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COVID-19 and its impact on neurosurgery: our early experience in Lombok Island Indonesia

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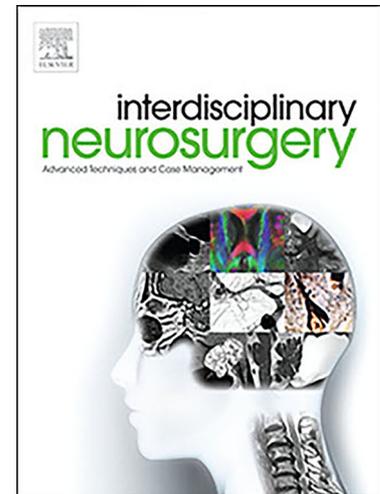
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Editorial. COVID-19 and its impact on neurosurgery: our early experience in Lombok Island Indonesia

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As of 17 May 2020, a total of 4 525 497 people have been reported confirmed for coronavirus disease (COVID-19) globally. Among these, there have been 307 395 deaths reported related to COVID-19. As of 17 May 2020, the Government of the Republic of Indonesia has reported 17 520 persons with confirmed COVID-19. There have been 1.148 deaths related to COVID-19 reported and 4.129 patients have recovered from the disease.¹ Confirmed cases have been reported all throughout the archipelago, with local transmissions occurring mainly in the island of Java, specifically in the country's capital city of Jakarta, West Java (Bandung City, Bekasi City, Bekasi Regency, Bogor Regency, Bogor City, Depok and Karawang Regency), Central Java (Semarang, Solo), Banten (Tangerang City, Tangerang Regency and South Tangerang), and East Java (Malang Regency, Magetan Regency, Kediri Regency, Sidoarjo Regency, and Surabaya). Outside of Java, the areas with local transmissions are North Kalimantan (Bulungan Regency, Malinau Regency), South Kalimantan (Banjarmasin), West Kalimantan (Pontianak), Central Kalimantan (Palangka Raya), East Kalimantan (Balikpapan), North Sulawesi (Manado City), South Sulawesi (Makassar City, Gowa Regency, Maros Regency), Southeast Sulawesi (Kendari), North Sumatra (Medan), South Sumatra (Prabumulih), West Sumatra (Bukit tinggi city, Padang city, Pesisir Selatan Regency), Riau (Pekanbaru), Bali (Denpasar City, Buleleng Regency, Bangli Regency, Jembrana Regency, Gianyar Regency, Karangasem Regency, Klungkung Regency), West Nusa Tenggara (Mataram City, West Lombok Regency, East Lombok Regency), and Papua (Mimika Regency, Jayapura City).^{1,2,3}

The Indonesian government has taken numerous measures to respond to the COVID-19 pandemic. President Joko Widodo has declared the COVID-19 pandemic a National Non-Natural Disaster. The declaration, amongst others, allows the government to invoke certain powers, such as relaxing the ease of entry for international aid, as well as to generate or allocate funds from the state coffers to combat the national disaster. In a press conference, Jakarta Governor Anies Baswedan has declared a citywide status of PSBB (*Pembatasan Sosial Berskala Besar* or Large Scale Social Restriction). The declaration followed the approval from Health Minister Terawan Putranto of the city's administration request for the status, as stipulated in Health Minister Decree HK.01.07/MENKES/239/2020 issued on April 7. In some areas, it has also been implemented according to the recommendation of the Minister of Health.^{2,3}

In West Nusa Tenggara the modification of this PSBB applies to the strict per-area restrictions. the number of Covid-19 positive patients in West Nusa Tenggara Province to date (May/17/2020) is 371 people, with details of 232 people have recovered, 7 (Seven) died, and 132 people are still positive and in good condition. In West Nusa Tenggara there are 8 covid 19 virus spread clusters, namely Jakarta 1 cluster (people who travel to Jakarta), Gowa cluster (people who follow ijtima ulama tabligh worshippers), Bogor cluster (pastors returning from Bogor after the conference), overseas clusters (crews from overseas), Magetan Cluster (santri from pondok pesantren in Temboro magetan), Sukabumi Clusters (Sukabumi Police Academy), Jakarta Cluster 2 (from a guide) and there are no clusters yet. at this time in West Nusa Tenggara it was determined that there was local transmission. To prevent transmission and early detection of Covid-19 transmission, health care workers continue to contact Tracing all people who have contact with positive confirmed.⁴

West Nusa Tenggara is a province of Indonesia. It comprises the western portion of the Lesser Sunda Islands, with the exception of Bali which is its own province. Mataram, on Lombok, is the capital and largest city of the province. The 2010 census recorded the population at 4,496,855; the latest estimate (for January 2014) is 4,702,389. The province's area is 19,708.79 km². The two largest islands in the province are Lombok in the west and the larger Sumbawa island in the east, with only a few medical services and hospitals that have Neurosurgery facilities, there are five hospitals that have neurosurgery services, 1 government hospital and 4 private hospitals with two neurosurgeons in West Nusa Tenggara Province.⁴

Equipping and Preparing Our Healthcare Workers

Nusa Tenggara Barat is a red zone of Covid 19 deployment and our hospital is the main referral center for covid patients for both diagnostic and management, so all healthcare workers are given protection according to the level of their workspace and adjusted to WHO recommendations. Only constraints during this pandemic, self-protection equipment is limited and the price is expensive and rare, so its use is adjusted to the work area. All medical personnel who come to the hospital are checked for body temperature at the hospital entrance, then they are required to change clothes with hospital work clothes, must wash their hands every time they examine the patient, wear protection according to the work area, including face shields, eye protection, and N95 mask, if needed with protective clothing with total coverage. If the medical person has close contact with a covid patient, a rapid test will be followed by a nasopharyngeal swab if reactive.

Neurosurgical Coverage Across Multiple Campuses

Under National Non-Natural Disaster, movement of consultants between hospitals was restricted. Manpower planning took into consideration emergency cases for tertiary hospitals, while the regional hospitals focused primarily on trauma and spine and stroke. However, depending on the urgency for surgery and the patient's stability for transfer, patients requiring specialized treatment would either be transferred to a tertiary hospital, or a consultant would be activated to perform the surgery in a regional hospital. This is reviewed on an individual case basis. Before interhospital transfer of patients, consultation with the infectious disease team and approval from the hospital's senior staff management is mandatory.

Impact on Neurosurgery Service

Elective surgeries are put on hold. Surgeries are reviewed by neurosurgeons and non-urgent cases are postponed. Emergency Cases can proceed in emergency operating theater. Semi-urgent cases can proceed, subject to the availability of operating theater staff and anesthetists. However, keeping in mind the unavoidable backlog of elective cases, non-urgent cases are reviewed weekly, and these surgeries are performed when possible. Cases not requiring a prolonged intensive care unit (ICU) stay are prioritized.

In West Nusa Tenggara Province, a 14-day isolation period was imposed on persons travelling from countries or others region with COVID-19. All emergency patients are judged to have risk factors that lead covid or not, if not suspicious towards covid, do not do swabs, if there is suspicion mandatory rapid tests and swabs before decisions are taken. In the outpatient setting, specialist appointments were reduced to the minimum. Patients are screened 1 week before, and non-urgent appointments are postponed. Scans already performed are reviewed and phone consultation initiated with these patients. Patients can prescribe large amounts of the drug from the pharmacy so as not to go to the clinic during this pandemic. In solidarity with all healthcare workers, as the number of suspected cases increased, our neurosurgery staff, volunteered in COVID-19 taskforce and the forefront screening centers to help screen suspected COVID-19 cases.

Education and Meetings

With restriction of interhospital movements, our department tapped into video conferencing for continuation of departmental Meetings, Young doctor tutorials, OSCE Examination, and journal clubs. Physical distance is maintained by ensuring a group of fewer than 5 are present in the room each time.

Maintaining Hygiene Practices and Morale

The pandemic audit tool, encompassing personal protective equipment, hand hygiene, and environmental audits, is performed regularly to ensure consistency in hygiene practices. Peer support and welfare groups were formed to provide morale support for our staff—a priority—with helplines for easy access. Initiatives such “spiritual and motivation care packs” served as morale boosters, especially during pandemic times.

Conclusions

This COVID 19 pandemic has entered an epidemic phase in West Nusa Tenggara. The war on Covid has been fought since the Pre-Case or Alert Phase. This pandemic is changing the neurosurgical service system in West Nusa Tenggara. In Medical Services, it is necessary to disclose information and data about the pattern of cases and their dissemination to facilitate intervention. Moral and material support needs to be given to all medical personnel in the fight against the covid 19 pandemic.

Disclosures

The authors report no conflict of interest.

Reference

1. WHO. Novel Corona Virus. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
2. AHK. **COVID-19 developments in Indonesia.** <https://indonesien.ahk.de/id/infocenter/berita/berita/covid-19-developments-in-indonesia>.
3. Kemenkes RI. COVID-19. <http://pusatkrisis.kemkes.go.id/covid-19>
4. Pemprov NTB. COVID 19. <https://corona.ntbprov.go.id/>

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Conflict of Interest.