



8. Bölüm

COVID-19 SEMPTOMATOLOJİSİ VE BULGULARI

Hasan SÖZEL¹

GİRİŞ

Koronavirüs hastalığı-2019 (COVID-19), bir koronavirüs suşu olan şiddetli akut solunum sendromu koronavirüs 2'nin (SARS-CoV-2) neden olduğu bulaşıcı bir hastalıktır.(1-3) İlk vakalar Aralık 2019'da Çin'in Wuhan kentinde görüldü ve süreç 11 Mart 2020'de Dünya Sağlık Örgütü (WHO) tarafından resmen bir pandemi olarak kabul edildi. Salgın, hastaların yanında sağlık çalışanlarını da olumsuz etkiledi.(4,5)

COVID-19 etkeni SARS-CoV-2 tanısı için altın standart boğaz sürüntüsünde bakılan gerçek zamanlı polimeraz zincir reaksiyonu (RT-PCR) testidir. Özellikle hastalığın erken döneminde veya viral yük düşük olduğunda nazofarengeal sürüntü RT-PCR testleri negatif olabilir.(6) RT-PCR testi COVID-19 tanısı için altın standart olmasına rağmen, akciğer grafisi ve bilgisayarlı tomografi (BT) pnömoninin tanı, takip ve evrelemesinde önemli bir role sahiptir.(7-10)

Spesifik olmayan görüntüleme bulguları en sık atipik veya organize pnömonidir.

Hastalığın tedavisi amacıyla şuanda birçok ilaç kullanılmakta yeni ilaç araştırma çalışmaları devam etmekte. Fakat henüz hastalığın spesifik bir tedavisi de yoktur. Şuanda birçok aşı, acil kullanım onayı almış ve uygulanmaya başlanmıştır.

ASEMPTOMATİK ENFEKSİYON

COVID-19'un asemptomatik enfeksiyonları yaygın olarak bildirilmiştir.(11-18) Bir incelemede, SARS-CoV-2 enfeksiyonu olan kişilerin yüzde 33'ünün hiçbir zaman semptom geliştirmediği öngörüldü.(19) Bu tahmin, pozitif test sırasında hiçbir semptomu olmayan bireylerin medyan oranının yüzde 46 (yüzde 43 ila 77 arasında) olduğu dört geniş katılımlı, kesitsel ve 14 boylamsal çalışmaya dayanmaktadır. Bu çalışmadaki asemptomatik bireylerin yüzde 73'ü takipte bu şekilde kaldı. Bununla birlikte, çalışmalarda geniş bir aralıkta rapor edilen asemptomatik enfeksiyonların oranı konusunda hala belirsizlik vardır. Ek olarak, "asemptomatik" tanımı, hangi spesifik semptomların değerlendirildiğine bağlı olarak çalışmalar arasında farklılık gösterebilir. Asemptomatik enfeksiyonları değerlendiren araştırmalardaki bulguların çeşitliliği aşağıdaki örneklerde yansıtılmaktadır:

- Neredeyse tüm yolcuların ve personelin şiddetli akut solunum sendromu koronavirüs 2 (SARS-CoV-2) için tarandığı bir yolcu gemisinde COVID-19 salgınında, gemideki nüfusun yaklaşık yüzde 19'unun testi pozitif çıktı; 712 doğrulanmış COVID-19 vakasının yüzde 58'i tanı anında asemptomatikti.(20,21) Hastaneye yatırılan ve izlenen bu asempto-

¹ Öğr. Gör. Dr. Hasan SÖZEL, Akdeniz Üniversitesi Tıp Fakültesi, İç Hastalıkları AD., dr07hasan@hotmail.com

İYİLEŞME VE UZUN VADELİ SEKEL

COVID-19'dan iyileşme süresi oldukça değişkendir ve hastalığın ciddiyetine ek olarak yaşa ve önceden var olan komorbiditelere bağlıdır. Hafif enfeksiyonlu bireylerin nispeten hızlı bir şekilde iyileşmesi beklenirken (örn., iki hafta içinde), şiddetli hastalığı olan birçok kişinin iyileşme süresi daha uzundur (örn., iki ila üç ay). En yaygın kalıcı semptomlar yorgunluk, nefes darlığı, göğüs ağrısı, öksürük ve bilişsel eksiklikleri içerir. Veriler ayrıca devam eden solunum bozukluğu ve kardiyak sekel potansiyelini de ortaya koymaktadır.(89–94)

COVID-19'dan iyileşen bazı hastalarda SARS-CoV-2 için kalıcı veya tekrarlayan pozitif nükleik asit amplifikasyon testleri vardır. Bu ortamlarda tekrarlayan enfeksiyon veya yeniden enfeksiyon kesin olarak ekarte edilemese de, kanıtlar bunların olası olmadığını göstermektedir.

SONUÇ

COVID-19'un klinik spektrumu gün geçtikçe genişlemekte, hergeçen gün yeni semptom ve bulgular tanımlanmaktadır. Önümüzdeki süreçte klinik pratikte birçok durum için ayırıcı tanımlar arasında yerini alacağı öngörülmektedir.

KAYNAKLAR

- Zhou F, Yu T, Du R, et al. Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: a retrospective cohort study. *The Lancet*. 2020;395:1054-1062
- Park SE. Epidemiology, virology, and clinical features of severe acute respiratory syndrome - coronavirus-2 (SARS-CoV-2; Coronavirus Disease-19). *Clin Exp Pediatr*. 2020;63:119-124.
- 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;5:536-544.
- Sözel H, Bişkin Çetin S. Death Anxiety Levels of Healthcare Professionals in the COVID-19 Period. *Eskişehir Med Journal, Eskişehir City Hosp*. 2021; 2:74-81
- Bulut D, Sefa Sayar M, Koparal B, et al. Which of us were more affected by the pandemic? The psychiatric impacts of the COVID-19 pandemic on healthcare professionals in the province where the first quarantine units were established in Turkey. *Int J Clin Pract*. 2021;75:1-9.
- Kang Z, Li X, Zhou S. Recommendation of low-dose CT in the detection and management of COVID-2019. *Eur Radiol*. 2020;30:4356-4357.
- Zhou F, Yu T, Du R, et al. Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: a retrospective cohort study. *Lancet*. 2020;395:1054-1062.
- Ufuk F, Savaş R. Chest CT features of the novel coronavirus disease (COVID-19). *Turk J Med Sci*. 2020;50:664-678.
- Xu Z, Shi L, Wang Y, et al. Pathological findings of COVID-19 associated with acute respiratory distress syndrome. *Lancet Respir Med*. 2020;8:420-422.
- Xie X, Zhong Z, Zhao W, et al. Chest CT for Typical Coronavirus Disease 2019 (COVID-19) Pneumonia: Relationship to Negative RT-PCR Testing. *Radiology*. 2020;296:E41-E45.
- Chan JFW, Yuan S, Kok KH, et al. A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person transmission: a study of a family cluster. *Lancet*. 2020; 395:514-523.
- Liu Y-C, Liao C-H, Chang C-F, et al. A Locally Transmitted Case of SARS-CoV-2 Infection in Taiwan. *N Engl J Med*. 2020; 382:1070-1072
- Mizumoto K, Kagaya K, Zarebski A, et al. Estimating the asymptomatic proportion of coronavirus disease 2019 (COVID-19) cases on board the Diamond Princess cruise ship, Yokohama, Japan, 2020. *Eurosurveillance*. 2020; 25:2000180.
- Kimball A, Hatfield KM, Arons M, et al. Asymptomatic and Presymptomatic SARS-CoV-2 Infections in Residents of a Long-Term Care Skilled Nursing Facility — King County, Washington, March 2020. *MMWR Morb Mortal Wkly Rep*. 2020;
- Wang Y, Liu Y, Liu L, et al. Clinical outcomes in 55 patients with severe acute respiratory syndrome coronavirus 2 who were asymptomatic at hospital admission in Shenzhen, China. *J Infect Dis*. 2020; 221:1770-1774.
- Sutton D, Fuchs K, D'Alton M, et al. Universal Screening for SARS-CoV-2 in Women Admitted for Delivery. *N Engl J Med*. 2020; 382:2163-2164.
- Gudbjartsson DF, Helgason A, Jonsson H, et al. Spread of SARS-CoV-2 in the Icelandic Population. *N Engl J Med*. 2020;382:2302-2315.
- Oran DP, Topol EJ. Prevalence of Asymptomatic SARS-CoV-2 Infection : A Narrative Review. *Annals of internal medicine*. 2020; 173:362-367.
- Oran DP, Topol EJ. The Proportion of SARS-CoV-2 Infections That Are Asymptomatic : A Systematic Review. *Ann Intern Med*. 2021; 174:655-662.
- National Institute of Infectious Diseases Japan. Field Briefing : Diamond Princess COVID-19 Cases. *Natl Inst Infect Dis Japan*. 2020;(published: 19 february 2020)
- Sakurai A, Sasaki T, Kato S, et al. Natural History of Asymptomatic SARS-CoV-2 Infection. *N Engl J Med*.

- 2020; 383:885-886.
22. Tabata S, Imai K, Kawano S, et al. Clinical characteristics of COVID-19 in 104 people with SARS-CoV-2 infection on the Diamond Princess cruise ship: a retrospective analysis. *Lancet Infect Dis.* 2020; 20:1043-1050.
 23. Arons MM, Hatfield KM, Reddy SC, et al. Presymptomatic SARS-CoV-2 Infections and Transmission in a Skilled Nursing Facility. *N Engl J Med.* 2020; 382:2081-2090.
 24. Baggett TP, Keyes H, Sporn N, et al. Prevalence of SARS-CoV-2 Infection in Residents of a Large Homeless Shelter in Boston. *JAMA - Journal of the American Medical Association.* 2020; 323:2191-2192.
 25. Louie JK, Scott HM, Dubois A, et al. Lessons from Mass-Testing for Coronavirus Disease 2019 in Long-Term Care Facilities for the Elderly in San Francisco. *Clin Infect Dis.* 2021; 72:2018-2020.
 26. Kasper MR, Geibe JR, Sears CL, et al. An Outbreak of COVID-19 on an Aircraft Carrier. *N Engl J Med.* 2020; 383:2417-2426.
 27. Letizia AG, Ramos I, Obla A, et al. SARS-CoV-2 Transmission among Marine Recruits during Quarantine. *N Engl J Med.* 2020; 383:2407-2416.
 28. Campbell KH, Tornatore JM, Lawrence KE, et al. Prevalence of SARS-CoV-2 among Patients Admitted for Childbirth in Southern Connecticut. *JAMA - Journal of the American Medical Association.* 2020; 323:2520-2522.
 29. Hu Z, Song C, Xu C, et al. Clinical characteristics of 24 asymptomatic infections with COVID-19 screened among close contacts in Nanjing, China. *Sci China Life Sci.* 2020; 63:706-711.
 30. Huang C, Wang Y, Li X, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet.* 2020; 395:497-506.
 31. Bajema KL, Oster AM, McGovern OL, et al. Persons Evaluated for 2019 Novel Coronavirus - United States, January 2020. *MMWR Morb Mortal Wkly Rep.* 2020; 69:166-170.
 32. Chen N, Zhou M, Dong X, et al. Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. *Lancet.* 2020; 395:507-513.
 33. Wang D, Hu B, Hu C, et al. Clinical Characteristics of 138 Hospitalized Patients with 2019 Novel Coronavirus-Infected Pneumonia in Wuhan, China. *JAMA - J Am Med Assoc.* 2020; 323:1061-1069.
 34. Liu K, Fang YY, Deng Y, et al. Clinical characteristics of novel coronavirus cases in tertiary hospitals in Hubei Province. *Chin Med J (Engl).* 2020; 133:1025-1031.
 35. Yang X, Yu Y, Xu J, et al. Clinical course and outcomes of critically ill patients with SARS-CoV-2 pneumonia in Wuhan, China: a single-centered, retrospective, observational study. *Lancet Respir Med.* 2020; 8:475-481.
 36. Wu Z, McGoogan JM. Characteristics of and Important Lessons From the Coronavirus Disease 2019 (COVID-19) Outbreak in China: Summary of a Report of 72 314 Cases From the Chinese Center for Disease Control and Prevention. *JAMA.* 2020;323:1239-1242.
 37. Stokes EK, Zambrano LD, Anderson KN, et al. Coronavirus Disease 2019 Case Surveillance - United States, January 22–May 30, 2020. *MMWR Morb Mortal Wkly Rep.* 2020; 69:759-765.
 38. Petrilli CM, Jones SA, Yang J, et al. Factors associated with hospital admission and critical illness among 5279 people with coronavirus disease 2019 in New York City: Prospective cohort study. *BMJ.* 2020; 369:m1966.
 39. Williamson EJ, Walker AJ, Bhaskaran K, et al. Factors associated with COVID-19-related death using OpenSAFELY. *Nature.* 2020; 584:430-436.
 40. Cunningham JW, Vaduganathan M, Claggett BL, et al. Clinical Outcomes in Young US Adults Hospitalized with COVID-19. *JAMA Internal Medicine.* 2021; 181:379-81.
 41. Chow N, Fleming-Dutra K, Gierke R, et al. Preliminary Estimates of the Prevalence of Selected Underlying Health Conditions Among Patients with COVID-19 - US, February 12-March 28, 2020. *MMWR Morb Mortal Wkly Rep.* 2020; 69:382-386.
 42. Harrison SL, Fazio-Eynullayeva E, Lane DA, et al. Comorbidities associated with mortality in 31,461 adults with COVID-19 in the United States: A federated electronic medical record analysis. *PLoS Med.* 2020; 17:e1003321.
 43. Dai M, Liu D, Liu M, et al. Patients with cancer appear more vulnerable to SARS-CoV-2: A multicenter study during the COVID-19 outbreak. *Cancer Discov.* 2020; 10:783-791.
 44. Lighter J, Phillips M, Hochman S, et al. Obesity in patients younger than 60 years is a risk factor for COVID-19 hospital admission. *Clinical Infectious Diseases.* 2020; 71:896-897.
 45. Tartof SY, Qian L, Hong V, et al. Obesity and Mortality Among Patients Diagnosed With COVID-19: Results From an Integrated Health Care Organization. *Ann Intern Med.* 2020; 173:773-781.
 46. Kompaniyets L, Goodman AB, Belay B, et al. Body Mass Index and Risk for COVID-19–Related Hospitalization, Intensive Care Unit Admission, Invasive Mechanical Ventilation, and Death — United States, March–December 2020. *MMWR Surveill Summ.* 2021; 70:355-361.
 47. Lowe KE, Zein J, Hatipoğlu U, et al. Association of Smoking and Cumulative Pack-Year Exposure with COVID-19 Outcomes in the Cleveland Clinic COVID-19 Registry. *JAMA Internal Medicine.* 2021; 181:709-711.
 48. Guan W, Ni Z, Hu Y, et al. Clinical Characteristics of Coronavirus Disease 2019 in China. *N Engl J Med.* 2020; 382:1708-1720.
 49. Pormohammad A, Ghorbani S, Baradaran B, et al. Turner R, Mansournia MA, et al. Clinical characteristics, laboratory findings, radiographic signs and outcomes of 61,742 patients with confirmed COVID-19 infection: A systematic review and meta-analysis. *Microb Pathog.* 2020; 147:104390.

50. Velavan TP, Meyer CG. The COVID-19 epidemic. *Tropical Medicine and International Health*. 2020; 25:278-280.
51. Zheng YY, Ma YT, Zhang JY, et al. COVID-19 and the cardiovascular system. *Nature Reviews Cardiology*. 2020; 17:259-260.
52. Suresh Kumar VC, Mukherjee S, Harne PS, et al. Novelty in the gut: A systematic review and meta-analysis of the gastrointestinal manifestations of COVID-19. *BMJ Open Gastroenterology*. 2020; 7:e000417.
53. Yu X, Yang R. COVID-19 transmission through asymptomatic carriers is a challenge to containment. *Influenza and other Respiratory Viruses*. 2020; 14:474-475.
54. Zhu N, Zhang D, Wang W, et al. A Novel Coronavirus from Patients with Pneumonia in China, 2019. *N Engl J Med*. 2020; 382:727-733.
55. WHO. Report of the WHO–China Joint Mission on coronavirus disease 2019 (COVID-19). February 28, 2020. [https://www.who.int/publications-detail/report-of-the-who-china-joint-mission-on-coronavirus-disease-2019\(COVID-19\)](https://www.who.int/publications-detail/report-of-the-who-china-joint-mission-on-coronavirus-disease-2019(COVID-19)) (accessed March 25, 2020).
56. Wu Y, Xu X, Chen Z, et al. Nervous system involvement after infection with COVID-19 and other coronaviruses. *Brain, Behavior, and Immunity*. 2020; 87:18-22.
57. Casey K, Itean A, Nicolini R, et al. COVID-19 pneumonia with hemoptysis: Acute segmental pulmonary emboli associated with novel coronavirus infection. *Am J Emerg Med*. 2020; 38:1544.e1-1544.e3.
58. Rogers JP, Chesney E, Oliver D, et al. Psychiatric and neuropsychiatric presentations associated with severe coronavirus infections: a systematic review and meta-analysis with comparison to the COVID-19 pandemic. *The Lancet Psychiatry*. 2020; 7:611-627.
59. Oxley TJ, Mocco J, Majidi S, et al. Large-Vessel Stroke as a Presenting Feature of COVID-19 in the Young. *N Engl J Med*. 2020; 382:e60.
60. Yaghi S, Ishida K, Torres J, et al. SARS-CoV-2 and Stroke in a New York Healthcare System. *Stroke*. 2020; 51:2002-2011.
61. Merkler AE, Parikh NS, Mir S, et al. Risk of ischemic stroke in patients with COVID-19 versus patients with influenza. *medRxiv*. 2020; 2020.05.18.20105494.
62. Revzin M, Raza S, Srivastava NC, et al. Multisystem imaging manifestations of COVID-19, Part 2: From cardiac complications to pediatric manifestations. *Radiographics*. 2020; 40:1866-1892.
63. Rocke J, Hopkins C, Philpott C, et al. Is loss of sense of smell a diagnostic marker in COVID-19: A systematic review and meta-analysis. *Clin Otolaryngol*. 2020;45:914-922.
64. Luërs JC, Klumann JB, Guntinas-Lichius O. The COVID-19 pandemic and otolaryngology: What it comes down to? *Laryngorhinootologie*. 2020; 99:287-291.
65. Lechien JR, Chiesa-Estomba CM, De Siati DR, et al. Olfactory and gustatory dysfunctions as a clinical presentation of mild-to-moderate forms of the coronavirus disease (COVID-19): a multicenter European study. *Eur Arch Oto-Rhino-Laryngology*. 2020; 277:2251-2261.
66. Russell B, Moss C, Rigg A, et al. Anosmia and ageusia are emerging as symptoms in patients with COVID-19: What does the current evidence say? *Ecancermedicalscience*. 2020; 14:ed98.
67. Vaira LA, Salzano G, Deiana G, et al. Anosmia and Ageusia: Common Findings in COVID-19 Patients. *Laryngoscope*. 2020; 130:1787.
68. Tong JY, Wong A, Zhu D, et al. The Prevalence of Olfactory and Gustatory Dysfunction in COVID-19 Patients: A Systematic Review and Meta-analysis. *Otolaryngol Head Neck Surg*. 2020;163:3-11.
69. Wu P, Duan F, Luo C, et al. Characteristics of Ocular Findings of Patients with Coronavirus Disease 2019 (COVID-19) in Hubei Province, China. *JAMA Ophthalmol*. 2020; 138:575-578.
70. Chen L, Liu M, Zhang Z, et al. Ocular manifestations of a hospitalised patient with confirmed 2019 novel coronavirus disease. *Br J Ophthalmol*. 2020; 104:748-751.
71. Loffredo L, Pacella F, Pacella E, et al. Conjunctivitis and COVID-19: A meta-analysis. *Journal of Medical Virology*. 2020; 92:1413-1414.
72. Scalinci SZ, Trovato Battagliola E. Conjunctivitis can be the only presenting sign and symptom of COVID-19. *IDCases*. 2020; 20:e00774.
73. Recalcati S. Cutaneous manifestations in COVID-19: a first perspective. *Journal of the European Academy of Dermatology and Venereology*. 2020; 34:e212-e213
74. Ludvigsson JF. Systematic review of COVID-19 in children shows milder cases and a better prognosis than adults. *Acta Paediatr*. 2020 ;109:1088-1095.
75. Lu X, Zhang L, Du H, et al. SARS-CoV-2 Infection in Children. *N Engl J Med*. 2020; 382:1663-1665.
76. Rodrigues JCL, Hare SS, Edey A, et al. An update on COVID-19 for the radiologist - A British society of Thoracic Imaging statement. *Clinical Radiology*. 2020; 75:323-325.
77. Klok FA, Kruij MJHA, van der Meer NJM, et al Confirmation of the high cumulative incidence of thrombotic complications in critically ill ICU patients with COVID-19: An updated analysis. *Thromb Res*. 2020;191:148-150.
78. Danzi GB, Loffi M, Galeazzi G, et al. Acute pulmonary embolism and COVID-19 pneumonia: A random association? *European Heart Journal*. 2020; 41:1858.
79. Hare SS, Rodrigues JCL, Nair A, et al. The continuing evolution of COVID-19 imaging pathways in the UK: a British Society of Thoracic Imaging expert reference group update. *Clinical Radiology*. 2020; 75:399-404.
80. Grillet F, Behr J, Calame Pet al. Acute Pulmonary Embolism Associated with COVID-19 Pneumonia Detected with Pulmonary CT Angiography. *Radiology*. 2020; 296:E186-E188.
81. Davoodi L, Jafarpour H, Taghavi M, et al. COVID-19 Presented With Deep Vein Thrombosis: An Unusual Presenting. *J Investig Med High Impact Case Reports*.

- 2020; 8:2324709620931239.
82. Hu H, Ma F, Wei X, et al. Coronavirüs fulminant myocarditis treated with glucocorticoid and human immunoglobulin. *European Heart Journal*. 2021; 42:191.
 83. Topol EJ. COVID-19 can affect the heart. *Science*. 2020; 370:408-409.
 84. Radmanesh A, Derman A, Lui YW, et al. COVID-19-associated diffuse leukoencephalopathy and microhemorrhages. *Radiology*. 2020; 297:223-227.
 85. De Sanctis P, Doneddu PE, Viganò L, et al. Guillain-Barré syndrome associated with SARS-CoV-2 infection. A systematic review. *European Journal of Neurology*. 2020; 27:2361-2370.
 86. Boccia M, Aronne L, Cclia B, et al. COVID-19 and coagulative axis: Review of emerging aspects in a novel disease. *Monaldi Archives for Chest Disease*. 2020; 90
 87. Cao B, Wang Y, Wen D, et al. A Trial of Lopinavir-Ritonavir in Adults Hospitalized with Severe COVID-19. *N Engl J Med*. 2020; 382:1787-1799.
 88. Mehta P, McAuley DE, Brown M, et al. COVID-19: consider cytokine storm syndromes and immunosuppression. *The Lancet*. 2020; 395:1033-1034.
 89. Huang Y, Tan C, Wu J, et al. Impact of coronavirus disease 2019 on pulmonary function in early convalescence phase. *Respiratory Research*. 2020; 21:163.
 90. You J, Zhang L, Ni-jia-Ti M yi di li, et al. Anormal pulmonary function and residual CT abnormalities in rehabilitating COVID-19 patients after discharge. *Journal of Infection*. 2020; 81:e150-e152.
 91. Mo X, Jian W, Su Z, et al. Abnormal pulmonary function in COVID-19 patients at time of hospital discharge. *Eur Respir J*. 2020;55:2001217.
 92. van den Borst B, Peters JB, Brink M, et al. Comprehensive health assessment three months after recovery from acute COVID-19. *Clin Infect Dis*. 2020; ciaa1750.
 93. Puntmann VO, Carerj ML, Wieters I, et al. Outcomes of Cardiovascular Magnetic Resonance Imaging in Patients Recently Recovered from Coronavirus Disease 2019 (COVID-19). *JAMA Cardiol*. 2020; 5:1265-1273.
 94. Rajpal S, Tong MS, Borchers J, et al. Cardiovascular Magnetic Resonance Findings in Competitive Athletes Recovering from COVID-19 Infection. *JAMA Cardiology*. 2021; 6:116-118.