



# 23. Bölüm

## COVID-19 ve Obstetrik Etkileri

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### GİRİŞ

Aralık 2019'da, Çin'in Wuhan kentinden başlayan ve hızla yayılan yeni tip koronavirüs hastalığı mart 2020'de Dünya Sağlık Örgütünün pandemi ilan etmesine neden oldu (1). Bu bölümde COVID-19 hastalığının gebelik dönemindeki etkileri incelenecektir.

### ETYOLOJİ

Koronavirüsler zarflı RNA virüsleridir. Elektron mikroskobu görüntüsü taç benzeri olduğu için bu isim verilmiştir. Daha önce insanı enfekte edebilen koronavirüs tipleri, normal bağışıklık sistemi olan insanlarda soğuk algınlığı benzeri hastalık yaptığı için, önemli bir patojen olarak görülmediler. 2002-2003 yılında, Çin'de ortaya çıkan Severe Acute Respiratory Syndrome (SARS) ve 2012 yılında, Suudi Arabistan'da ortaya çıkan Middle East Respiratory Syndrome (MERS) epidemileri ise koronavirüslerin insanda ölümcül hastalık yapabileceklerini gösterdi (2).

Aralık 2019'da, Çin'in Hubei eyaleti, Wuhan kentinde solunum sıkıntısı yaşayan hastalardan alınan örneklerde, insanları enfekte edebilen yeni bir koronavirüs tipi izole edildi. Bu insanlarda enfeksiyon yapabilen yedinci koronavirüs tipi idi<sup>3</sup>. SARS ve MERS benzerliğinden dolayı yeni tip koronavirüs SARS-CoV-2 olarak adlandırıldı (4). SARS-CoV-2 beta koronavirüs ailesine üye ve genomik olarak yarasa koronavirüsüne %96 oranında benzemektedir (5).

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## Doğum Zamanlaması ve Yönetimi

COVID-19 hastalığı erken doğum için yada sezaryen doğum için bir endikasyon değildir. Doğum zamanlaması ve şekli hastanın kliniğine göre ve obstetrik endikasyonlar ile planlanmalıdır.

Semptomu olmayan yada hafif semptomu olan COVID-19 hastalarında doğum, maternal ve fetal kontraendikasyon olmaması durumunda, bulaşı azaltmak amacıyla karantina sonrasına ötelenebilir. Bu dönemde fetal iyilik hali testleri rutin endikasyonlarla yapılır.

Gebenin kliniğinde hızlı bozulma, yeni gelişen organ yetmezliği, septik şok ve güven vermeyen fetal iyilik hali durumlarında sezaryen doğum uygulanabilir. Genel anestezi aerosol gelişimine neden olacağından mümkün olan hastalarda rejional anestezi tercih edilmelidir.

Vajinal doğum planlanan hastalar, mümkünse negatif basınçlı bir odada ve maskeleri takılı olarak doğurtulmalıdır. Şeffaf örtü ile göğüs hizasından yukarıda olacak şekilde izolasyon sağlanması düşünülmelidir. Sürekli fetal monitorizasyon ve maternal satürasyon takibi yapılmalıdır. Satürasyonun düşmesi durumunda oksijen tedavisi verilmelidir. Doğum eylemini kısaltmak için indüksiyon ve augmentasyon yöntemleri kullanılabilir (55). Geç umbilikal kord klemplenmesi term yenidoğanlarda önerilmez.

## Postpartum

Doğum sonrası hastalar tek kişilik odalarda takip edilmelidir. Anne bebek ayrılması konusunda yeterli veri olmamakla birlikte temizlik ve maske kurallarına uyularak emzirme sağlanabilir. Sağlık bakanlığı klavuzu ağır yada kritik hastalık durumunda anne bebek ayrılmasını önermektedir (55).

## KAYNAKLAR

1. WHO/Europe | WHO announces COVID-19 outbreak a pandemic. Accessed May 20, 2021. <https://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-COVID-19/news/news/2020/3/who-announces-COVID-19-outbreak-a-pandemic>
2. Cui J, Li F, Shi Z-L. Origin and evolution of pathogenic coronaviruses. *Nat Rev Microbiol.* 2019;17(3):181-192. doi:10.1038/s41579-018-0118-9
3. Zhu N, Zhang D, Wang W, et al. A Novel Coronavirus from Patients with Pneumonia in China, 2019. *N Engl J Med.* 2020;382(8):727-733. doi:10.1056/NEJMoa2001017
4. Coronaviridae Study Group of the International Committee on Taxonomy of Viruses. The species Severe acute respiratory syndrome-related coronavirus: classifying 2019-nCoV and naming it SARS-CoV-2. *Nat Microbiol.* 2020;5(4):536-544. doi:10.1038/s41564-020-0695-z
5. Zhou P, Yang X-L, Wang X-G, et al. A pneumonia outbreak associated with a new coronavirus of probable bat origin. *Nature.* 2020;579(7798):270-273. doi:10.1038/s41586-020-2012-7

6. Chia PY, Coleman KK, Tan YK, et al. Detection of air and surface contamination by SARS-CoV-2 in hospital rooms of infected patients. *Nat Commun.* 2020;11. doi:10.1038/s41467-020-16670-2
7. Cevik M, Kuppalli K, Kindrachuk J, Peiris M. Virology, transmission, and pathogenesis of SARS-CoV-2. *BMJ.* Published online October 23, 2020:m3862. doi:10.1136/bmj.m3862
8. Bai Y, Yao L, Wei T, et al. Presumed Asymptomatic Carrier Transmission of COVID-19. *JAMA.* 2020;323(14):1406-1407. doi:10.1001/jama.2020.2565
9. Pan X, Chen D, Xia Y, et al. Asymptomatic cases in a family cluster with SARS-CoV-2 infection. *Lancet Infect Dis.* 2020;20(4):410-411. doi:10.1016/S1473-3099(20)30114-6
10. Rabi FA, Al Zoubi MS, Kasasbeh GA, Salameh DM, Al-Nasser AD. SARS-CoV-2 and Coronavirus Disease 2019: What We Know So Far. *Pathog Basel Switz.* 2020;9(3). doi:10.3390/pathogens9030231
11. WHO Regional Office for the Eastern Mediterranean, Al-Mandhari A, Samhoury D, Abubakar A, Brennan R. Coronavirus Disease 2019 outbreak: preparedness and readiness of countries in the Eastern Mediterranean Region. *East Mediterr Health J.* 2020;26(2):136-137. doi:10.26719/2020.26.2.136
12. Peiris J, Lai S, Poon L, et al. Coronavirus as a possible cause of severe acute respiratory syndrome. *Lancet Lond Engl.* 2003;361(9366):1319-1325. doi:10.1016/S0140-6736(03)13077-2
13. Blitz MJ, Rochelson B, Rausch AC, et al. Universal testing for coronavirus disease 2019 in pregnant women admitted for delivery: prevalence of peripartum infection and rate of asymptomatic carriers at four New York hospitals within an integrated healthcare system. *Am J Obstet Gynecol Mfm.* 2020;2(3):100169. doi:10.1016/j.ajogmf.2020.100169
14. Sutton D, Fuchs K, D'Alton M, Goffman D. Universal Screening for SARS-CoV-2 in Women Admitted for Delivery. *N Engl J Med.* Published online April 13, 2020. doi:10.1056/NEJMc2009316
15. Nishiura H, Kobayashi T, Miyama T, et al. Estimation of the asymptomatic ratio of novel coronavirus infections (COVID-19). *Int J Infect Dis.* 2020;94:154-155. doi:10.1016/j.ijid.2020.03.020
16. Gao Z, Xu Y, Sun C, et al. A systematic review of asymptomatic infections with COVID-19. *J Microbiol Immunol Infect.* 2021;54(1):12-16. doi:10.1016/j.jmii.2020.05.001
17. Sakurai A, Sasaki T, Kato S, et al. Natural History of Asymptomatic SARS-CoV-2 Infection. *N Engl J Med.* Published online June 12, 2020. doi:10.1056/NEJMc2013020
18. Zambrano LD, Ellington S, Strid P, et al. Update: Characteristics of Symptomatic Women of Reproductive Age with Laboratory-Confirmed SARS-CoV-2 Infection by Pregnancy Status — United States, January 22–October 3, 2020. *Morb Mortal Wkly Rep.* 2020;69(44):1641-1647. doi:10.15585/mmwr.mm6944e3
19. Ai T, Yang Z, Hou H, et al. Correlation of Chest CT and RT-PCR Testing in Coronavirus Disease 2019 (COVID-19) in China: A Report of 1014 Cases. *Radiology.* Published online February 26, 2020. doi:10.1148/radiol.2020200642
20. Caruana G, Croxatto A, Coste AT, et al. Diagnostic strategies for SARS-CoV-2 infection and interpretation of microbiological results. *Clin Microbiol Infect.* 2020;26(9):1178-1182. doi:10.1016/j.cmi.2020.06.019
21. Kucirka LM, Lauer SA, Laeyendecker O, Boon D, Lessler J. Variation in False-Negative Rate of Reverse Transcriptase Polymerase Chain Reaction–Based SARS-CoV-2 Tests by Time Since Exposure. *Ann Intern Med.* Published online May 13, 2020. doi:10.7326/M20-1495
22. Sebghati M, Khalil A. Uptake of vaccination in pregnancy. *Best Pract Res Clin Obstet Gynaecol.* Published online April 6, 2021. doi:10.1016/j.bpobgyn.2021.03.007
23. COVID-19 vaccines, pregnancy and breastfeeding. Royal College of Obstetricians & Gynaecologists. Accessed May 21, 2021. <https://www.rcog.org.uk/en/guidelines-research/>

- ch-services/coronavirus-COVID-19-pregnancy-and-womens-health/COVID-19-vaccines-and-pregnancy/COVID-19-vaccines-pregnancy-and-breastfeeding/
24. SZEKERES-BARTHÓ J. Immunological Relationship Between the Mother and the Fetus. *Int Rev Immunol.* 2002;21(6):471-495. doi:10.1080/08830180215017
  25. Gaunt G, Ramin K. Immunological Tolerance of the Human Fetus. *Am J Perinatol.* 2001;18(06):299-312. doi:10.1055/s-2001-17861
  26. Kourtis AP, Read JS, Jamieson DJ. Pregnancy and Infection. *N Engl J Med.* 2014;370(23):2211-2218. doi:10.1056/NEJMra1213566
  27. Goodnight WH, Soper DE. Pneumonia in pregnancy. *Crit Care Med.* 2005;33(10 Suppl):S390-397. doi:10.1097/01.ccm.0000182483.24836.66
  28. Neuzil KM, Reed GW, Mitchel EF, Simonsen L, Griffin MR. Impact of influenza on acute cardiopulmonary hospitalizations in pregnant women. *Am J Epidemiol.* 1998;148(11):1094-1102. doi:10.1093/oxfordjournals.aje.a009587
  29. Rasmussen SA, Jamieson DJ, Uyeki TM. Effects of influenza on pregnant women and infants. *Am J Obstet Gynecol.* 2012;207(3):S3-S8. doi:10.1016/j.ajog.2012.06.068
  30. Mosby LG, Rasmussen SA, Jamieson DJ. 2009 pandemic influenza A (H1N1) in pregnancy: a systematic review of the literature. *Am J Obstet Gynecol.* 2011;205(1):10-18. doi:10.1016/j.ajog.2010.12.033
  31. Di Mascio D, Khalil A, Saccone G, et al. Outcome of coronavirus spectrum infections (SARS, MERS, COVID-19) during pregnancy: a systematic review and meta-analysis. *Am J Obstet Gynecol Mfm.* 2020;2(2):100107. doi:10.1016/j.ajogmf.2020.100107
  32. Rasmussen SA, Lyerly AD, Jamieson DJ. Delaying Pregnancy during a Public Health Crisis — Examining Public Health Recommendations for COVID-19 and Beyond. *N Engl J Med.* Published online September 30, 2020. doi:10.1056/NEJMp2027940
  33. Woodworth KR, Olsen EO, Neelam V, et al. Birth and Infant Outcomes Following Laboratory-Confirmed SARS-CoV-2 Infection in Pregnancy — SET-NET, 16 Jurisdictions, March 29–October 14, 2020. *Morb Mortal Wkly Rep.* 2020;69(44):1635-1640. doi:10.15585/mmwr.mm6944e2
  34. Olshinka KR, Volodarsky-Perel A, Steiner N, Rubinfeld ES, Dahan MH. COVID-19 PANDEMIC EFFECT ON EARLY PREGNANCY – ARE MISCARRIAGE RATES ALTERED, IN ASYMPTOMATIC WOMEN? *Fertil Steril.* 2020;114(3):e530-e531. doi:10.1016/j.fertnstert.2020.09.036
  35. Matar R, Alrahmani L, Monzer N, et al. Clinical Presentation and Outcomes of Pregnant Women With Coronavirus Disease 2019: A Systematic Review and Meta-analysis. *Clin Infect Dis Off Publ Infect Dis Soc Am.* Published online June 23, 2020. doi:10.1093/cid/ciaa828
  36. Lamont RE. Infection in the prediction and antibiotics in the prevention of spontaneous preterm labour and preterm birth. *BJOG Int J Obstet Gynaecol.* 2003;110 Suppl 20:71-75. doi:10.1016/s1470-0328(03)00034-x
  37. Wei SQ, Bilodeau-Bertrand M, Liu S, Auger N. The impact of COVID-19 on pregnancy outcomes: a systematic review and meta-analysis. *CMAJ Can Med Assoc J.* 2021;193(16):E540-E548. doi:10.1503/cmaj.202604
  38. Gheblawi M, Wang K, Viveiros A, et al. Angiotensin-Converting Enzyme 2: SARS-CoV-2 Receptor and Regulator of the Renin-Angiotensin System. *Circ Res.* 2020;126(10). doi:10.1161/CIRCRESAHA.120.317015
  39. Shanes ED, Mithal LB, Otero S, Azad HA, Miller ES, Goldstein JA. Placental Pathology in COVID-19. *Am J Clin Pathol.* 2020;154(1):23-32. doi:10.1093/ajcp/aqaa089
  40. La Verde M, Riemma G, Torella M, et al. Maternal death related to COVID-19: A systematic review and meta-analysis focused on maternal co-morbidities and clinical characteristics. *Int J Gynaecol Obstet Off Organ Int Fed Gynaecol Obstet.* Published online April 30, 2021. doi:10.1002/ijgo.13726

41. Figliozzi S, Masci PG, Ahmadi N, et al. Predictors of adverse prognosis in COVID-19: A systematic review and meta-analysis. *Eur J Clin Invest.* 2020;50(10):e13362. doi:10.1111/eci.13362
42. Fang X, Li S, Yu H, et al. Epidemiological, comorbidity factors with severity and prognosis of COVID-19: a systematic review and meta-analysis. *Aging.* 2020;12(13):12493-12503. doi:10.18632/aging.103579
43. Allotey J, Stallings E, Bonet M, et al. Clinical manifestations, risk factors, and maternal and perinatal outcomes of coronavirus disease 2019 in pregnancy: living systematic review and meta-analysis. *The BMJ.* 2020;370. doi:10.1136/bmj.m3320
44. Goh XL, Low YF, Ng CH, Amin Z, Ng YPM. Incidence of SARS-CoV-2 vertical transmission: a meta-analysis. *Arch Dis Child - Fetal Neonatal Ed.* 2021;106(1):112-113. doi:10.1136/archdischild-2020-319791
45. Kotlyar AM, Grechukhina O, Chen A, et al. Vertical transmission of coronavirus disease 2019: a systematic review and meta-analysis. *Am J Obstet Gynecol.* 2021;224(1):35-53.e3. doi:10.1016/j.ajog.2020.07.049
46. Tolu LB, Ezeh A, Feyissa GT. Vertical transmission of Severe Acute Respiratory Syndrome Coronavirus 2: A scoping review. *PloS One.* 2021;16(4):e0250196. doi:10.1371/journal.pone.0250196
47. Clinical Spectrum. COVID-19 Treatment Guidelines. Accessed May 27, 2021. <https://www.COVID19treatmentguidelines.nih.gov/overview/clinical-spectrum/>
48. SMFM\_COVID\_Management\_of\_COVID\_pos\_preg\_patients\_2-2-21\_(final).pdf. Accessed June 3, 2021. [https://s3.amazonaws.com/cdn.smfm.org/media/2734/SMFM\\_COVID\\_Management\\_of\\_COVID\\_pos\\_preg\\_patients\\_2-2-21\\_\(final\).pdf](https://s3.amazonaws.com/cdn.smfm.org/media/2734/SMFM_COVID_Management_of_COVID_pos_preg_patients_2-2-21_(final).pdf)
49. Mehta P, McAuley DF, Brown M, Sanchez E, Tattersall RS, Manson JJ. COVID-19: consider cytokine storm syndromes and immunosuppression. *Lancet Lond Engl.* 2020;395(10229):1033-1034. doi:10.1016/S0140-6736(20)30628-0
50. Fardet L, Galicier L, Lambotte O, et al. Development and validation of the HScore, a score for the diagnosis of reactive hemophagocytic syndrome. *Arthritis Rheumatol Hoboken NJ.* 2014;66(9):2613-2620. doi:10.1002/art.38690
51. Bowyer L, Robinson HL, Barrett H, et al. SOMANZ guidelines for the investigation and management sepsis in pregnancy. *Aust N Z J Obstet Gynaecol.* 2017;57(5):540-551. doi:https://doi.org/10.1111/ajo.12646
52. ACOG Practice Bulletin No. 196 Summary: Thromboembolism in Pregnancy. *Obstet Gynecol.* 2018;132(1):243-248. doi:10.1097/AOG.0000000000002707
53. Di Minno A, Ambrosino P, Calcaterra I, Di Minno MND. COVID-19 and Venous Thromboembolism: A Meta-analysis of Literature Studies. *Semin Thromb Hemost.* 2020;46(7):763-771. doi:10.1055/s-0040-1715456
54. COVID-19rehberieriskinhastayonetimivedavipdf.pdf. Accessed June 2, 2021. <https://COVID19.saglik.gov.tr/Eklenti/40719/0/COVID-19rehberieriskinhastayonetimivedavipdf.pdf>
55. COVID-19solunumsistemihastaliklarininyayginoldugudonemdesaglikkuruluslarindagebetakibipdf.pdf. Accessed June 2, 2021. <https://COVID19.saglik.gov.tr/Eklenti/39101/0/COVID-19solunumsistemihastaliklarininyayginoldugudonemdesaglikkuruluslarindagebetakibipdf.pdf>
56. Repurposed Antiviral Drugs for COVID-19 — Interim WHO Solidarity Trial Results. *N Engl J Med.* Published online December 2, 2020. doi:10.1056/NEJMoa2023184