

## UGM Expert: Pay Attention to Dexamethasone Consumption

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Dexamethasone caused a furore worldwide after researchers in the UK announced the recovery of Covid-19 patients. They gave the Covid-19 patients standard Covid-19 therapy plus a low-to-moderate dose of Dexamethasone for ten days with a concentration of 6 mg / day). The 2,100 patients who recovered were Covid-19 patients and received oxygen therapy or using a ventilator (severe Covid-19 patients).

The Nature magazine website says that there will be no effect on the use of Dexamethasone dose to Covid-19 patients with the mild condition. Clinicians also commonly use other corticosteroids in Acute Respiratory Distress Syndrome (ARDS) by clinicians. The clinicians use the dose of corticosteroids as much as 2 mg/kg for 32 days for methylprednisolone (MP) or 100 mg / 24 hours for at least three days for hydrocortisone injection.

Pharmacist Ika Puspitasari, M.Sc., Ph.D, who is also a lecturer at the UGM Faculty of Pharmacy, said that Acute Respiratory Distress Syndrome (ARDS) is one of the indications of Covid-19 infection in severe level. Hence, patients need oxygen therapy and even ventilators. There are hazardous adverse effects from the use of corticosteroids. It applies to some kinds of corticosteroids medicines such as methylprednisolone, hydrocortisone or Dexamethasone. Therefore, the use of those medicines must be under strict doctor's supervision.



According to him, Dexamethasone is a hard drug of corticosteroids which has used for long in handling allergies and autoimmune diseases. The examples of autoimmune diseases are rheumatism and systemic lupus erythematosus (LES), cancer, pain and nausea, vomiting after surgery, adrenal insufficiency (Addison's disease), and Cushing's syndrome. Besides, Dexamethasone has a powerful anti-inflammatory effect because it can inhibit the enzyme phospholipase. It plays a role in inflammation and inhibits the release of vasoactive and chemoattraction factors. Other factors play a role in inflammation, namely interleukin (IL-1, IL-2, IL-3, IL-6) and TNF- $\alpha$ .

"Dexamethasone is also often misused. People sometimes added it to traditional herbal medicine for aching rheumatic pain without calculating the dose of Dexamethasone so that the community knows it as a sufficient herbal ache. Some herbs are illegal because they endanger the public and prohibited from selling," she explained at the UGM Campus on Monday (6/22).

Ika explained the review of the fate of drugs in the body showed corticosteroids lasted long in the body, specifically Dexamethasone is much longer, namely up to 54 hours. Therefore, the use of Dexamethasone should be monitored by doctors considering that the adverse effects that occur are precarious.


"Adverse effects that occur in the use of Dexamethasone occur due to the effects they have, namely metabolic and catabolic effects on bones, muscles, connective tissue, nerves, digestive tract, growth and lungs," she said.

There are quite severe adverse effects that are often experienced by corticosteroid users, including Dexamethasone if used in the long term or large doses. Among the organ systems, bones experience loss and muscular disorders—the digestive tract such as inflammation of the stomach, inflammation of the pancreas, and fatty liver.

Besides, it can also result in decreased immune function, hypertension, heart rhythm disorders, plaque buildup in the heart, glaucoma and cataracts. Also affects the growth of many feathers, skin atrophy, zits, accumulation of fatty tissue on the shoulders and face, diabetes, weight gain, reproductive hormone disorders, insomnia, mental disorders, memory and emotional disorders.

Given the hazardous adverse effects, Ika said, doctors must closely monitor the use of Dexamethasone. The public is advised not to buy Dexamethasone without a doctor's prescription. This appeal was out due to the current condition reveals that dexamethasone tablets and injections have been sold online through online shopping sites.

For the treatment of Covid-19, she continued, clinicians gave Dexamethasone for only Covid-19



patients with severe cases of Covid-19 in hospital. People do not need to go along with consuming Dexamethasone if they do not want to experience severe adverse effects.

"If a healthy person consumes dexamethasone, the immune system may drop so that it is susceptible to any infection, including Covid-19," he concluded.

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