

## The Role of Ozone Therapy as Adjuvant in the Management of Covid-19 in Indonesia

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## Indonesian Demographics (year 2023):



- Located in Southeast Asia
- The area is similar to the whole Europe
- National Capital: Jakarta
- Number 4 most populated country in the world (after China, India, USA)

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## Indonesian Demographics (year 2023):

### BALI



- Population = 281,911,465 peoples
- Male vs Female = 50.20% vs 49.80%.
- The total area = 5,193,250 square kilometers
- Consisted of 1,919,440 square kilometers land and 3,272,820 square kilometers sea
- Indonesia is archipelago country with 17,001 islands

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## The Famous Tourist Spots

### The Biggest Buddhist Temple in TheWorld: Borobudur Temple



### Komodo Island – Labuan Bajo, NTT: Komodo Dragon



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## Indonesian Medical Ozone Association (IMOA / PERTOZI), in 2023

- Founded in 1994. Has 271 member of Medical Doctors, from 45 cities in Indonesia
- Has National Guideline on Ozone Application
- National Congress every 3 years
- International Seminar and Workshop for M.D and Nurses, with the the invited speakers:
  - Dr. Renate Viebahn-Hänsler
  - Dr. Dortswitz
  - Dr. Med. Michael Schreiber
  - Prof. Dr. Med. Ziad Fahmy

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## The Indonesian Central Police Bhayangkara Hospital

- Bhayangkara Hospital  
(Dr. R Said Soekanto) Hospital
- Total area: 3.62 hectares
- Referral hospital  
for other 64 police hospitals in Indonesia
- Total : 1118 Beds



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## The Indonesian Central Police Bhayangkara Hospital

- Total health workers = 1.408 people
- Number of health workers who handle covid-19 patients = 640 people
- Number of health workers who died = 2 people
- Total number of covid-19 patients : 13.287 people

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## Introduction

- The Covid-19 Pandemic in Indonesia happened since the first March 2020 until December 2022
- Increasing numbers in morbidity and mortality had caused collapse of many hospitals due to:
  - Too many patients
  - Lack of oxygen supply
  - Insufficiency and uncertainty of Covid-19 drugs and supplies
  - Unpreparedness of health workers

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## IMOA and Police Hospital Collaboration

- Indonesian Medical Ozone Association (IMOA / PERTOZI) has proposed two programs to give contribution to society
- By collaboration with The Indonesian Police Central Bhayangkara Hospital (R Said Sukanto Bhayangkara Hospital) in Jakarta, IMOA prepared to help Covid-19 management in the hospital through Ozone therapy, because they opened for the innovation in Covid-19 management.
- The rational: Ozone will help Covid-19 management through its effects
  - Virucidal effect
  - The ability to reduce inflammation
  - The ability to increase blood oxygen concentration

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## IMOA and The Indonesian Police Central Bhayangkara Hospital Collaboration

The main purpose of collaboration:

- To enhance the immunity of doctors and paramedics
- To give ozone therapy as adjuvant therapy to the Covid-19 patients

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## Stakeholders of the Programs



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## Meeting to discuss about the research



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## Materials and Methods

- Ethical clearance were asked to the Hospital Ethical Board
- PROGRAM 1 (September – December 2020):
  - Training on Medical Doctors and Nurses in the application of MAH and Rectal Insufflation Ozon procedures
  - Examination of G6PD before ozone administration
  - Give MAH and Rectal insufflation to 25 Medical Doctors and 123 Nurses, for 5 consecutive days to increase their immune system to Covid-19
- PROGRAM 2 (February 2021 - March 2022):
  - Case: Rectal Insufflation ozone therapy to 680 hospitalized mild to moderate severity Covid-19 patients, as adjuvant to Covid-19 Protocol
  - Control: others Covid-19 patients with Covid-19 Protocol
  - Informed consent were asked to the patients before the ozone therapy



## Why the rectal insufflation technique?

- Time efficiency (approximately 5 minutes): to protect health workers by shortening the exposure to Covid-19
- Scientifically effective to enhance the oxygen saturation
- Easy application
- Cost effective
- Efficacy of ozone rectal insufflation therapy is the same as MAH (Major Autohemotherapy)



## Health Workers in charge



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## Ozone Regiments

- For MAH Ozone Therapy:
  - Twice a week, 1.500 µg each, for 5 times
- For Rectal Insufflation Therapy:
  - Day 1 : 30 µg/mL x 100 ml (totally, 3,000 µg)
  - Day 2 to 5 : 30 µg/mL x 200 ml (totally 6,000 µg)

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## Medical Supplies

### MAH Disposable



### Rectal Disposable



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## Application of Ozone Therapy

### Major Autohemotherapy (MAH)



### Rectal Insufflation



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## Collaboration of IMOA and Police Central Hospital



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## The Ozone Machine



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## Coordination Meeting



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## Results and Discussions

### Program 1: Sept 2020 – Des 2020

- All participants were very happy, that they were supported for their work handling the Covid-19 Patients
- Just after Ozone administration they experienced a freshness and healthy
- The women with fluor albus and get Vaginal insufflation recovered soon
- During the Pandemy, they felt more immune to Covid-19, rather than the others who did not get Ozone: None of them were subject to COVID-19 infection during the Pandemy

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## Program 2 : Feb 2021 - March 2022

- All the patients experienced a rapid increase
  - In oxygen blood saturation
  - A significant reduction of dyspnea
  - More energized
  - Rapid disappearance of anosmia, ageusia and insomnia
  - The fast conversion of PCR positive to negative (only 3 to 5 days after initial ozone therapy)
  - The duration of hospitalization was reduced significantly to only 5 days ( vs 14 days in non-ozone patients)
- No side effects were found during and after ozone administration
- Cost effective: only need additional cost of 20 USD/patient

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## Conclusions

- The application of Major Autohemotherapy (MAH) or Ozone Rectal insufflation to health workers were effective in supporting the immunity to Covid-19 management.
- The application of Ozone Rectal insufflation as adjuvant therapy for Covid-19 patients can effectively fasten the recovery of the patients from the symptoms, reduce hospitalization time, safe, and cost effective
- MAH of 1.500 µg, twice a week for 5 times is sufficient for the immunity of health workers
- The recommendation of rectal insufflation for Covid-19 adjuvant therapy is 3.000 µg for the first day and 6.000 µg for the next 4 consecutive days

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**Thank you for being a partner  
in Covid-19 management**



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**THANK YOU FOR YOUR ATTENTION**

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### **ACKNOWLEDGEMENTS**

- Indonesian Police Central Bhayangkara Hospital
- PT Sigi Seminau

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