







Neuropathy screening clinic/inauguration





World Mental Health Day





Lecture on the occasion of 151st birth celebration of Mahatma Gandhiji, the father of nation and Shri Lal Bahadur Shastriji at EURO School





J. J. M. Medical College, Davangere.

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From the desk of the Principal

As we approach towards the end of 2020, we have a realization of mixed experiences and a reasonably good ability to cope with adverse situations what human being and specially Doctor's are tested in this pandemic situation of COVID.

The pandemic compelled us to explore alternative means of teaching & communication with students. Thanks to the technology which has made the world a small place to reach every nook and corner of the world. Our Medical education department. has successfully co-ordinated the herculean task of organizing online classes for all batches of undergraduate students and ensured seamless learning even during such extreme times.

We proudly announce the re- opening of college for undergraguates and assure the parents that all guidelines & precautionary measures for prevention of COVID transmission will be taken in the campus & hostels. In this issue we have continued our efforts to share COVID- related information from various departments to our readers in the midst of this pandemic. I would like to appreciate the Dept. of Pharmacology for their information on drugs & treatement in relation to COVID and also the latest information on various vaccines which is the most debated topic among Medical faternity & researchers world wide.

The college is proud to announce that the ceremony for laying of foundation stone of new 2000 bedded Bapuji Hospital block by our Hon. Chairman Dr. Shamanur Shivashankarappaji & Sri.S.S.Mallikarjan Joint Secretary BEA and other dignitories which marks the beginning of a new era in the progress of health care facilities to the people of Davangere and it surroundings.

We wish the year 2021 brings health, happiness & prosperity to all our teaching and non teaching faculty of JJMMC.

Principal, JJMMC

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The Chairman / The Principal **J. J. M. Medical College** Davangere - 577 004. Ph : +91-8192-231388, 253850-59 Ex.101 / 104 Fax : +91-8192-23188, 253859 www.jjmmc.org

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Bhoomi Puja of new Hospital Block at JJM Medical College:

Bapuji Hospital under the auspice of Bapuji Educational Association will be setup with an advanced futuristic 2000 bedded hospital costing more than 500 crores.

The Bhoomi Puja of the mammoth hospital was performed by Sri. Shamanur Shivashankarappa, Hon. Secretary BEA & chairman JJM Medical College and Sri S S Mallikarjun Joint Secretary BEA on the festive day of Vijayadashmi 26th October 2020. This occasion was graced by our Principal Dr Murugesh S B, Sri Athani Veeranna treasurer of BEA, Dr M G Eshwarappa Director (Academics) BEA, Dr Kumar Medical Director Bapuji Hospital, Sri Sathyanarayana Director (Administration) JJMMC, and Sri. S K Veeranna, Director Harihara Urban Co-operative bank.

The new hospital block is an 8 floor building and will be built with the latest technology incorporating SAYTEKNO- saypost beam technology Turkey.

Academic activities and achievements : Department of Biochemistry

Dr. T. Vivian Samuel, Dr. Anshika Garg. "Evaluation of serum adenosine deaminase and gamma glutamyl transferase in cancer cervix -A low-cost diagnostic tool" was published in International Journal of Clinical Biochemistry and Research 2020;7 (3): 325-328.

Department of Physiology Academic activities

- Dr. Bhagya. V. Professor presented E poster on 'Auditory & brainstem responses in hyperbilirubinemic infants' at 10th AOCN 2020 / Child Neurocon - held at ITC Gardenia, Bengaluru
- Dr. Bhagya. V. Professor presented e- Paper / e poster 'Basic And Applied Physiology V-ICONBAP 2020' at The 6th Annual & 1st Virtual International Conference - held at Sikkim Manipal Institute of Medical Sciences, Gangtok, Sikkim
- Dr.Sunitha. M, Associate Professor in Physiology has guided ICMR STS for JatinBhoopala S , Second year medical student for project on "Electrocardiographic changes due to occupational exposure to pesticides & Fertilizers among farmers in and around Davangere: A comparative study".

Publications

SI. No.	Title	Journal	Authors
1.	Airway Resistance in Farmers Exposed to Pesticides as Compared to Controls	International Physiology / Volume 8, Nor(1), 2020: 21-25	Sunitha M, S Smilee Johncy, Ashwini S, Dhanyakumar
2.	Effect of Occupational Exposure to Pesticides on Cardiovascular System among Farmers: A Comparative Study	International Journal of Physiology, Vol. 8, No. 03 , 2020: 91-97	Sunitha M, Jatin Bhoopala S, Suresh Y Bondade

DEPARTMENT OF PATHOLOGY

- Dr Chatura KR Moderated session on Recent Advances in soft tissue tumors: Morphology to Genetics at KAPCON 2020 E conference on 3rd October 2020
- 2. Dr Suresh Hanagvadi Professor pathology
- Webinar on "Hemophilia- Diagnosis & Management", organized by Government of District Hospital, Tumkur, Karnataka on 29.09.2020, 6 PM to 7.30 PM
- Webinar on "Challenges in laboratory diagnosis of Hemophilia & pragmatic outlook in Indian clinical Laboratory settings", organized by MGM Medical College, Warangal, Telangana on 30.11.2020, 2 PM to 3.30 PM

Post Graduate Activities

The following E- Papers were presented by Post Graduates at E-KAPCON 2020 on $2^{nd} - 4^{th}$ October 2020 organized by KCIAPM





TITLE	PRESENTER	GUIDE	PRIZE
E-cadherin expression in Squamous cell	Dr. Rashmi P	Dr. Suresh K K	Session best paper
Carcinoma of oral cavity and oropharynx		Dr. Chatura K R	
and its correlation with modified			
Anneroth's histological grading			
Histopathological study of Polypoidal	Dr. Roopa	Dr. Thippeswamy	
neoplastic lesions of nasal cavity,		MTR	
paranasal sinuses and nasopharynx			
Inhibitors in Hemophilia	Dr. Subhashini H	Dr. Suresh	Session best paper
	Bevinakatti	Hanagavadi	
Histopathological study of Gestational	Dr. Rajalakshmi D	Dr. Soumya B M	
Trophoblastic Disease			
A study on prognostic value of cytological	Dr. Veeksha V	Dr. Patil S B	Session best paper
grading and its correlation with axillary	Gouda		Selected as 1 of the
nodal metastasis in IDC of breast			top 5 candidates
HER2/neu expression in malignant lesions	Dr. C N Aarthy.	Dr. Seema	
of Uterine Cervix-reliable or not?		Bijjaragi	
A comparative study between Nucleic acid	Dr. Priyanshi	Dr. Rajashekar K S	
Amplification Testing (NAT) and HIV	Anand		
antibodies Enzyme Linked Immunosorbent			
Assay (ELISA) among blood donors			

The following E-Posters were presented by Post Graduates at E-KAPCON 2020 on 2nd - 4th October 2020 organized by KCIAPM

TITLE	NAME	GUIDE
Carcinosarcoma of ovary: A case study	Dr. Shruthi Kareddy	Dr. Soumya B M
Intracholecystic Papillary -Tubular neoplasm : A case report	Dr. Shikhar Kumar	Dr. Chatura K R
Mullerian Adenosarcoma: A case report	Dr. Melanie yvnne pinto	Dr. Seema Bijjaragi
Cemento ossifying fibroma of nasal cavity -A rare case report	Dr. Dipti Anu	Dr. Seema Bijjaragi, Dr. Niketha B
Unusual metastatic site of Follicular thyroid	Dr. Krupa K	Dr. Suresh K K
carcinoma -A case report		Dr. Vardendra Kulkarni
Anaplastic Wilms tumor -A case report	Dr. Shruthi	Dr. Suresh K K
		Dr. Vardendra Kulkarni
Glanzmann's Thrombesthenia along with Gonadal	Dr. Veena R	Dr. Suresh Hanagavadi
Dysgenesis and Mayer-Rokitansky Kuster Hauser syndrome		
in a girl with 46xx Karyotype : A rare case report		
Unilateral Krukenberg tumor -An unsual presentation	Dr. Pradeep Kumar	Dr. Seema Bijjaragi
	Reddy M	Dr. Vardendra Kulkarni
Osteosarcoma high grade type : Case report	Dr. Thumma Deepika Poorima	Dr. Patil S B
Fine needle aspiration cytology of lymphoproliferative	Dr. Divya P J	Dr. Shwetha J H
disorder in an Immunosuppresed patient -A case report		

DEPARTMENT OF PHARMACOLOGY

Staff Activities:

 Dr. Santosh Kumar M, Associate Professor, Department of Pharmacology was a resource person in a Five day online workshop on Bioinformatics for Engineers and Medicos conducted by Department of Masters of Computer Application, University BDT college of Engineering, Davanagere and gave a talk on 01/10/2020 Topic: "Bioinformatics in Pandemic"

Staff Publication:

- Dr Shashikala G.H., Dr Abishek P. Raichurkar. "Evaluation of analgesic activity of the methanol extract from the galls of Quercus infectoria alone and as an adjuvant in Wistar rats". Published in International journal of basic and clinical pharmacology. 2020 May; 9(5):701-705.
- Dr Narendranath S., Dr Veena H., Dr Shashikala G H. "A comparative study between Cilnidipine and Amlodipine on learning and memory in albino mice". Published in International journal of basic and clinical pharmacology. 2020 May; 9(5):726-730.
- Dr Santhosh Kumar M., Dr Geetha M., Dr Harish Kumar S. "Bird's eye view of COVID-19 clinical trials being conducted across India". Published in International journal of pharmacological research". 2020; 10(08):e5481.

Emerging Covid-19 Vaccines Under Trials In The World, <u>1) PFIZER COVID-19 VACCINE</u>

Name of vaccine: BNT162b2

Country: United States of America (U.S.A)

Manufacturer: Pfizer in collaboration with German firm Biontech

Antigen used: mRNA

Safety and Efficacy data: mRNA vaccines have a relatively safer profile than traditional vaccines as they do not use inactivated virus, rather a portion of the viral sequence encoding for one or more viral antigens. Safety data milestone required by U.S. Food and Drug Administration (FDA) for Emergency Use Authorization (EUA) has been achieved.

Data demonstrates that vaccine was well tolerated across all populations with over 43,000 participants enrolled; no serious safety concerns observed, the only Grade 3 adverse event greater than 2% in frequency was fatigue at 3.8% and headache at 2.0% The vaccine was found to be 90% effective in preventing the infection. (Half the trial participants are given the vaccine shot while the other half are injected with a dummy vaccine (control group).

90% effectiveness means that if 100 recipients of the dummy vaccine got infected by the virus, only 10 from that group who received the actual vaccine dose was infected) this was claimed on Nov 9th 2020. As of Nov 18th 2020 primary efficacy analysis demonstrates BNT162b2 to be 95% effective against COVID-19 beginning 28 days after the first dose, 170 confirmed cases of COVID-19 were evaluated, with 162 observed in the placebo group versus 8 in the vaccine group. Efficacy was consistent across age, gender, race and ethnicity demographics; observed efficacy in adults over 65 years of age was over 94%.

Storage requirement: A cold-chain requirement at a temperature of $-70^{\circ}C \pm 10^{\circ}C$.

Treatment schedule: Given as 2 doses, separated by 21 days. Route - Intramuscular.

Methodology: BNT162b1 is a codon-optimized mRNA vaccine that encodes for the trimerized SARS-CoV-2 RBD, a critical target of the virus nAb. The vaccine portrays an increased immunogenicity due to the addition of T4 fibritin-derived foldon trimerization domain to the RBD antigen. The mRNA is encapsulated in 80 nm ionizable cationic lipid nanoparticles, which ensures its efficient delivery. The Phase 1/2 clinical trials have revealed elevated

RBD-specific IgG antibodies levels and neutralizing antibody response.

Cost: \$20 (Rs 1500) per dose approximately.

2) OXFORD ASTRA ZENECA

Name of the Vaccine: AZD1222 (Oxford Astra Zeneca). In India, Serum Institute of India to manufacture 10 crore doses by December and will be sold under brand name Covishield.

Completed phase: Phase I-II

Current phase: Phase III, across 20 clinical trial sites in the UK (Estimated date of completion- December 22, 2020)

Country: University of Oxford, AstraZeneca, UK.

Antigen used: AZD1222 is a recombinant replication - defective Chimpanzee adenovirus expressing the SARS-Co-V-2-5 Surface glycoprotein.

Safety and efficacy data:

Immune response - Spike-Specific antibodies at day 28; neutralizing antibodies after a booster dose at day 56.

Adverse effects - Pain at the injection site, headache, fever, chills, muscle ache, malaise in more than 60% of participants; Paracetamol allowed for some participants to increase tolerability.





Storage requirements: Refrigerated at 2-8 degrees Celsius.

Methodology used in preparation: Modified Chimp adenovirus vector (ChAdOx1).

Treatment schedule: Two intramuscular dosesof 5 X 10^10 virus particles 4 weeks apart in deltoid of non-dominant arm for > 18 years age.

Cost: Rs. 225/- per dose.

3) MODERNA VACCINE

Country & Manufacturer: Cambridge Massachusetts, a US based company. NIAID- National Institute of Allergy & Infectious diseases

Antigen used: mRNA 1273 is covid19 vaccine candidate encoding for a perfusion stabilized form of the spike (S) protein

Efficacy& safety data: a)Preclinical study; The study showed 2 doses with 4 weeks apart vaccination of mRNA 1273 ,vaccine candidate led to a robust immune response & protection against SARS- COV2 INFECTION in the upper & lower airways in non human primates.

b)Phase 1 study; Dose escalation, open label trial including 45 healthy adults, (18-55 years of age) received 2 doses, 28 days apart, 25µg, 100µg or 250µg induced antiSARS- COV2 immune responses in all participants & no trial limiting safety concerns were identified.

c) Phase 2 trial - showed safety, reactogenicity & immunogenicity of vaccinations of mRNA 1273 administered 28 days apart. Study involved 600 healthy participants between the age group (18-55 & above), received 50 μ g,100 μ gdose or placebo.

d)Phase 3 trial- COVE study of Moderna vaccine had enrolled 30000 participants, announced vaccine efficacy of 94.5% (P< 0.0001) & safety data did not report any significant safety concern.A review of adverse effects reports short lived fatigue, headache & pain after the injection in some patients.

Storage requirements: Remains stable at 20c to 80c (360 to 460F), the temperature of standard home or medical refrigerator for 30 days. & remains stable at -200c or -4F for up to 6 months & at room temperature for 12 hrs. So Moderna announces longer shelf life at refrigerated temperature

Treatment schedule: $0.5ML(100\mu G)$ IM 2 doses 4 weeks apart.

Methodology used in preparation: Novel lipid nanoparticle (LNP) encapsulated mRNA based vaccine that encodes for a full length, perfusion stabilized spike protein of SARS-COV-2

Cost : vaccine may cost expensive approximately \$37(Rs2750).

4) COVAXIN

Name of the vaccine: COVAXIN

Manufacturer: Bharat biotech International Itd in collaboration with NIV, PUNE and ICMR

Country: India

Antigen used: Whole-Virion Inactivated SARS-CoV-2 Vaccine

Safety and efficacy data

Preclinical Studies:

a) Immunogenicity and protective efficacy of whole Virion inactivated SARS Cov2 in the Syrian hamster model: Induced potent immune response in hamsters, Th1 Biased immune response was elicited by the vaccine and it protected Syrian hamsters from SARS Cov2 pneumonia.

b) Remarkable immunogenicity and protective efficacy of inactivated SARS Cov2 vaccine in rhesus macaques

c) Evaluation of safety and immunogenicity of adjuvanted Th1 skewed of whole Virion inactivated SARS Cov2 vaccine in mice, rats and rabbits.

Clinical studies

Phase 1/ Phase 2: An Adaptive, Seamless Phase 1, Followed by Phase 2 Randomized, Double-blind, Multicenter Study to Evaluate the Safety, Reactogenicity, Tolerability and Immunogenicity of the Whole-Virion Inactivated SARS-CoV-2 Vaccine (BBV152) in Healthy Volunteers. Regulatory Clearance Status from DCGI 10/07/2020, 12 centers. Dose: 0.5ml, Route of administration: Intramuscular injection, Frequency: Two doses at Day 0 and Day 14 Total Sample Size=1125

A subject expert committee on Covid-19 at the Central Drugs Standard Control Organization had recommended granting permission for conducting phase 3 clinical trial of its vaccine 'Covaxin' after assessing the safety and immunogenicity data of the phase 1 and 2 trials on 23/10/2020

A Phase 3: Randomized, Double-blind, Placebo-controlled, Multicenter Study to Evaluate the Efficacy, Safety, Immunogenicity, and Lot-to-Lot consistency of BBV152, a Whole virion Inactivated Vaccine in Adults greater than or equal to 18 Years of Age. Regulatory Clearance Status from DCGI 23/10/2020, 23 centers. Dose: 0.5ml, Route of administration: Intramuscular injection, will be administered as a two dose 28 days apart. Total Sample Size=25800

Storage requirements: 2 to 8 C

Treatment schedule: 0.5ml, IM injection, two dose 28 days apart

Methodology used in preparation: Inactivated whole SARS-CoV-2 vaccine, adjuvanted with aluminum hydroxide gel or a novel TLR7/8 agonist adsorbed gel.

Cost: Low cost but not yet fixed









Name of the vaccine: JNJ - 78436735 (formerly known as Ad 26.COV2.S)

Country: United States

Antigen used: Ad26.COV.S delivers the SARS -CoV -2 spike protein into cells using an inactivated common cold virus as the delivery vehicle.

Safety and efficacy data: The results of preclinical study were very promising. A multicentre phase 1/2a randomized, doubleblinded, placebo -controlled clinical trial has been conducted, The findings demonstrate that the vaccine is mostly safe for human use and is capable of inducing robust immune responses. Pain at the site of injection was the most common local adverse event, and fatigue, headache and myalgia were the most frequently observed solicited adverse events. A mild to moderate intensity fever was observed in few participants, which resolved in 1 to 2 days.

Storage requirements: The vaccine is expected to remain stable for upto two years at -40 Farenheit. Once it goes out to distributors and customers, it can be kept stable at 2 to 80 Celcius for upto three months.

Treatment schedule: In the phase 1/2a trial, a single dose vaccination regimen was followed with 5x1010 or 1x 1011 viral particles per vaccination in adults through intramuscular injections. The safety and efficacy of the vaccine were assessed after 4 weeks of vaccination. Solicited and unsolicited adverse events were recorded for 7 and 28 days after vaccination respectively

Methodology used in preparation: The vaccine is based on non- replicating adenovirus serotype 26, vector, a well tolerated highly immunogenic viral vector.

Manufacturer: Janssen Pharmaceutical Companies of Johnson & Johnson.

Cost if available: Not available in the Market. Phase III study is in progress.

Present status of the vaccine: The phase III ENSEMBLE study of the single - dose regimen of JNJ -78436735, continues to enroll and vaccinate study participants. ENSEMBLE is proceeding to enroll up to 60,000 participants worldwide.

In addition to the single- dose regimen ENSEMBLE study, Jansen has now initiated the two dose regimen ENSEMBLE 2 trial. ENSEMBLE 2 is a complementary, planned, pivotal, largescale, multi-country Phase 3 trial that will study the safety and efficacy of two - dose regimen of the investigational Janssen vaccine candidate for the prevention of COVID-19 in up to 30,000 participants worldwide. The ENSEMBLE and ENSEMBLE 2 trials will run in parallel.

6) SPUTNIK V[Gam-COVID-Vac]

Name of the vaccine: Sputnik V [Gam-COVID-Vac]

Country: Russia

Developer: Gamaleya Scientific Research Institute and the Russian Defense Ministry

Antigen Used: S protein present on spikes of COVID-SARS-2. The COVID -19 viruses uses these spikes to enter the cells.

Methodology used in preparation: 2 vector [human adenoviruses]-based platform

How it works: 2 different types of adenovirus vectors (rAd26 and rAd5) are used for the first dose and second dose vaccination respectively. The gene in the vector which causes the infection is removed. The gene coding for 'S' protein of SARS-COV-2 spikes is inserted into the vector. This inserted gene is safe for the individual but helps the immune system to react and produce antibodies, which protect from COVID-19 infection.

Safety and Efficacy:

Phase 1 and 2 clinical trials: completed on August 1, 2020. No side effects were observed. The vaccine is said to have induced strong antibody and cellular immune response. No participant got infected with COVID-19 after being administered with the vaccine.

Phase 3 clinical trials: (Interim analysis) Total of 40,000 volunteers participating in the Phase 3 trials. 20,000 volunteers have been vaccinated with the first dose of the vaccine and more than 16,000 volunteers with the first and second doses of the vaccine.Out of the 16,000 volunteers, there were 20 confirmed coronavirus infections 21 days after being immunized. Hence it is claimed to be 92 % effective.

India: Drug Controller General of India (DCGI) has granted approval to Dr. Reddy's Laboratory to conduct Phase 3 Trials of Sputnik V in India. Ganesh Shankar Vidyarthi Medical College in Kanpur is the first clinical trial site for Sputnik V in India.

Storage requirements: The Sputnik V vaccine's liquid form must be stored at minus -18 degrees Celsius or below to maintain efficacy. Freeze dried preparations of the vaccine can be stored at 2 to 8 degrees C, which can then diluted and injected.

Vaccination Schedule: 2 doses 21 days apart Intramuscular Route

Cost: Not yet being marketed





7) SINOPHARM VACCINE

Name of the vaccine: Sinopharm Vaccine

Country : China

Manufacturer: China National Pharmaceutical group

Antigen used: inactivated beta propiolactone aluminum hydroxide-adjuvanted whole-virion SARS-CoV-2 vaccine

Methodology in preparation: an infectious virus is altered by some sort of protein-denaturing treatment to make it noninfectious that can retain enough of their protein surfaces to set off a useful immune response. In SinoPharm's case, they inactivated the coronavirus with beta-propiolactone, which is a classic protein-alkylating compound. BPL is a strained fourmembered ring that is ready to be attacked and opened by pretty much any sort of nucleophile, including protein side chains from amino acids such as Cys or Lys.

Safety and efficacy data : Phase 1 and 2 trials : The results based on data from 320 healthy adults shown that candidate triggered robust antibody responses in inoculated people and shot did not cause any serious side effects.

A phase 3 trial is underway. The trial will enroll 15,000 subjects across three cohort, sites in the United Arab Emirates have already administered the vaccine to more than 5,000 people. The vaccine has been administered to more than 31,000 people in the UAE, Egypt, Bahrain and Jordan, "Early results are showing it is safe, there is a general rise in antibodies for all the volunteers,"

Treatment schedule: Given at 2 doses, 21 days apart, intramuscular

Storage requirement: 2 to 80 c

Cost: 145 US dollars for 2 doses

8) SINOVAC

Name of the vaccine: Sinovac

Manufacturer: sinovac biotech Ltd.

Country: China

Antigen used: Whole-Virion Inactivated SARS-CoV-2 Vaccine obtained from cells.(Vero cells African green monkey kidney)

Safety and efficacy data

Preclinical Studies:

a) Immunogenicity and protective efficacy of whole Virion inactivated SARS Cov2 in the Syrian hamster model: Induced potent immune response in hamsters, Th1 Biased immune response was elicited by the vaccine and it protected Syrian hamsters from SARS Cov2 pneumonia.

b) Remarkable immunogenicity and protective efficacy of inactivated SARS Cov2 vaccine in rhesus macaques, will be administered as a two doses.

Clinical studies

Phase 1/ Phase 2: An Adaptive, Seamless Phase 1, Followed by Phase 2 Randomized, Double-blind, Multicenter Study to Evaluate the Safety, Reactogenicity, Tolerability and Immunogenicity of the Whole-Virion Inactivated SARS-CoV-2 Vaccine (BBV152) in Healthy Volunteers. Dose: 0.5ml, Route of administration: Intramuscular injection, Frequency: Two doses at Day 0 and Day 14 or 0 and 28 days.

Phase 3: si`novac ,one of the three Chinese vaccines in the the last stages of testing, is expecting interim data as soon as in November from its phase 3 trial of almost 10,000 people in Brazil. Planning to seek regulatory approval in both Brazil and China for general use of its inactivated vaccine by the year end.

Storage requirements: 2 to 8 C

Treatment schedule: 0.5ml, IM injection, two dose 14 days apart or 28 days apart

Methodology used in preparation: Inactivated whole SARS-CoV-2 vaccine, adjuvanted with aluminum hydroxide gel then diluted in a sodium chloride.

Cost: Low cost but yet to fix

9) CANSINO BIOLOGICS VACCINE

Name of the vaccine: Ad5-n CoVVaccine

Country: China

Manufacturer : CanSino biologics Ltd

Antigen used: SARS -CoV-2 spike protein

Methodology in preparation: It is a genetically engineered vaccine with replication defective Adenovirus Type 5 as the vector to express SARS-CoV-2 spike protein..

Safety and efficacy data:

Phase 1 clinical trial: In a open-label, non-randomized, phase 1 trial, we found that the Ad5-vectored COVID-19 vaccine was tolerable and immunogenic in healthy adults. One dose of the vaccine induced rapid specific T-cell and humoral responses by 14 days.

Phase II clinical trial :Evidence from phase 2 study indicates the candidate Ad5-vectored COVID-19 vaccine has a good safety profile, with only mild, transient adverse events related to vaccination and no serious adverse events.



Single-dose immunisation with the vaccine induced rapid onset of immune responses within 14 days and significant humoral and cellular immune responses within 28 days in the majority of the recipients.

Phase III clinical trial: It would be conducted at Saudi Arabia, Russia, Brazil and Chile and is aimed to know longevity of protection, appropriate dosage to trigger immune response and to know whether there are host specific immune response.

Treatment schedule : Single dose, intramuscular injection

Storage requirement: 20 to 80 c

Cost: 216 US dollars

DEPARTMENT OF COMMUNITY MEDICINE

- Neuropathy screening clinic was inaugurated on 12-11-20 at Bapuji Hospital OPD. Screening will be done by Neurotouch Device developed by Yostra Labs. Screening clinic will be managed by Dept of Community Medicine in collaboration with Departments of Medicine, Endocrinology and Surgery.
- Awareness talk on Flourosis was given by Dr Shubha D B, at District Health Office, Davangere on 19-11-20 and 21-11-20.
 Programme was organized by Dept of Health and Family Welfare, Davangere



Health talk at MBA college was given by Dr Sandhyarani J on the topic Health and hygiene during COVID-19 pandemic on 22-9-20.



DEPARTMENT OF OPHTHALMOLOGY

Publications

- Dr.Suresha.A.R., Dr.Sadwini.M.H. Role of demodex infestation in blepharitis and coconut oil as a treatment option - Indian Journal of Clinical and Experimental Ophthalmology 2020;6(2):270-275.
- Dr.Suresha.A.R., Dr.Hima Bhatt.Minimizing surgically induced astigmatism in non-phaco manual small incision cataract surgery by U-shaped modification of scleral incision- Indian Journal of Ophthalmology October 1, 2020, IP 223:186.244.101, ,
- 3. Dr.Anitha.S.Maiya Traumatic glaucoma in 100 consecutive cases of ocular blunt trauma in a tertiary care center Kerala J Ophthalmology 2020; 32: 154-8.

DEPARTMENT OF PSYCHIATRY

- Dr. Sudarshan C.Y Professor and HOD of Psychiatry was the judge for best PG paper award presentation during the E-KANCIPS on 11/10/2020 organized by Sri Basaveshwara Medical College, Chitradurga.
- 2. Dr. K Nagaraja Rao was a chief guest on the occasion of 151st birthday celebration of Mahatama Gandhi, The Father of Nation and Shri Lal Bahadur Shastri, The Second Prime Minister of India on 2.10.2020 at Euro School, Shamanur Naganur Road, Davangere. He spoke to limited group of school teachers on the Humanistic aspects of Gandhian philosophy. He also spoke on Shri Lal Bahadur Shastri's contribution to food security and border security of India reflected in the slogan Jai Jawan, Jai Kisan. He highlighted the simplicity of two great personalities of India and the need to inculcate those values in all of us.
- 3. On 10/09/2020, Davangere District administration, Zilla Panchayat Davangere, District Health and Family Welfare in association with District Mental Health Program& Department of Psychiatry, Chigateri District Hospital conducted World Suicide Prevention Day program at DC Office Davangere. Sri Mahanthesh Belagi, District Commisioner inaugurated & presided over the program. Sri Pujar Veeramallappa (K.A.S), Additional DC was the chief guest. Dr. Sudarshan C.Y Professor & HOD of Department Psychiatry J.J.M Medical College was the Resource person of the program who addressed the Taluk Medical Officers & other caregivers of COVID-19 on the topic Suicide- Causes, management and prevention. The program was attended by Dr. Divya KG, Dr Varsha B Angadi, Dr. Aditya Singhal, Dr. Monica, PG students of Psychiatry Department, JJM Medical College



- 4. Department of Psychiatry J.J.M Medical College, Davangere conducted a group discussion on the eve of World Mental Health Day on 10/10/2020. The theme for the year was "Mental Health for All, Greater Investment-Greater Access". It started with an introductory speech by Dr. K Nagaraja Rao, Senior Professor of Psychiatry on the origins of Mental Health Day Activities by World Federation for Mental Health. He also elaborated on the themes of each year till now.
- Dr. Sudarshan C.Y, Professor and HOD of Psychiatry moderated the group discussion. It focused on the path psychiatry has taken till now, the present state and the challenges ahead. Dr. Shamshad Begum, Professor,

Dr. Hemavathi, Senior Resident, Dr. Divya K, Dr. Murali, Dr. Harish, Dr. Varsha, Dr. Suhani, Dr. Ashwini, Dr. Tejesh, Dr. Aditya, Dr. Sneha were also present at the program. The program ended by a vote of thanks by Dr. Hemavathi.

Postgraduate activities

IPSKC QUIZ Post graduates from the Department of Psychiatry Dr. Vatsalya S Gowda and Dr. Divya K G participated in the PG Quiz organized by Indian Psychiatric Society Karnataka Chapter at Bagalkot on 8/03/2020 and bagged third prize

The following E- Papers were presented by Post Graduates at E-KANCIPS 2020 organized on 4th October 2020 by Sri Basaveshwara Medical College, Chitradurga

SI. No.	Title	Presenter	Guide	
1.	First Psychiatric Consultation during Covid-19 Lockdown	Dr. Harish K S	Dr. Sudarshan C.Y	
2.	Psychopathology in adults having intellectual disability	Dr. Ashwini Lad	Dr. Sudarshan C.Y	
3.	Prevalence of DSM-5 specifiers of MDD and their association with severity of depression and suicidiality	Dr. Angadi Varsha B	Dr. Anupama M	
4.	To study and assess functional and structural impairment of liver in alcoholic liver disease	Dr. Suhani	Dr. Anupama M	

DEPARTMENT OF GENERAL MEDICINE

A Guest Lecture on "AWARENSS & SENSITIZATION TALK ON COVID-19"by Dr.Vindhya.P, Associate Professor of Pulmonary Medicine, JJMMC, Dvg. & Dr. Girish. M.S, Asst. Surgeon C.G Hospital, Dvg. was held on 17th March 2020 at Bapuji Medicine Department Seminar Hall. The Session was chaired by Dr. K.V. Chandrashekar, Professor & HOD of General Medicine, JJMMC, DVG.

Publications

1) Dr. Manjunath M, Dr. Gosavi Siddharth, Dr. Patre Rachita Dutt, "A Case Report of Small Round Cell Tumour in Paraspinal Region in HIV", International Journal of Science and Research. Volume 8 Issue 6, June 2019, 1711 - 1715

2) Dr. Gosavi Siddharth, Dr. Samarth Sangamesh, Dr. Amogh Ananda Rao, Relationship of Night time Blood Pressure with Urine Microalbumin Creatinine Ratio in Non-CKD Patients, Journal of Medical Science and Clinical Research. JMSCR Vol||08||Issue||02||Page 842-844||February 2020. 3) Gosavi S, Pradeep TV, Rao AA, Davis S, Pulavarti B, Vaishnav PP. Effect of Haemodialysis on QTc in Newly Diagnosed Chronic Kidney Disease Patients, Journal of Clinical and Diagnostic Research. Year: 2020 | Month: October | Volume: 14 | Issue: 10 | Page: OC15 - OC17-indexed in DOAJ

4) Malthesh MK, Gosavi S, Shastry S, Rajesh R, Vaishnav PP, Maruthi K. Relationship of Acute ST-Elevation Myocardial Infarction with hs-CRP and Serum Iron Profile in Southern India: A Cross-sectional Study, Journal of Clinical and Diagnostic Research. Year: 2020 | Month: November | Volume: 14 | Issue: 11 | Page: OC05 - OC08-indexed in DOAJ

5) Raaju UR, Gosavi S, Sriharsha K. Allopurinol: Sorrow to the marrow. J Family Med Prim Care. 2020 May 31;9(5):2511-2513. doi: 10.4103/ jfmpc. jfmpc_249_20. PMID: 32754532; PMCID: PMC7380764. PUBMED





6) Shastry S, Rajesh R, Sangamesh S, Siddharth G. Hepatitis A: A refreshing perspective through a rare symptom in a teaching hospital in south India. J Family Med Prim Care. 2020 Jul 30;9(7):3749-3752. doi: 10.4103/jfmpc.jfmpc_549_20. PMID: 33102363; PMCID: PMC7567288. PUBMED

7) Siddharth G, T v Pradeep, Rao AA. What Haemodialysis Does to QTC in Patients with Newly Diagnosed Chronic Kidney Disease? J Assoc Physicians India. 2020 Jan;68(1):74. PMID: 31979730. PUBMED

8) Siddharth G, Sangamesh S, Rao AA. Relationship between Nighttime BP and Urine Microalbumin to Creatinine Ratio. J Assoc Physicians India. 2020 Jan;68(1):77. PMID: 31979754.PUBMED

Simple ways to boost immune system

- 1. Foods to include in your diet
- Garlic & Onion
- Turmeric & Black Pepper
- Jeera & Ajwain
- Tulsi
- Star Anise, Neem, Pumkin Seeds,
- Foods Rich In Vitamin C Like Amla ,Lemons
- Sweet Potatoes, Pumpkin, Moringa

2. Movement activity: exercise, yoga, walking, skipping, body weight Exercise

3. To boost good health- foods rich in probiotics like rice ganji etc. probiotics like garlic, bananas, apple cider vinegar, apple etc..

4. Minerals-zinc & selenium (pumpkin seeds, brazil nuts)

DR.K.V.CHANDRASHEKAR Professor & H.O.D

COVID LONG HAULERS

In this era of Covid-19; millions of patients have recovered from Covid-19 infection, but it has been found that this recovered people suffer from various symptoms many weeks or even month after recovery it is also being called as "post -covid syndrome" Common persistent symptoms includes cough, fever, joint pain, myalgia, dyspnea, fatigue, GI symptoms

In a study conducted by a Angelo carfi et.al published in JAMA, it was found that 87.4% of recovered patients reported persistence of at least one symptom, particularly fatigue and dyspnoea were the commonest.

Further studies regarding long term complications of Covid-19 is needed.

Dr. SuhasDr. K.V ChandrashekarPost Graduate General MedicineProfessor & H.O.D

DEPARTMENT OF NEONATOLOGY

1. Dr.G.Guruprasad , Prof & HOD

- Delivered a webinar talk on "Art of Newborn examination " in Karnataka state Neonatology Forum (NNF), during April 2020.
- Moderated a session on "Recent advance in Neonatology which has changed our clinical practice" during July 2020,organised by Indian Academy of Paediatrics (IAP) India in webinar series.
- 3. Moderated a session on ' Neurodevelopment follow up clinic for High Risk infants ' on 20th Oct, 2020, organised by Indian Academy of Paediatrics. Karnataka state chapter .
- ⁴ Published original Research paper "A Prospective study of BERA in high risk NICU graduates in a tertiary care center ".in International Journal of scientic Research in Feb 2020.
- Published original article In Reproductive Health (BMC) journal 2020 17:120 http//doi.org/ 10.1186/ s12978-020-00969-w) "A comparison of MITS counselling and informed consent process in Pakistan ,India ,Bangladesh ,Kenya ,and Ethopia ".

2. Dr. Ashwini R.C , Associate. Professor.

- 1. Rejoined department after completion of DM Neonatology from PGIMER, Chandigarh.
- Participated in panel discussion in IAP webinar on 'Neurodevelopment follow up of High Risk Newborn / NICU graduate' on 20th Oct, 2020 & spoke on 'Developmental screening tools & types'.
- Published original research paper 'Correlation between early magnetic resonance imaging brain abnormalities in term infants with perinatal asphyxia & neurodevelopment outcome at one year' in International Journal of Contemporary Paediatrics [doi: http:/ldx.doi.org/10.18203/ 2349-3291.ijcp.2020.4002].



3. Dr. Chaitali R.R, Senior Resident,

1. Delivered talk on 'Common Neonatal Procedures' in Karnataka state Neonatology

Forum (NNF), on 5th July 2020.

- 2. Participated in panel discussion on "Immune Thrombocytopenic Purpura "organised by Bangalore paediatric society along with IAP blore on 19 Aug 2020.
- Published original Research paper "A Prospective study of BERA in high risk NICU graduates in a tertiary care centre ".in International Journal of scientific Research in Feb 2020.
- Published original article In Reproductive Health (BMC) journal 2020 17:120. http//doi.org/ 10.1186/ s12978-020-00969-w) "A comparison of MITS counselling and informed consent process in Pakistan ,India ,Bangladesh ,Kenya, and Ethopia ".

DEPARTMENT OF DERMATOLOGY

An overview of cutaneous manifestations in COVID-19: A cross sectional study of 115 patients Authors: Dr. Amrutha Hosalli, Dr. Nadiga Rajashekhar, Dr. Suga Reddy Abstract

Background: Coronaviruses are RNA viruses that have become major health problem since 2002 after the outbreak of SARS-CoV-2. Presently, world is worried about 2019 novel CoV (SARS-CoV-2).Various cutaneous manifestations has been described earlier. In our study, we would like to describe the cutaneous manifestations found in 115 COVID patients. Aim: To look for cutaneous manifestations in COVID-19 positive patients. Materials and methods: We studied 115 positive patients who were tested positive on throat swab examination by RT-PCR. Among which 75 patients complained of symptoms like dyspnoea, fever, arthralgia, myalgia. Results: Among the patients studied only 22 patients had cutaneous manifestations. Among which 12 patients had erythematous rash, 3 patients had vesicles, 3 patients had uticarial lesions, and remaining 4 patients had non specific symptoms like erosions, peeling of skin. P value in COVID-19 positive patients with skin lesions is 0.017 which tells that there is significant association of skin lesions with COVID-19 patients. Further studies are needed in this respect. Conclusion: Coronavirus is not dermatotropic virus, yet many studies have described cutaneous manifestations earlier.

But in our study we have found 14.6% of patients with cutaneous manifestations. Knowing about cutaneous manifestations helps in suspecting patients presenting to outpatient department which further helps in early diagnosis and preventing the spread.

Key words: cutaneous lesions, COVID-19 positive patients, overview

Introduction:

Corona viruses are posing serious health related concerns since long time. In 2002 severe acute respiratory syndrome corona virus (SARS-CoV-2) infected 8000 people with 10% fatality rate. Later again in 2012, middle east respiratory syndrome coronovirus (MERS-CoV-2) had infected more than 1700 people with 36% fatality(1). In December 2019 unexplained pneumonia cases were reported initially in Wuhan, China. The pathogen, a novel coronavirus named severe acute respiratory syndrome coronavirus 2 (SARSCoV-2), was isolated from lower respiratory tract samples of infected patients and the resultant disease was named as COVID-19 (Corona virus Disease 2019). By Feb 15, COVID-19 has spread rapidly throughout China and across the world, and was announced as a pandemic condition by March 11 (2)(3).

Materials and methods:

This is cross sectional observational study in which we included 115 patients, studied in the month of April and May 2020 who were in admitted in the COVID ward after testing for corona virus through throat swab and nasal swab by RT-PCR. Patients who presented to the outpatient department with complaints of fever, respiratory complaints like dyspnea, patients who had travel history from the areas declared red zone, and patients who found to be the contacts of positive patients after contact tracing were included for testing. All the patients admitted had undergone routine investigations. Detailed clinical history and examination was done to look for cutaneous lesions. Patient who developed skin lesions during the course of illness were noted. All the patients found to have skin lesions were treated symptomatically and with emollients as the skin lesions in viral illness are self limiting.



Results:

Out of 115 patients 68 patients were males and 47 patients were females. Age distribution of COVID patients is tabulated in table 1. Among 115 patients studied 75 patients were symptomatic and had viral prodromal symptoms like fever, arthralgia, myalgia and dyspnoea. Among which 3 patients were placed in ICU due to severe respiratory distress.

Skin manifestations were seen only in 22 patients(14%) out of which males were 12 and females were 10, age and gender distribution is tabulated in table 2. 9 of the 22 patients developed skin lesions simultaneously with other systemic symptoms. 5 patients had erythematous rash a day or two prior to the development of symptoms. Remaining 4 patients developed lesions 2 -4 days after development of symptoms (table 3). All the patients who had developed lesions had other systemic symptoms as well.

Among 22 patients 12 patients had erythematous rash, among which majority of patients has diffuse rash mainly present over trunk (figure 3) and over trunk and proximal part of lower limb is seen in 2 patients. 3 patients had vesicles (varicella like lesion). 3 patients had urticarial lesions (figure 4), among these 1 patient had wheals all over body. And remaining 4 patients had remaining non specific symptoms like erosions, peeling of skin(figure 5)(table 4). We have tried to take as many pictures as possible, but some pictures couldn't be taken due to precautionary measures. Among 20 symptomatic patients, 17 of them had got skin lesions cleared before discharge. Patients were discharged after throat swabs were tested negative.

P value when calculated for COVID-19 positive and negative patients using Pearson correlation, it was found to be 0.017 and 2.505 respectively which tells that the skin lesions found in COVID-19 positive patients had significant association. Furthur studies are needed in this aspect. Coronovirus is not a dermotropic virus, yet skin lesions are seen in17.6% of patients, further studies are needed even in this aspect to looh for pathogenesis.

Discussion:

The first case of SARS-CoV-2 infection, also known as the Corona virus Disease of 2019 (COVID-19) was reported in December of 2019 in Wuhan, China (4). Later, Severe acute respiratory syndrome corona virus 2" (SARS-CoV-2) has spread over the four continents, causing the respiratory manifestations of Corona virus disease-19 (COVID-19) and

was labelled pandemic on March 11 (3). SARS-CoV-2 being a respiratory disease mainly spreads through respiratory secretions, droplets and through direct contact for a low infective dose (1). Presence of SARS-CoV-2 in fecal swabs and blood, indicates routes of transmission may be multiple(1). Due to this ongoing SARS-CoV-2 pandemic there is a huge impact on dermatological practice including the marked decrease in face-to-face consultations and there is increase in favour of teledermatology (3). Common symptoms seen are fever, fatigue, cough, and shortness of breath. Although many cases result in mild symptoms, it is estimated that around 5% of patients develop severe pneumonia and multiorgan failure (5). COVID-19 has affected more than 135 countries and this number is still expected to rise futhur (6)

The prevalence of cutaneous signs reported in association with this pandemic is conflicting; one study reported a rash in only 0.2% of a cohort of Chinese patients, whereas in a cross sectional Italian study the estimated prevalence was 20.4%, compared to 14.6% in our study. It might not be possible to determine exact prevalence of skin findings in infected patients unless serologic testing is more widely available(7). COVID-19 does not have epidermotropism, even then cutaneous manifestations in CoV-19 positive patients have been reported(8) . Cutaneous manifestations may be due to small vessel occlusion which need to be further studied.(1)

In a study conducted C. Galvan Casas et al in spain they have classified cutaneous lesions into Acral areas of erythemaoedema with some vesicles or pustules (pseudo-chilblain) in 19%, vesicular eruptions (9%), Urticarial lesions (19%), Other maculopapules (47%), Livedo or necrosis (6%). Similar findings were seen in study conducted in Italy by Recalcati s et al described 18 out of 88 COVID-19 patients hospitalized in the Lecco Hospital , Italy developed erythematous rash (n=14), widespread urticaria (n=3) or varicella-like vesicles (9)

In a study they have found oral lesions presenting as multiple ulcers(10). Adrien Sanchez et al also reported digitate papulosquamous eruption(5). S recalcati et al demonstrated acral lesions, mostly in children suggesting acral lesions could be late manifestations of the disease and children could be the facilitators of the viral transmission. (11). During the Italian outbreak, they have observed a varicella-like papulovesicular exanthem as a rare but 58 specific COVID-19-associated skin manifestation(12). Joob et al. reported on a dengue-like petechial rash in a COVID-19 patient from Thailand. (13)

Compared to study elsewhere of European countries, we have found that patient had mild illness, and also skin lesions were also not severe. The main purpose of the study is to find out if COVID -19 has any tell tale signs like that of slapped check appearance in case of parvovirus so that it could help in further help in diagnosing of cases early. And could also help in taking precautions at earlier stage and prevent further spread of disease. On the whole occurrence and severity of cutaneous manifestations may vary from region to region, initially cutaneous lesions were rare and the disease was also known to involve heart, kidney, lung, vasculature and liver. Later on skin lesions started to occur and could be due to iatrogenic secondary infection. (1)

Skin lesions in health workers may be also due to hyper hydration, friction due use of personal protective equipment, occlusion protective hats may produce folliculitis, pruritis and exacerbate seborrhea dermatitis. And use glove for long duration and sweating which creates wet environment may lead to hand dermatitis. Most common site affected is nasal bridge due to use protective goggle. And most common skin changes reported are erythema, papules, scaling and maceration. (1)

Although less number of patients are seen with the skin manifestations, this could be of significant help if even asymptomatic patients with just specific skin lesions are tested for coronavirus, who wouldn't have been tested otherwise. Hence this study was conducted to see specific cutaneous markers. As erythematous rash, vesicles and urticarial lesions were found in most studies, we recommend patients presenting with these lesions for the first time even without systemic symptoms until this pandemic ends could be tested.

Conclusion:

SARS-CoV-2 has become the major health since recent times. As skin the index of much systemic disease, this could the same in case of COVID-19. Certain skin lesions could be found specific for the disease which further help in early identifying of the disease and hence which may also help to end the pandemic early. More number of studies are needed to found specific lesions.

Declaration

The authors certify that they have obtained all appropriate patient consent forms. In the form the patients has/have given his/her/their consent for his/her/images and other clinical information to be reported in journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity can be guaranteed. Table 1: number of COVID positive patients and non -COVID positive patients in particular age group

	· ·	
Age group	Number of patients	Number of COVID Positive patients with skin lesions
1-10 years	11 (9.5%)	2
11-20 years	26 (21.7%)	1
21-30 years	20 (19.1%)	6
31-40 years	26 (28.6%)	5
41-50 years	12 (10.4%)	2
51-61 years	6 (5.2%)	2
61-70 years	6 (5.2%)	4
Total	115	22

Table 2: Distribution of COVID-19 positive patients across different age group and gender.

SI. No.	Age distribution	Number of COVID-19 positive patients with skin lesion		Total
		Male	Female	
1	1 to 10	2	0	2
2	11 to 20	0	1	1
3	21 to 30	4	2	6
4	31 to 40	3	2	5
5	41 to 50	1	1	2
6	51 to 61	0	2	2
7	60 and above	2	2	4
	Total	12	10	22

Figure 1: Distribution of number of covia positive patents with skin lesion across different age group and gender

Table 3: Pattern of occurrence of lesions with respect to systemic symptoms

Pattern of occurrence of skin lesions with respect to systemic symptoms	Number of patients
1.Skin lesions occurring simultaneously with systemic symptoms	11
2.Skin lesions occurring prior to systemic symptoms	5
3.Skin lesions occurring after systemic symptoms develop	4
4 skin losions in asymptomatic patients	2

skin lesions in asymptomatic patients





Table 4: Number of patients with particular type of lesion and number of lesions with severity

Type of lesion	Number of patients	Number patients with severe skin lesions
1.Erythematous rash	12	2
2.Vesicular lesion	3	-
3.Urticarial lesion	3	1
4.Non specific	4	-



DEPARTMENT OF OTORHINOLARYNGOLOGY

SMELL AND TASTE DISTURBANCES IN COVID-19 INFECTIONS

DR. K.P. BASAVARAJU(PROF & HOD OF ENT), DR. PRATHVI P. NAYAK(2ND YR PG IN ENT)

INTRODUCTION:

COVID-19 is a type of upper respiratory tract infection caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) with symptoms ranging from mild to severe respiratory disease. It can present with symptoms like fever, arthralgia, malaise, dry cough, shortness of breath, nausea, vomiting and diarrhoea. These patients can also have ENT complaints like rhinorrhoea, nasal obstruction, sore throat, sudden onset of hyposmia or anosmia and dysgeusia or ageusia. In some studies, it was noted that sudden onset taste and smell dysfunction may present as first symptom of the disease and it may be present even before molecular confirmation of the disease.

As smell and taste dysfunction has been found to be one of the early symptoms of the disease, it can be used in early diagnosis of the same. Diagnosing COVID-19 disease early using these symptoms can be of great help for ENT surgeons, who are at high risk of exposure.

MECHANISM OF ACTION:

In COVID-19, the mechanism involved for the development of anosmia and ageusia is not been confirmed yet. But many theories have been speculated.

Anosmia caused by a viral infection is incredibly common. Normally, a viral infection causes nasal obstruction which hinders odour molecules from interacting with olfactory receptors, resulting in inability to smell. This is usually temporary. But the researches done have shown that the mechanism involved in COVID-19 is due to different interaction. Recent papers suggest that COVID-19 primarily targets a protein known as ACE2, or angiotensin-converting enzyme 2. It uses this protein along with a specific protease TMPRSS2 to bind to cells, enter them and then replicate. This specific ACE2 protein is not expressed on the olfactory sensory neurons and so these cells are not vulnerable. But they have been found in other olfactory cells like sustentacular cells. Hence these cells get damaged which leads to secondary inflammation of olfactory neurons leading to temporary anosmia.

Dysgeusia or ageusia caused by COVID-19 is also speculated to have similar mechanism to that of anosmia. Like the olfactory epithelium, the epithelium of taste buds and salivary glands has also been found to express the ACE2 protein. However, the exact mechanism is not yet confirmed.

SURVEY:

A survey was conducted by Department of Otorhinolaryngology in Bapuji Hospital regarding taste and smell dysfunction in COVID-19 positive patients. In this study, we included 100 patients who were tested positive for the disease with RT-PCR testing. Commonly used items like cardamom, soap, talcum powder, cinnamon, onion, mango, rose, paint thinner, lemon and orange were used for testing smell perception. Score of 1 for every correct answer and 0 for wrong answer was given. Less than or equal to a score of 4 was diagnosed as hyposmia and less than or equal to 1 as anosmia. Score more than 4 was considered as normosmia. Taste perception was examined using solutions of different tastes, salty, sour, bitter and sweet. Two or more wrong answer was considered abnormal.

In this survey, we found 25 patients to have smell dysfunction and 21 patients to have taste dysfunction. In these, 15 patients had both taste and smell disturbance, whereas 10 patients presented with isolated smell disturbance and 6 with isolated taste disturbance.

60% of patients with smell disturbance presented with hyposmia and the remaining with anosmia. No patients had complaints of parosmia. 67% of patients with taste disturbance had hypogeusia, 24% had ageusia and 9% had dysgeusia.





Majority of these patients had gradual onset of symptoms. Some patients even noticed decrease in the progression of these symptoms suggesting that it might be temporary dysfunction.



CONCLUSION:

31% of the tested subjects were found to have either olfactory or gustatory dysfunction. Many of these had this as one of the earliest symptom, presenting even before testing. This can be made use of by doctors, specifically ENT specialists for early diagnosis and management of COVID-19. And by taking extra precautionary care while handling these cases in OPD, doctors can avoid exposure risk to a great extent.

As this survey did not include follow up of the patients, duration of these symptoms couldn't be assessed. But it has been studied by other researchers that both olfactory and gustatory dysfunction caused by COVI-19 is temporary. It has been found that the symptoms start to subside by 8th day of disease.

Re-emergence of COVID-19 disease in many cities in India, necessitates more research regarding early diagnosis and treatment to tackle the disease. Looking out for early symptoms and signs of the disease will further aid in the disease spread control.

DEPARTMENT OF SURGERY

Case report of hydatid cyst of liver with intraperitoneal extension managed with laparoscopic pericystectomy.

Presenter-Dr Manjunath s Nayak Pg General surgery

Guide- Dr Prakash MG Professor of general surgery, jjmmc

Hydatid disease is parasitic infestation caused by tapeworm echinococcus granulosus. It can affect multiple organs. The liver(75%) and lungs (15%) are the most common sites of occurrence. Here we are presenting a 26 yr old female patient with hydatid cyst of liver with intraperitoneal extension managed with laparoscopic pericystectomy combined with preoperative and post operative antihelminthic therapy.

A 26 yr female presented with pain in left side of abdomen since 3 months. Pain was dull, non radiating with no aggravating or relieving factors. There was no history of fever and vomiting. On per abdomen examination there was tenderness in left lumbar region but no palpable mass was present.

USG abdomen and pelvis showed presence of hydatid cyst in left lumbar region, cect abdomen and pelvis showed four intraperitoneal hydatid cyst largest measuring 16.5 x 12 cm in the left side of peritoneal cavity related closely to left lobe of liver. Other three cystic lesions were of 4 cm in size and were located in pelvic cavity. All blood investigations were under normal limits.

Patient was started on albendazole 400mg bid for 2 months and was asked to review after 2 months. Review cect abdomen and pelvis showed largest cyst of 11 x 8cm, there was significant resolution of size, loculations and enhancement of walls. Laparoscopic pericystectomy was planned.









Cect abdomen done before giving albendazol





Cect abdomen after a course of albendazole

Patient put in supine position, ports placed. Cyst of 15x 15cm is arising from left lobe of liver extending to the anterior wall of stomach and adhered to greater omentum. One more cyst of 5x5 cm noted in pelvic cavity along with left adenexal cyst. Cyst wall separated from omental adhesions, anterior wall of stomach and left lobe of liver with the help of harmonic device. Cyst wall opened, hydatid fluid aspirated and daughter cysts removed. Complete pericystectomy done. Cyst wall along with its remaining contents is retrieved in a sterile bag without spillage. Intraabdominal drain placed below left lobe of liver. Intraoperative period was uneventful.



Separating cyst wall from left lobe of liver



Cyst wall being removed



Patient was allowed orally on pod 1, tolerated orally, intraabdominal drain was removed on pod 3 and discharged. Suture removal done on pod 10. Albendazole 400mg bd continued for 3 months. Histopathologically presence of hydatid cyst confirmed. Cect abdomen done after 3 months showed no evidence of recurrence.

Conclusion: Hydatid cyst was commonly approached through open surgical exploration. Since successful laparoscopic pericystectomy done for for the first time in our institution, we are reporting this case.



COVID-19 TRAINING













ATTENTION PLEASE

The submission for the next issue January 2021 of the News letter should be done before 10th January 2021. All the Photos should be in JPEG format. Please send the copy of the material in the form of soft copy as well as hard copy through the department co-ordinator within the stipulated time and cooperate.

TEACHERS DAY CELEBRATION





