



INTRODUCTION

Nowadays, COVID-19 infection has been associated with increased morbidity and mortality rates, especially in vulnerable populations, such as pregnant women. At present, a small number of experimental and clinical studies have been conducted regarding the optimal treatment of an infected mother, in direct relation to the time of delivery. The ultimate purpose of present study is to investigate the current drugs, which can be used to fight COVID-19 infection during pregnancy, highlighting also the necessity of further clinical trials and research to build as much as possible effective therapeutic strategies with the least possible complications and side effects.

RESULTS

As demonstrated in a multitude of current and credible relevant papers, which were examined extensively during our systemic review, today the necessity of containing the pandemic has led to the administration of numerous therapies, which do not have clear indications of pharmaceutical efficacy and safe fetal development. In present study, we prioritize possible treatments and present the dose response and toxicity effects for each drug. In particular, antiviral agents, such as remdesivir, have been used efficiently to control COVID-19 infection in pregnant women. Antibiotics, especially amoxicillin and ceftriaxone, are drastic only in case of co-bacterial infection, while the use of azithromycin has recently been abandoned. Prenatal corticosteroids are indicated in preterm birth, while drugs such as tocilizumab, interferon B1 and convalescent plasma are used in life-threatening infections. Finally, due to the increased likelihood of thromboembolic events, the prophylactic use of low molecular weight heparin (LMWH) is recommended. Based on the current medication guidelines all pregnant women in the second and third trimester must be vaccinated against COVID-19.

MATERIALS AND METHODS

A systemic review of scientific articles and research studies (including prospective research, randomized controlled clinical trials, meta-analysis studies) was undertaken. On that purpose, a total amount of 50 current studies was evaluated, in order to examine all new and revised information on the current routine, off-label, and investigational medications used in pregnant with COVID-19 infection, either for symptomatic relief or in the context of clinical trials.

CONCLUSION

Undoubtedly, the existing pharmaceutical guidelines for the management of COVID-19 infection during pregnancy are constantly being reviewed and updated. Nowadays, it is a fact that most of the given treatment strategies are safe during pregnancy and lactation, without teratogenic action or side effects in breastfed infants, although their therapeutic efficacy remains limited and questionable. Under these circumstances, the current rapid global development of the pandemic makes important a more targeted conduction of relevant clinical trials, in order to achieve the most effective management, treatment and prevention of COVID-19 disease in pregnant and lactating women.

REFERENCES

1. Royal College of Obstetricians & Gynaecologists. Coronavirus (COVID-19) infection in pregnancy, Version 9 [4 June 2020] London, UK. RCOG 2020.
2. WHO. Coronavirus disease 2019 (COVID-19), Situation Report – 209. Available at: <https://covid19.who.int> [Accessed 6 January 2021].
3. Zambrano L.D., Ellington S., Strid P. et al. (2020), Update: characteristics of symptomatic women of reproductive age with laboratory-confirmed SARS-CoV-2 infection by pregnancy status in United States. MMWR Morb Mortal Wkly Rep. 2020;69(44):1641-1647. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/33151921>.
4. Ko J.Y., DeSisto C.L., Simeone R.M., et al. (2021), Adverse pregnancy outcomes, maternal complications, and severe illness among U.S. delivery hospitalizations with and without a COVID-19 diagnosis, Clin Infect Dis., Published online ahead of print. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/33977298>.
5. Sutton D. ,Fuchs K. ,D'Alton M. & Goffman D. Universal Screening for SARS-CoV-2 in Women Admitted for Delivery. N Engl J Med 2020; 382: 2163– 2164. Available at: <https://pubmed.ncbi.nlm.nih.gov/32283004>.