



Fig. 1. Personal protection equipment (PPE) should be used by medical personnel in the endoscopy ward.

respiratory route during routine practice. Isolation of all patients and strict use of PPE should be observed to reduce the disease burden. In the context of the COVID-19 pandemic, unidentified cases should be detected by implementing more precaution guidelines. For gastrointestinal specialists in endoscopy wards, we highly recommend that they wear at least surgical mask and glasses during clinical visits and that they wear a N95 mask, glasses, a face shield, and latex gloves (not vinyl gloves) during endoscopic procedures.

Knowledge of coronavirus disease 2019 (COVID-19) by medical personnel in a rural area of Thailand

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To the Editor—Coronavirus disease (COVID-19) is a new respiratory infection that is a global public health problem; as of February 28, 2020, it had already caused disease in >60 countries. After it first appeared in China,¹ Thailand became the second country where COVID-19 occurred.² Presently, COVID-19 is under surveillance in Thailand. Even after several attempts to control the disease, both imported cases and local transmissions still occur.³ Based on the knowledge, attitude, practice (KAP) theory, good knowledge is necessary for successful disease control. Here, we report the results of a questionnaire on knowledge of COVID-19 administered to medical personnel in a rural area of Thailand. The setting is the Nang Rong district, a rural region of Thailand in Buriram Province, ~410 km from Bangkok and adjacent to Cambodia.

Briefly, a 10-question questionnaire (Table 1) was used to test the overall knowledge of 124 medical personnel (42 males and 82 females;

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Table 1. Study Questionnaire

The sentence regarding COVID-19 is correct or not correct:

1. This disease is a respiratory disease.
2. Eating bats can cause this disease.
3. Soap can kill this pathogenic virus.
4. The incubation period of this disease is only 7 days.
5. Anyone who has not traveled to China has no risk for this disease.
6. All patients have fever.
7. All patients have a cough.
8. Some patients might have diarrhea.
9. Specific antiviral drugs are available.
10. A vaccine for prevention of this disease is available.

average age, 36.7 ± 7.9 years) working in the study area (5 physicians, 81 nurses, 20 nurse assistants, 12 public health workers, and 6 other medical workers). The average total knowledge score was 6.26 ± 1.42. We observed no association between the total knowledge score and sex or age, but there was a significant association between total knowledge score and type of medical personnel. Many medical personnel still have a low level of overall knowledge about COVID-19, despite the emergence of the disease in Thailand and after several public

health policies counteracting the outbreak have been implemented. Surprisingly, some physicians have a lower knowledge score than non-physicians. These data indicate the necessity to improve education about the new disease among medical personnel. Medical personnel also educate the local population regarding disease and precautions, and if medical personnel are not knowledgeable, disease control may not succeed.

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Corticosteroid use for 2019-nCoV infection: A double-edged sword

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To the Editor—A newly emergent coronavirus disease 2019 (COVID-19), first recognized in the city of Wuhan, China, in early December 2019, is a respiratory tract infection. On March 11, 2020, with >118,000 cases reported in 114 countries and nearly 4,291 deaths worldwide, this virus was labeled a pandemic by the World Health Organization (WHO).¹ Responding to the uncertain clinical progression of COVID-19 and the absence of any particular therapy with established efficacy, the medical and scientific communities are working to develop various therapies to achieve an effective cure for the COVID-19. Some physicians have suggested corticosteroids to treat COVID-19 as in previous outbreaks of severe acute respiratory syndrome (SARS) and the Middle East respiratory syndrome (MERS).

Although corticosteroid use has been reported in hospitalized patients with severe disease, contradictory evidence from the WHO regarding corticosteroid use in some viral illnesses suggests that this evidence is not definitive. In severe cases of COVID-19, complications (eg, pneumonia, acute respiratory distress syndrome, cardiomyopathy, arrhythmia, acute kidney failure, sepsis, and septic shock) can occur along with complications associated with prolonged hospitalization (eg, secondary bacterial infections). In severely ill patients with these complications, corticosteroids have been used widely.^{2–4} During a retrospective review in Wuhan Union Hospital,⁵ the efficacy of the early use of short-term corticosteroids was investigated and compared with a control group using the clinical record and chest computed tomography (CT) scans. Among these groups, one group was intravenously administered methylprednisolone at a dose of 1–2 mg/kg/d for 5–7 days. The results included the rapid return of body temperature to a normal and improvement in peripheral capillary oxygen saturation (SpO₂). Chest CTs showed improved absorption focus with methylprednisolone administration. Parallel to these reported observations, another Chinese study showed similar outcomes with early use of high-dose corticosteroids along with quinolone

in patients with severe acute respiratory syndrome coronavirus (SARS-CoV).⁶

Contrary to the aforementioned results, the current interim guidance from WHO on clinical management of severe acute respiratory infection when COVID-19 is suspected (released January 28, 2020),⁷ advises against the utilization of corticosteroids during this disease unless it is indicated for a comorbid clinical condition. The wide use of this drug in the management of SARS-CoV and the Middle East respiratory syndrome coronavirus (MERS-CoV) worsened the immune response and caused diffuse alveolar damage, even though it did suppress lung inflammation to some extent.^{8,9} In a review of observational studies on SARS patients with progressively worsening pulmonary conditions or abnormalities on chest X-ray, those administered corticosteroids showed no benefit but did show possible side effects such as steroid-induced psychosis and avascular necrosis. This review classified the treatment regimens as early treatments and rescue treatments administered in later stages of the disease progression.¹⁰ Russell *et al*¹¹ summarized the results of various case-control studies of SARS patients; they showed a higher incidence of psychosis with high-doses of corticosteroid administration, as well as diabetes, delayed viral clearance, and avascular necrosis. They also reported a delay in viral RNA clearance from the respiratory tract following corticosteroid administration in a MERS-CoV infection.¹¹

Considering these findings, no evidence exists to indicate that the use of corticosteroids will benefit patients infected with 2019-nCoV, and it could worsen their condition. In conclusion, we understand that the ongoing coronavirus pandemic is a challenging and unprecedented time for the world. Although few studies do suggest a potential role for the use of corticosteroids in COVID-19 treatment, the current literature does not provide any definitive evidence for or against their use. Thus the use of corticosteroid could be regarded as a double-edged sword. Corticosteroid treatment ought not to be utilized for the treatment of COVID-19 outside of a clinical trial, and caution should be exercised until further evidence regarding corticosteroid use specific to COVID-19 emerges. However, we recommend that clinicians proceed with extreme caution when administering corticosteroids, making it certain that the benefits outweigh the risks.

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