding the same is required.

### **Following is the experience of General Surgery Department at PIMSR :**

Many patients (planned as well as emergency cases) have been operated at PSH who were recovered from covid 19 infection. We are also part of IAGES study named "A national multi Center observational case control study on 30 day morbidity and mortality of abdominal surgical procedures in patients recovered from SARS-CoV 2019 infection".

Recently we encountered two patients of acute abdomen, of which one 55 years old female admitted in covid ward for mild to moderate pneumonia, treated successfully for the same, developed severe abdominal pain and distension on 7th day of admission, prompt investigations with sonography and ct scan of abdomen was done, finding suggestive of mesenteric ischemia and small bowel obstruction with renal artery thrombosis. Patient was immediately taken for surgery and intra operative found to have ileal as well as sigmoid mesenteric ischemia and bowel gangrene, life saving surgery with resection and stoma formation done, unfortunately patient died on post operative period due to myocardial infarction and sudden cardiac arrest, possibly due to thromboembolism. Another case of lower limb gangrene in post covid time is also reported, and requiring below knee amputation.

With the above experience it cannot be over emphasized that an high index of suspicion has to be maintained by the treating clinicians so as to appropriate and timely treatment can be instituted for the patient.

-Authors:

**Dr. Harshil Shah** (SR),

**Dr. Madhavan Iyengar** (Professor and Head),  
Department of General Surgery.

## 3. COVID VACCINATION - UPDATES

In order to respond quickly and effectively to the COVID-19 pandemic, a broad range of candidate COVID-19 vaccines are being investigated globally using various technologies and platforms. These include viral-vectored, protein subunit, nucleic acid (DNA, RNA), live attenuated and inactivated vaccines. Some of these candidates have entered clinical trials.

### COVID-19 VACCINES UNDER TRIALS IN INDIA

#### COVAXIN

COVAXIN™, India's indigenous COVID-19 vaccine Bharat Biotech is developed in collaboration with the Indian Council of Medical Research (ICMR) - National Institute of Virology (NIV). This indigenous, inactivated vaccine is developed and manufactured in Bharat Biotech's BSL-3 (Bio-Safety Level 3) high containment facility.

The vaccine received approval from Drug Controller General of India (DCGI) for Phase I & II Human Clinical Trials and an Adaptive, Seamless Phase I, Followed by Phase II Randomized, Double blind, Multicentre Study to Evaluate the Safety, Reactogenicity, Tolerability and Immunogenicity of the Whole-Virion Inactivated SARS-CoV-2 Vaccine (BBV152).

#### Covishield

The Serum Institute of India (SII) and Indian Council of Medical Research are jointly conducting a Phase II/III, Observer-Blind, Randomized, Controlled Study to Determine the Safety and Immunogenicity of Covishield (COVID-19 Vaccine).

#### ZyCoV-D

Zydus Cadila, focused on discovering and developing NCEs, Novel Biologicals, Biosimilars and Vaccines, announced that its plasmid DNA vaccine to prevent COVID-19, ZyCoV-D. Safety in Phase I clinical trial of ZyCoV-D in healthy subjects established as endorsed by the independent Data Safety Monitoring Board (DSMB). Zydus commenced Phase II trial.

#### Sputnik

Dr Reddys Laboratories Limited and Sputnik LLC are jointly conducting Multi-centre, phase II/III adaptive clinical trial to assess safety and immunogenicity of Gam-COVID-Vac combined vector vaccine.

#### Biological E's novel Covid-19 vaccine

Biological E. Limited is conducting a prospective open label randomised Phase-I seamlessly followed by Phase-II study to assess the safety, reactogenicity and immunogenicity of Biological E's novel Covid-19 vaccine containing Receptor Binding Domain of SARS-CoV-2 for protection against Covid-19 disease when administered intramuscularly in a two dose schedule(0,28D) to healthy volunteers



# WHATS UP WITH MEDICAL FIELD

## **BBV154 - Intranasal vaccine**

Bharat Biotech is conducting Multicenter Study to Evaluate the Reactogenicity, Safety, and Immunogenicity of an Intranasal Adenoviral vector COVID-19 vaccine (BBV154) in Healthy Volunteers. BBV154 is an intranasal vaccine stimulates a broad immune response - neutralizing IgG, mucosal IgA, and T cell responses. Immune responses at the site of infection (in the nasal mucosa) - essential for blocking both infection and transmission of COVID-19

## **COVOVAX**

Indian Council of Medical Research and Serum Institute of India jointly performing a phase 2/3, observer-blind, randomized, controlled study to determine the safety and immunogenicity of COVOVAX [SARS-CoV-2 recombinant spike protein nanoparticle vaccine (SARS-CoV-2 rS) with Matrix-M1™ adjuvant] in Indian adults

## **mRNA based vaccine (HGCO19)**

Randomized, Phase I/II, Placebo-controlled, Dose-Ranging, study to evaluate the Safety, Tolerability and Immunogenicity of the candidate HGCO19 (COVID-19 vaccine) in healthy adult subjects. The trial is being conducted by Genova Biopharmaceuticals Limited.

Source- <https://vaccine.icmr.org.in/covid-19-vaccine>

# INTERESTING MEDICAL CASE REPORTS OF PATIENTS TREATED AT PSH

## **Case -1 - Innovative MIPPO DHS Technique for Treatment of Intertrochanteric femur fracture**

A male patient aged 40 years presented with complaint of pain & unable to stand or walk (right side of leg) at the Orthopaedic Department of Parul Sevashram hospital. Patient was evaluated and diagnosed as Intertrochanteric femur fracture. Patient was operated with MIPPO DHS (Minimally Invasive Percutaneous Plate Osteosynthesis with Dynamic Hip Screw) technique which aimed at advantages such as minimal blood loss, early rehabilitation and less chance of infection.



**Operating Surgeons :** *Dr. Arvind Kumar, Dr. Dhaval Sangada, Dr. Aliasgar Rampurwala*

**Anaesthetists :** *Dr. Sudha Shah, Dr Dhruvi Patel*

## **Case -2 Endarterectomy in Chronic Total Occlusion of the left anterior descending artery (CABG)**

A male patient aged 70 years visited the Department of CardioVascular & Thoracic Surgery of Parul Sevashram Hospital with complaints of chest pain. Patient's angiography was performed on an immediate basis which indicated triple vessel disease and proximal chronic total occlusion of the left anterior descending artery with no distal vessel seen.

The patient was operated for CABG (Bypass) with long LAD endarterectomy; a high risk surgery. Team of Medical and Paramedical staff ensured appropriate post operative care to deliver desired results.

Patient stay was uneventful and is on regular followup

**Operating Surgeon :** *Dr. Parth Bharat Solanki*

**Anaesthetist :** *Dr. Hitendra Kanzaria*



# INTERESTING MEDICAL CASE REPORTS OF PATIENTS TREATED AT PSH

## **Case -3 Cerebellar tumor with gross hydrocephalus**

A 10 year old female child presented to Neurosurgery OPD at Parul Sevashram Hospital with complaints of headache, vomiting, ataxia and visual diminution. On investigations supported by MRI Brain, she was diagnosed as having a cerebellar tumor with gross hydrocephalus.



Patient was operated in SITTING position and sub occipital craniectomy with gross tumor excision was performed, Biopsy was suggestive of medulloblastoma Grade IV. Post operatively, the patient was extubated immediately and was discharged in stable condition without any added deficits. Patient was advised for radio and chemo therapy.

Parents of the patient happily shared that Headache was relieved and vision was improved.

**Operating Surgeons :** *Dr. Ashish Desai, Dr. Pratik Koradia,*

**Anaesthetists :** *Dr. Hetal Parikh, Dr. Dhruvi Patel*

## **Case -4 Case of Persistent/ Recurrent Bilious Vomiting Managed Successfully at Parul Sevashram Hospital)**

A 3 year old patient presented with complaint of persistent bilious vomiting since birth at Department of Pediatrics, Parul Sevashram Hospital.



On evaluation and abdomen sonography, patient was detected to have Gastric Outlet Obstruction. Patient was also found to have Collapsed Stomach with abrupt narrowing at 2nd and 3rd part of Duodenum; on detailed evaluation through CECT Abdomen and Gastro Graffin Study.

Patient was operated for Laprotomy & Jejunostomy indicating grossly dilated stomach and 1st and 2nd part of Duodenum, an extremely rare condition at this age. Patient was closely monitored by our expert team and was happily discharged on 6th post-operative day without any complication.

**Treating Doctors :** *Dr. Uma Nayak (HOD), Dr. Hemal Dave, Dr. Naveen Ganapan, Dr. Nirali Dhivar, Dr. Sadhana Tomar, Dr. Nehal Patel*

**Operating Surgeon :** *Dr. Siddhartha Nayak*

# INTERESTING MEDICAL CASE REPORTS OF PATIENTS TREATED AT PSH

## Case -5 Vesico Vaginal Fistula

A 45 yr old woman came with complaints of Continuous dribbling of watery discharge from vagina to Parul Sevasharam Hospital.

She was Operated for abdominal hysterectomy 6 months back in MP and developed the above symptoms one week after surgery. CT IVP suggested VVF which was confirmed with cystoscopy. Laparoscopic VVF repair was

done. Patient was discharged with catheter and which was subsequently removed after four weeks. Patient was asymptomatic at 1 and 3 month follow up.

**Operating Surgeons :** Dr. Komal Patel, Dr. Akanksha, Dr. Chirag Parikh

**Anaesthetist :** Dr Chinar Patel & Team



## Case -6 A Difficult Case of Acute Exacerbation of COPD

A 40 year old male with acute exacerbation of COPD (Chronic Obstructive Pulmonary Disease) Cor Pulmonale with sepsis was admitted on Ventilator in ICU, Parul Sevashram Hospital. Patient was extubated once, he developed bradycardia and had to be reintubated which made prognosis worse. Being difficult extubation, he needed repeated short trials of SIMV and VCV modes. Finally the patient was extubated almost after a month with no ventilator associated complication. He was weaned off from oxygen and discharged with full recovery.

A great team work of the Consultants, Intensivists and ICU staff have made it possible for the patient to recover fully.

**Treating Doctors :** Dr. Arti Muley, Dr. Hema Bhojani, Dr. Sona Mitra, Dr. Dinesh Nakum

**Intensivists :** Dr. Misbah Rangwala, Dr. Ronak Shah



# WHAT'S NEW AT PIMSR & PSH



## 1. 20,000 litre Oxygen Tank installation at Parul Sevashram Hospital

In order to fulfil the rising demand of oxygen in Covid Patients, 20,000 litre Oxygen Tank has been installed at Parul Medical Institute & Hospital. Parul University has made an additional investment of 1 crore rupees for setting up supportive infrastructure in these dire times of pandemic. With this enhanced capacity, we will be able to save more lives.

## 2. 1st Batch of Internship of PIMSR

We are happy to announce our first batch of Interns from MBBS admission batch 2016 at Parul Sevashram Hospital from 12th April 2021 onwards.



## 3. The second wave of Covid-19 dealt efficiently at PSH

With total capacity of 600 beds including 110 ICU bed, 50 ventilator and 580 oxygen beds for COVID 19 patients, Parul University and Parul Sevashram Hospital performed its national duty to serve the people of our great Nation India. 30% of our COVID beds were dedicated as free beds to serve the poor and non-affording patients. More than 5000 patients were successfully managed and treated.

# WHAT'S NEW AT PIMSR & PSH



4. The **Nephrology Department** of Parul Sevashram Hospital successfully conducted 100+ dialysis sessions for Covid positive patients.

5. The **Physiotherapy Department** initiated Post Covid Rehabilitation Centre for facilitating smooth recovery of Patients who suffered from Covid-19. The centre also provides Tele Physiotherapy services to the patients.



6. **Paediatrics Department commences training on Covid-19 Management Protocols**

As a part of preparedness for the anticipated third wave of Covid-19 Pandemic, the Department of Paediatrics, PIMSR has commenced training on Covid-19 Management Protocols in Paediatric patients for the Medical Officers of Waghodia and neighbouring Primary and Community Health Centres.

# EVENTS AT PSH AND PIMSR

- 1. National level competition on World Health Day**  
Parul Institute of Medical Sciences and Research, Faculty of Medicine, Parul University in association with Technical Events Cell, Parul University, organized National level Virtual Quiz Competition on "WORLD HEALTH DAY 2021" on 07/04/2021. The Event was held online with 600+ participants from across the country. The event was well coordinated by : Dr. Mitesh Dave, Professor and HOD, Anatomy Department , PIMSR Dr. Meghana Joshi, Tutor, Anatomy Department, PIMSR along with students volunteers from 1st Year.



- 2. Skill fest 2021**  
The Department of Paramedical & Health Science, Faculty of Medicine, Parul University has organised an Annual Flagship event "SKILLFEST 2021"- A STATE LEVEL SKILL WORKSHOP SERIES FOR MEDICAL & PARAMEDICAL PROFESSIONALS & STUDENTS under the valuable guidance of Dr. Geetika Madan Patel, Medical Director of Parul Sevasharm Hospital. Total number of participants including faculties, students and working professionals was 427 from different colleges across the Gujarat. Total of 19 different types of advanced skill workshops were organized like Neonatal Resuscitation, Introduction to ECG, Mechanical Ventilation, Clinical Examination in Cardiology, Basics of Perfusion Sciences, Techniques for Suturing, Bandaging, Dressing, Basics of MRI, Immunohistochemistry, Dissection of Cranial Cavity. Specimen Processing, Vision Therapy, Contact Lenses, ABC assessment, ABG/VBG, Electrophysiology, Common Procedures, First Aid



# EVENTS AT PSH AND PIMSR

and Triage, Pre & Post-Operative Protocols, Hospital Infection Control. All Workshop Series Conducted by Master Experts of Respective fields & Coordinated by Faculty Members of Department of Paramedical & Health Science.

### 3. **Physiology Quiz Competition**

On 05-03-2021, Nerve-Muscle Physiology Quiz competition was held which was Organized by: Dr. Piyush Patel, Assistant Professor, Physiology Department, PIMSR. 30 students of 1st year MBBS participated in the event. There were four rounds in the competition.



1st: Regular MCQs

2nd: Fastest finger 1st: Students were provided buzzer for the same

3rd: Puzzle (Who Am I)

4th: Identify the Image based clinical scenarios.

All the participants played active role & enjoyed session fully.

Faculties had enjoyed and supported this session too.



# ACHIEVEMENTS



## 1) THE HUMAN FACE OF CORPORATE INDIA – Dr Geetika Patel, Medical director, Parul sevashram hospital

Dr Geetika Patel, was amongst the panelists during India vs corona 2.0 e conclave, corporate special organized by ABP news. She was the only female selected from across corporate sector in India to give her thoughts and experiences on road to recovery of Covid 19 and contribution of Parul University and Parul Sevashram Hospital in tackling the Covid 19 pandemic.

## 2) You tube educational channel by Dr Mitesh Dave

Dr Mitesh Dave, Professor, Dept of Anatomy started you tube channel named 'Dr Mitesh Dave anatomy', which crossed 1, 00,000 subscribers and you tube awarded him with silver play button.



## 3) Discussion on RADIO CITY 91.1 FM

Dr Mehul Marwadi (Asso. Prof., Dept of Medicine) was invited by Radio city to give talk on 21st may at 12 pm. He emphasized of post covid rehabilitation and prevention of fungal infection specifically of mucormycosis in detail.

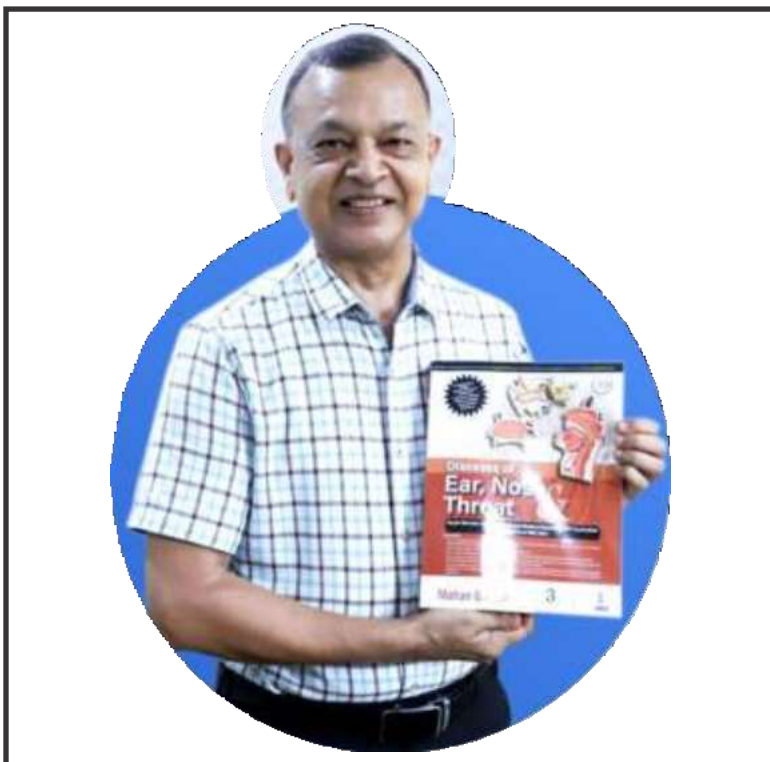
# ACHIEVEMENTS

## 4) Exclusive talk on news channel SPARK TODAY

Faculties from PIMSR and research (Dr Shashwat Nagar, Prof., Dept of community medicine, Dr Ravish Kshatriya, Prof., Dept of Pulm medicine and Dr Yatin Joshi, Asst Prof., Dept of Pulm Medicine) on occasion of WORLD TB DAY gave a talk on control strategies and achieving targets of NTEP in india before global target & TB control during pandemic on news channel debate on SPARK TODAY.



## 5) Dr. Mohan Bansal published the first ENT textbook based on Competency Based Medical Education curriculum



"Diseases of Ear Nose and Throat" 3rd Edition 2021 published by Jaypee Bros.

First and the only ENT textbook developed on the basis of new Competency Based Medical Education of Graduate Medical Education Regulation (GMER) 2019 of National Medical Commission (NMC)/MCI.

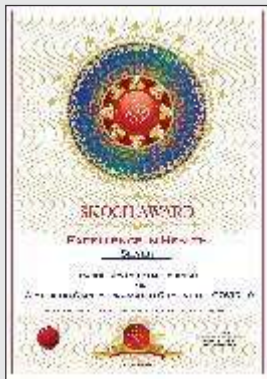
Dr Mohan Bansal was also invited as a Guest speaker in CME on Evaluation of Dizzy (Vertigo) patient on 13 May 2021 sponsored by Neurolife Abbot Medical. History taking was discussed in detail as that is the main component of the evaluation and provide diagnosis in 90% of the patients.

# AWARDS & ACCOLADES



## Award for Excellence

Parul Sevashram Hospital was awarded with An Excellence Certificate for its Holistic Care Approach to Combat COVID19 disease at 10th Healthcare leaders forum by Elets



Parul Sevashram Hospital was granted an Award of Excellence for "Holistic care approach to Combat Covid-19" by the prestigious SKOCH GROUP.



## Future Leader in Healthcare

Parul Sevashram Hospital was Felicitated as Future Leader in Healthcare - Times Health Icons in 2020.



## Quality Certification (Bronze)

Parul Sevashram Hospital was felicitated by Quality certification (Bronze) for compliance with Quality standards of PMJAY from National Health authority and Quality council of India..



A student from Faculty of Medicine,  
Krishna Soni  
published a review article in a  
Pubmed Indexed Journal under the guidance of  
Orthopaedics Professor & Head  
Dr. Karthik Vishwanathan.



સમય એક સરસ મજાનો આવશે,  
બસ તું તારે તારું કામ કરે જા.

વાતો તમારી રોજે રોજ થશે,  
બસ મન લગાવી ને સેવા કરતો જા.

ઉગતા સૂર્ય ના કિરણો ની જેમ પ્રકાશિત થઈશ,  
બસ પ્રભુ માં શ્રદ્ધા નો દિપક પ્રગટાવે તો જા.

ઉત્સાહ તારો વધતો જશે,  
બસ મુખ હંમેશા આનંદિત રાખતો જા.

હિમ્મત તારી બમણી થઈ જશે,  
બસ નિરાશા ઓ ને ભૂલતો જા.  
ધીરજ ના ફળ મીઠા જ મળશે

એ કહેવત સાચી પડશે,  
બસ વિશ્વાસ પોતાના પર કરતો જા.

જીવન ના પથ પર સફળતા ડગલે ને પગલે મળશે,  
બસ થઈ જશે, રહેવા દે રૂપી આળસ દૂર કરતો જા.

બુલંદીઓ ને તું આરૂઢ થઈશ,  
બસ વિનમ્રતા તારા માં લાવતો જા.

એક દિવસ આ કવિતા સાર્થક બનશે,  
બસ બધા જ શબ્દો આત્મસાદ કરતો જા.  
પાંદડી

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## પાડલ યુનિ.એ CSR હેઠળ સેવાશ્રમ હોસ્પિટલને રૂ. ૩ કરોડ ફાળવ્યા પાડલ સેવાશ્રમ હોસ્પિટલમાં કોરોનાના ૬૦૦ પૈકી ૩૮૦ બેડ પર નિ:શુલ્ક સારવાર

વગોડરા, સનિવાર શહેરની પાડલ યુનિવર્સિટી દ્વારા કોરોના મહામારી દરમિયાન શૈક્ષણિક જવાબદારી સાથે સામાજિક જવાબદારી પણ સંપૂર્ણપણે નિભાવી છે. કોરોના મહામારીમાં પાડલ યુનિવર્સિટી સંલગ્ન પાડલ સેવાશ્રમ હોસ્પિટલને સંપૂર્ણ કોવિડ હોસ્પિટલમાં ફેરવી દેવામાં આવી હતી. હોસ્પિટલમાં ૬૦૦ બેડ કાર્યરત હતા. જેમાંથી ૩૮૦ બેડ પર નિ:શુલ્ક સારવાર આપવામાં

### આઈસીયુમાં કોરોના માટે ૧૧૦ બેડની વ્યવસ્થા કરવામાં આવી હતી

આવી રહી હતી. એટલું જ નહીં હોસ્પિટલમાં આવતા દર્દીઓની ઓક્સિજનની જરૂરીયાતને પહોંચી વળવા માટે ૨૦ હજાર કિલો લીટરની મેડિકલ ઓક્સિજન ટેન્ક પણ તાત્કાલીક લગાવવામાં આવી હતી. જેથી એક પણ દર્દીને ઓક્સિજનની મુશ્કેલી ન આવી. મહામારીની શરૂઆતથી અત્યાર સુધીમાં પાડલ સેવાશ્રમ હોસ્પિટલ દ્વારા ૫૦૦૦થી વધારે દર્દીઓની સારવાર કરવામાં આવી છે. જે સંખ્યા રોજબરોજ વધી જ રહી છે.

કોરોનાની ખાસ ટીમ તૈયાર કરવામાં આવી છે. મેનેજમેન્ટ દ્વારા મ્યુકરમાઈકોલિસના દર્દીઓ માટે અલાયદી વ્યવસ્થા પણ ઊભી કરવામાં આવી છે.

હોસ્પિટલની કામગીરી ખાખતે મેડિકલ ડાયરેક્ટર ડૉ.કોમલ પટેલે જણાવ્યું હતું કે, પાડલ સેવાશ્રમ હોસ્પિટલ દ્વારા યુનિવર્સિટી તેમજ હોસ્પિટલના તમામ કર્મચારીઓ, દર્દીઓને આર્થિક રીતે મુશ્કેલી નહીં થાય તેમજ નિ:શુલ્ક આપવામાં આવે છે. એટલું જ નહીં અમારા વિદ્યાર્થીઓ દ્વારા આસપાસના ગામોમાં મહામારી વિષે જાગૃતિ ધારવા સહિત આર્થિક રીતે મુશ્કેલી નહીં થાય તેવા સારવાર કરવામાં આવી છે. જેમાં સર્જન, ઈમેન્ટી સ્ટ્રેપ્ટોકોક્કસ, ઓપેમેલોક્કસ અને ઈન્કેશન સ્ટ્રીટી સ્ટ્રેપ્ટોકોક્કસ

## પાડલ યુનિ.એ CSR હેઠળ સેવાશ્રમ હોસ્પિટલને રૂ. ૩ કરોડ ફાળવ્યા કોરોના કાળમાં સમાજ સાથે કર્મચારીની પણ કાળજી રાખતી પાડલ યુનિવર્સિટી

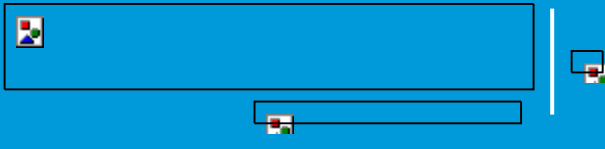
### મહામારી દરમિયાન યુનિવર્સિટી દ્વારા ૧૫૦૦ વ્યક્તિઓને રોજગારી અપાઈ

કોરોના મહામારીની સ્થિતિમાં એક વર્ષથી લોકો લોન પરેશાન થઈ ગયા છે. અનેક લોકોની નોકરી ગઈ છે તો અનેકના વેપાર પણ ખેંચ થઈ ગયા છે. આવા સમયમાં પણ શહેરની પાડલ યુનિવર્સિટી દ્વારા સમાજ સાથે કર્મચારીઓનું પણ તેટલું જ ધ્યાન રાખવામાં આવી રહ્યું છે. પાડલ યુનિવર્સિટી દ્વારા જરૂરીયાતમંદ કર્મચારીઓને એક મહિનાનો પગાર બેંડવાસ આપવો, મેડિકલ સર્વિસમાં ડિસાઈન્ટ આપવું સહિતના નિર્ણયો લેવામાં આવ્યા છે. એટલું જ નહીં મહામારી દરમિયાન જ યુનિ. દ્વારા ૧૫૦૦ વ્યક્તિને નોકરી અપાઈ છે.

કોરોના મહામારીમાં વ્યક્તિને બિમારીની સાથે સાથે અર્થિક નુકસાન પણ ખોવવું પડી રહ્યું છે. ત્યારે અનેક કર્મચારીઓ દ્વારા કર્મચારીઓને છુટ કરવામાં આવ્યા છે, તેમજ ખોટા અને ઈ-સીમેન્ટ નથી અપાયા, પગાર કાપવામાં આવ્યો છે. જેના કારણે લોકોની આર્થિક સ્થિતિ કપરી બની છે. તેવા સમયમાં શહેરની પાડલ યુનિવર્સિટી દ્વારા શૈક્ષણિક વર્ષમાં અંદાજે ૧૫૦૦ વ્યક્તિને નોકરી આપવામાં આવી છે. એટલું જ નહીં કર્મચારીઓના પગાર પણ સમયસર કરવામાં આવ્યા છે. તે ઉપરાંત ઈ-સીમેન્ટ અને ખોનસ પણ તમામ કર્મચારીઓને સમયસર આપવામાં આવ્યું છે.

મેનેજમેન્ટ દ્વારા તાલુકા પટ્ટિસ્થિતિમાં કર્મચારીઓને આર્થિક મુશ્કેલી હાથ કરવાના આશયથી જે કર્મચારીને જરૂર હોય તેમને એક મહિનાનો પગાર બેંડવાસ આપવામાં આવી રહ્યો છે. આ નિર્ણય આદ અત્યાર સુધીમાં પહોંચી કર્મચારીએ તેનો લાભ લીધો છે. એટલું જ નહીં પાડલ યુનિવર્સિટી સંલગ્ન સેવાશ્રમ હોસ્પિટલમાં કર્મચારીઓ માટે ૧૫ ટકા ડિસ્કાઉન્ટની પણ જાહેરાત કરવામાં આવી છે. કોલિની સારવારમાં કરવા બજારની રોજા કર્મચારીઓ તેમજ યુનિવર્સિટીના કોઈ પણ કર્મચારી અથવા તેમના પરિવારજન કોરોના સંક્રમિત થાય તો તેમને ૧૪ દિવસથી વધુ આપવામાં આવે છે. તેનો પણ પગાર કાપવામાં આવતો નથી. થીજા તરફ કર્મચારીઓ અને સમાજની સેવા કરી શકાય તે માટે એક શૈક્ષણિક સંસ્થા હોવા છતાં CSR હેઠળ રૂ. ૩ કરોડ સેવાશ્રમ હોસ્પિટલને કાપવામાં આવ્યા છે.

પાડલ યુનિ.ના મેડિકલ ડાયરેક્ટર ડૉ. ગિરીશ પટેલે જણાવ્યું હતું કે, યુનિ.ના ૨૮ હજારથી વધુ વિદ્યાર્થીઓનું ભવિષ્ય ખતાવવા માટે કરજ બજાવતા કર્મચારીઓના વર્તમાનની ચિંતા કરવી અને તેમનું ધ્યાન રાખવું તે અમારી નૈતિક જવાબદારી અને કરજ છે. લોકડાઉન હોય કે પછી મહામારી દરેક શૈક્ષણિક અને વિન શૈક્ષણિક કર્મચારીઓ દ્વારા વિદ્યાર્થીઓ પ્રત્યેની પોતાની કરજ સંપૂર્ણ નિષ્ઠાથી નિભાવી છે. જેને અને વિદ્યાર્થીઓને ઊંચે.



# MYTH AND FACTS

**Myth :** Current epidemic of mucormycosis can affect any individual

**Fact :** It is true that mucormycosis can as such affect any individual with an immune-compromised status however in the current epidemic; mucormycosis is seen among COVID-19/recovered patients

**Myth :** Mucormycosis is communicable/contagious disease

**Fact :** Mucormycosis is not contagious and cannot be spread from one person to another

**Myth :** It is not possible to prevent mucormycosis

**Fact :** Mucormycosis is preventable. It can be prevented by use of masks if visiting dusty construction sites, wearing shoes, long trousers, long sleeve shirts and gloves while handling soil, moss or manure and maintenance of personal hygiene including thorough scrub bath

**Myth :** Mucormycosis is a mild non-fatal infection

**Fact :** Mucormycosis can turn into a fatal infection if proper care is not exercised. This includes preventive measures and not ignoring early signs of the infection

**Myth :** There are not enough signs to early identify mucormycosis

**Fact :** In COVID-19 patients, diabetics and immunocompromised the following signs like Sinusitis- nasal blockage or congestion, nasal discharge (blackish/bloody), local pain on the cheek bone, One sided facial pain, numbness or swelling, Blackish discolouration over bridge of nose/palate, toothache, loosening of teeth, jaw involvement, Blurred or double vision with pain, fever, skin lesion, thrombosis, necrosis, Chest pain, pleural effusion, haemoptysis, worsening of respiratory symptoms

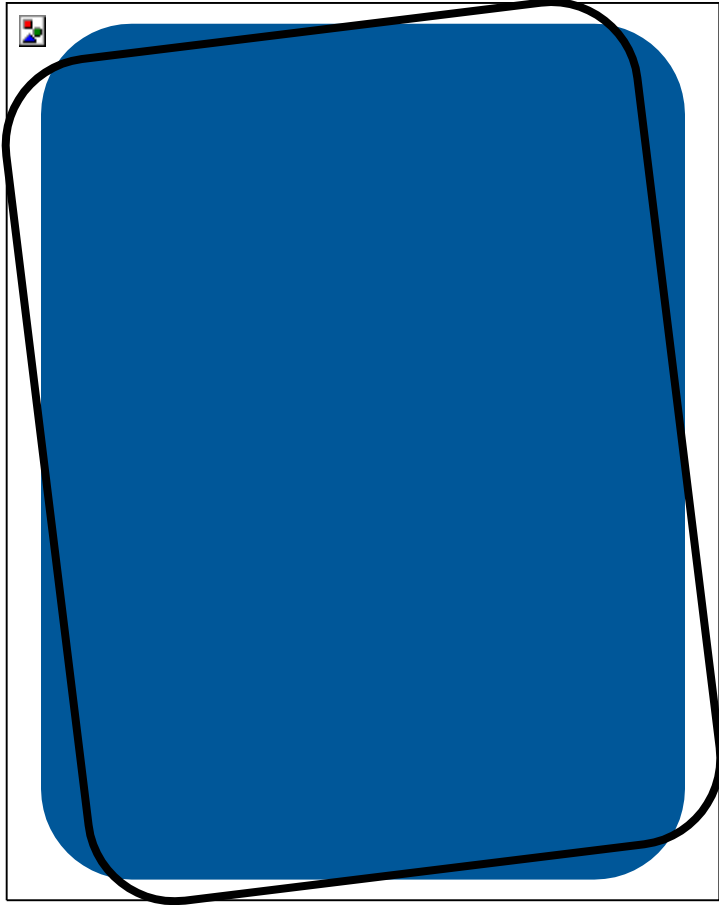


# MEDI – QUIZ

- Following should be done in a case of mucormycosis except**
  - Use clean/sterile water for humidifiers
  - Use antibiotics/antifungal abundantly
  - Use steroids judiciously
  - Control hyperglycemia
- The following predisposes mucormycosis**
  - Uncontrolled diabetes
  - Prolonged ICU stay
  - Immunosuppression by steroids
  - All of above
- Which are the common sources of mucormycosis in hospital settings?**
  - Hospital linen
  - Nearby construction sites
  - Adhesive tapes
  - All of above
- Mechanism of action of Amphotericin B against mucormycosis is**
  - Disrupts fungal cell wall synthesis
  - Forms pores on cell walls
  - Allows leakage of cellular component
  - All of above
- Most effective form in which Amphotericin B is available is**
  - Injectable IV
  - Oral suspension
  - Inhaled
  - All of above

Dr. Hiren Patel

# #COVID WARRIORS



Two horizontal bars, each containing a small icon in the top-left corner.

A small icon in the top-left corner and a cluster of smaller icons below it.

A horizontal bar with a small icon in the top-left corner.

A horizontal bar with a small icon in the top-left corner.

A large horizontal bar with a small icon in the top-left corner.