Activity of dexamethasone in dialysis patients suffering from Covid 19.

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Abstract

COVID-19 has been shown to have an impact on the kidneys. Some individuals with COVID-19 have developed acute kidney injury (AKI), which is a sudden loss of kidney function. This may occur in severe cases of the illness, particularly in individuals who are hospitalized and require intensive care. Additionally, COVID-19 can lead to blood clots that can block blood flow to the kidneys, leading to AKI. In some cases, the AKI caused by COVID-19 can be severe and require dialysis. It is important for individuals with COVID-19 to receive prompt medical attention to monitor and treat any potential kidney complications.

Keywords: COVID-19, Dialysis, Hospitalized, Kidney complications, Lung inflammation.

Introduction

The COVID-19 pandemic has had a significant impact on dialysis patients. Due to the contagious nature of the virus, dialysis patients, who have weakened immune systems and often have underlying health conditions, are at a higher risk of severe illness and complications from COVID-19. The pandemic has also disrupted the availability and delivery of dialysis treatment, with some dialysis centres temporarily closing or reducing hours, and patients experiencing difficulties getting to appointments due to travel restrictions and fears of exposure to the virus. Additionally, the pandemic has increased stress and anxiety for dialysis patients, who are already dealing with the physical and emotional demands of their condition.

In dialysis patients, respiratory illnesses can be especially serious because they may have weakened immune systems and underlying medical conditions such as chronic kidney disease. Some common respiratory illnesses in dialysis patients include pneumonia, bronchitis, and the flu. It is important for dialysis patients to receive prompt and proper medical care, as well as to practice good hygiene to prevent the spread of respiratory infections. This may include receiving vaccinations, washing hands regularly, and avoiding close contact with others who are sick.

Patients with kidney problems who are diagnosed with COVID-19 may require special considerations for drug therapy. The following medications may be used to treat COVID-19 in patients with kidney dysfunction [1].

Treatment

•**Remdesivir:** A nucleotide analogue antiviral drug that has been authorized for emergency use by the FDA to treat COVID-19 in hospitalized patients.

•**Dexamethasone:** A corticosteroid that has been shown to reduce mortality in critically ill COVID-19 patients, including those with kidney dysfunction.

•**Tocilizumab:** An immunosuppressive drug that has been used off-label to treat severe cases of COVID-19, including those with kidney dysfunction [2].

Dexamethasone is a glucocorticoid steroid that has anti-inflammatory and immunosuppressive effects. In COVID-19 patients, it has been shown to reduce the risk of death in patients with severe and critical illness. The mechanism of action of dexamethasone in COVID-19 patients is not fully understood, but it is believed to work by reducing the overactive immune response to the virus that can lead to severe lung inflammation and respiratory distress. Dexamethasone has been shown to decrease the levels of cytokines, which are proteins produced by immune cells that cause inflammation. By reducing cytokine levels, dexamethasone can decrease the severity of the immune response and prevent lung damage. Additionally, dexamethasone can also improve oxygenation in patients with severe respiratory distress [3, 4].

However, it's important to note that dexamethasone is only recommended for COVID-19 patients who are hospitalized and require supplemental oxygen or mechanical ventilation. The use of dexamethasone in mild or moderate COVID-19 cases has not been proven to be effective and may even be harmful. The use of dexamethasone should always be guided by a healthcare professional and tailored to the individual patient's needs and severity of illness [5].

Conclusion

The use of corticosteroids as adjunctive therapy might be effective in patients with community-acquired pneumonia (CAP). Oral administration of dexamethasone is a practical

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and safer alternative to the intravenous route. Since patients hospitalized with pneumonia might have delayed gastric emptying, this study explored systemic exposure in terms of area under the concentration–time curve (AUC) of oral dexamethasone in patients hospitalized with CAP.

References

1. De La Rubia J, Roig M, Ibanez A, et al. Activity and safety of lenalidomide and dexamethasone in patients with multiple myeloma requiring dialysis: A Spanish multicenter retrospective study. Eur J Haematol Title. 2010;85(4):363-5.
2. Kastritis E, Wechalekar AD, Dimopoulos MA, et al. Significant activity of bortezomib-based therapy in patients with primary systemic (AL) amyloidosis. Blood. 2008;112(11):869.
3. Ludwig H, Rauch E, Kuehr T, et al. Lenalidomide and dexamethasone for acute light chain-induced renal failure: A phase II study. Haematologica. 2015;100(3):385.
4. Smyth E, Glavey S, Melotti D, et al. Dialysis independence following single-agent daratumumab in refractory myeloma with renal failure. Ir J Med Sci. 2019;188:1079-80.
5. Xiao S, Schmidt RJ, Baylis C. Plasma from ESRD patients inhibits nitric oxide synthase activity in cultured human and bovine endothelial cells. Acta Physiol Scand. 2000;168(1):175.

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