

**EARLY CORTICOIDS AGAINST COVID-19: ONE MORE RISK FOR  
BRAZILIANS' HEALTH**

**CORTICOIDES PRECOCAMENTE CONTRA A COVID-19: MAIS UM RISCO  
PARA A SAÚDE DOS BRASILEIROS**

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**RESUMO**

Vários medicamentos sem eficácia comprovada cientificamente têm sido prescritos para o tratamento preventivo e precoce da COVID-19 no Brasil, endossando a política negacionista do governo Bolsonaro em relação à pandemia. Um tipo de medicamento tem feito parte desse coquetel de medicamentos e se destacou na indicação, os corticoides. São analisadas as razões e possíveis consequências da mais popular dessas drogas, a dexametasona. O valor terapêutico dessa medicação é apresentado, inclusive para a COVID-19 em casos mais graves, mas não de forma preventiva e precoce. São discutidas também as responsabilidades relativas à essas práticas e os efeitos em larga escala na população brasileira.

**Palavras-chave:** riscos; brasileiros; médicos; drogas

**ABSTRACT**

Several drugs without scientifically proven efficacy have been prescribed for the preventive and early treatment of COVID-19 in Brazil, endorsing the Bolsonaro government's denialist policy regarding the pandemic. One type of drug has been part of this cocktail of drugs and stands out in the indication, the corticoids. The reasons and possible consequences of the most popular of these drugs, dexamethasone, are analyzed. The therapeutic value of this medication is presented, including for COVID-19 in more severe cases, but not preventively and early. The responsibilities regarding these practices and the large-scale effects on the Brazilian population are also discussed.

**Keywords:** risks; Brazilians; doctors; drugs

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## 1 INTRODUCTION

In the first months of 2021, the Brazilian government continued denying the pandemic and its fate in favor of innocuous medicines (SILVA, 2021), failing to purchase essential supplies to fight COVID-19, such as oxygen, fundamental medicines for intubation, and vaccines. To complicate this context, more doctors daily support and propagate the prescription of this medicine cocktail, named "covid kit" (SANTOS-PINTO; MIRANDA; OSORIO-DE-CASTRO, 2021). In this way, these health professionals end up endorsing a health policy (SILVA, 2021), which uses the precious time to face the pandemic by recommending these medications. While it misses opportunities to buy vaccines quickly, elaborate vaccination planning, and coordinate the confrontation of the disease through science with effective treatments. Since doctors are a respected category in Brazil, the population is confused by this kind of support for scientific denialism and ends up pressuring mayors and governors (and other doctors not adhering to this approach). Pressure for them to abandon the harsh but necessary actions, such as social distancing, sometimes isolation, based on current epidemiological knowledge, and to position themselves in favor of this kind of nonsense.

All this context is aggravated by groups that support the Brazilian government and its ideas about the pandemic on social networks, which are extremely efficient in the dissemination of Fake News and conspiracy theories about the pandemic and treatments with no effect against COVID-19 (CATALÁN-MATAMOROS, 2020; ORSO *et al.*, 2020). During the pandemic, these groups disseminate on social networks statements of doctors in favor of the COVID kit, of alleged cities free of deaths from the pandemic because of an "early treatment" or even preventive treatment against the disease, demanding that other public administrators follow the same line, reaching the absurdity of doctors offering to implement these actions in cities that do not apply it. Some cities are even distributing this kit for free, in other words, uselessly intoxicating their population.

## 2 CORTICOIDS FOR MILD CASES OR PREVENTIVELY?

One of the latest insertions of the COVID kit was the inclusion of corticosteroids in the preventive or early package against SARS-CoV-2 in Brazil. Although this type of drug in Brazil (the most popular is dexamethasone) has been found in well-conducted studies to be effective in severe cases of COVID-19, it must be emphasized in severe cases only (GROUP,

2020). In a larger study developed on the subject, it was shown that the use of dexamethasone resulted in lower mortality, but only among those who were receiving invasive mechanical ventilation or oxygen only, but it had no effect among those who were not receiving respiratory support (WOOTTON, 2021).

The therapeutic value of dexamethasone should not be diminished, as it is a widely used drug against skin diseases, neurological problems, various allergies and asthma; therefore, its anti-inflammatory action is very well documented (BARNES, 2006). The research then assumed that the effects of the known inflammatory storm caused by COVID-19, detected in autopsies by inflammatory damage in the lung alveoli and other organs, could be prevented using this medication. However, this has only been proven in cases of complications of the condition, never early and much less preventively, but even in cases where complications occur, the drug should be used with some caution, always considering the possible side effects, such as secondary infections and other undesirable effects (MCCREARY; POGUE, 2020; THEOHARIDES; CONTI, 2020).

The problem has been amplified in Brazil because besides the preventive use (totally absurd) (SILVA, 2022), this corticosteroid has become a standard medication for many doctors as soon as patients manifest and are diagnosed with COVID-19, it is being prescribed early on a large scale. It would be great if it were effective because it has been listed as an essential drug by the World Health Organization (WHO) for decades, it is out of patent, its cost is very reasonable, and it is available in many countries in various formulations (BROCCOLI *et al.*, 2018), but it has proven ineffective in early phases of COVID-19, and its risks are known.

The WHO itself has already recognized the value of studies with dexamethasone in severe cases of COVID-19, but the possible side effects of using corticoids should be observed, especially if used early because there will be no benefit; a low dose will already have a positive effect on the limit the progression of acute respiratory distress syndrome (MAHASE, 2020). However, the use of corticoids for prolonged periods, as currently used in Brazil (there should be no research to demonstrate the use in individuals without any disease for prevention because it would be unethical), can alter the hormonal balance, with all the known effects of this imbalance (CURTIS *et al.*, 2007).

To summarize the risks of using dexamethasone, a drug that had an increase in more than 2 million doses in the year 2020 in Brazil, coming from the type of standard therapy for

many Brazilian physicians, we can divide it into short-term effects, when patients use less than a month, and when patients use from 1 to 3 months (NOREEN; MAQBOOL; MADNI, 2021). The set of risks demonstrates the imprudence of its prescription in cases where there is no worsening of COVID-19.

In Brazil, the short-term use of dexamethasone is the most recommended, and its preventive use is so insane, so irrational, that it deserves a psychiatric analysis, but the most common is that for a portion of Brazilian doctors, it should be prescribed the first symptoms of COVID-19 and then use the medication if there are symptoms (period less than a month). The possible risks for this unfortunate patient will be prolonged viremia – the prolonged presence of the virus in the bloodstream, everything that someone with SARS-CoV-2 does not need - autoimmune and cardiovascular manifestations, the appearance of bacterial superinfections (which will not be cured because the COVID kit will have already misused antibiotics), and resistance to neuromuscular blocking agents (something very serious if the patient must be intubated) (BROADBENT *et al.*, 2018; MANSON *et al.*, 2009; MATTOS-SILVA *et al.*, 2020; WALSH *et al.*, 2001). So, as you can see, it is a medication which, if used outside the period recommended by the research, seems to be tailor-made to complicate a coronavirus infection.

But the senselessness in combating COVID-19 is unlimited in Brazil (SILVA, 2021), so it is necessary to present the risks of using dexamethasone for long-term use, incredibly this procedure has been prescribed in this country. The possible effects on blood glucose are substantiated and may increase the risk of diabetes (hyperglycemia); effects on vision, such as glaucoma and cataracts, hypertension, and fluid retention (ALESSI *et al.*, 2020; BERNAL-MIZRACHI *et al.*, 2003; DERBY; MAIER, 2000; TRIPATHI *et al.*, 1999). They may also generate psychological effects, such as mood changes, confusion, and behavioral changes, as well as osteoporosis and menstrual changes (BROWN; CHANDLER, 2001; MORGANSTEIN; MORGANSTEIN; MORGANSTEIN, 2020; MOSER *et al.*, 1996; REN *et al.*, 2015).

It is important to remember that patients with hypertension and diabetes are considered high-risk groups for COVID-19 complications (FANG; KARAKIULAKIS; ROTH, 2020), precisely those diseases that can be triggered or worsened by the prolonged use of corticoids such as dexamethasone. In other words, in an indiscriminate, excessive, and inadequate period prescription (as is occurring on a large scale in Brazil), this drug seems designed to aggravate cases of the pandemic virus disease. Moreover, this kind of practice has an impact on the way

the population deals with the pandemic because by relying on respected health professionals, many can, and should, be abandoning the time-honored measures for preventing SARS-CoV-2, such as social distancing and wearing masks (FENG *et al.*, 2020). COVID-19 would not be so dangerous after all because there would already be, in addition to corticoids, a whole list of supposedly effective drugs.

### **3 RESPONSIBILITIES**

It is necessary to recognize the responsibilities among politicians and among any professional who is spreading this kind of false information, but it would be up to doctors to ensure the correct medicines and proper treatments, so the consequences should be attributed mainly to these professionals. The possible deaths and sequels from these absurd prescriptions must be attributed to those who indicated them who encouraged them through social networks in an irresponsible way; it is hard to conceive that this is happening even in the face of the Brazilian daily tragedy. Unequivocal proof that this preventive and early treatment is not effective. But some (for now) tragedies are being added to the pandemic, with patients being driven to acute renal failure, to the transplant queue, heart problems and bleeding to death, and due to an absurd set of unproven medication.

The formation of doctors should work as a barrier for this kind of assimilation of approach because these professionals have one of the longest periods of studies, with a selection process that is often very competitive and rigorous. It is not correct to attribute to young or recently graduated doctors this adherence to innocuous (and dangerous) treatments (SILVA, 2021), as the use of antibiotics against the virus (SILVA, 2021) reaches doctors of all ages and all levels of experience in Brazil. Therefore, it is urgent to analyze this phenomenon, how it was constituted, its risks, its consequences, and its reasons so that it can be faced with the necessary rigor, that it can be understood, so that never again can such an important category of society be aligned to an action so contradictory to its noble mission. The worst thing is that those doctors who are standing against this insanity end up being asked to change their opinion by intimidation from patients, influenced by other doctors and authorities, and popular in Brazilian social networks.

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