

DAFTAR PUSTAKA

1. Dos Santos WG. Natural history of COVID-19 and current knowledge on treatment therapeutic options. *Biomed Pharmacother.* 2020;129.
2. Li H, Liu SM, Yu XH, Tang SL, Tang CK. Coronavirus disease 2019 (COVID-19): current status and future perspectives. *Int J Antimicrob Agents.* 2020;55(5):1.
3. Djalante R, Lassa J, Setiamarga D, Sudjatma A, Indrawan M, Haryanto B, et al. Review and analysis of current responses to COVID-19 in Indonesia: period of january to march 2020. *Prog Disaster Sci.* 2020;6:2.
4. Hotline COVID-19 (2021). Peta sebaran COVID-19 di Indonesia. Available from: <https://covid19.go.id/peta-sebaran> - Diakses 12 Oktober 2021
5. Speth MM, Singer-Cornelius T, Oberle M, Gengler I, Brockmeier SJ, Sedaghat AR. Olfactory dysfunction and sinonasal symptomatology in COVID-19: prevalence, severity, timing, and associated characteristics. *Otolaryngol Head Neck Surg.* 2020;163(1):5–6.
6. Megawati Kiay, Olivia C.P Pelealu SKM. Anosmia pada Coronavirus disease 2019 (Covid-19). *J Biomedik.* 2021;13(2):168.
7. Mastrangelo A, Bonato M, Cinque P. Smell and taste disorders in COVID-19: From pathogenesis to clinical features and outcomes. *Neurosci Lett.* 2021;748:1–3.
8. Moein ST, Hashemian SMR, Mansourafshar B, Khorram-Tousi A, Tabarsi P, Doty RL. Smell dysfunction: a biomarker for COVID-19. *IFAR.* 2020;10(8):945–9.
9. Kanjanaumporn J, Aeumjaturapat S, Snidvongs K, Seresirikachorn K, Chusakul S. Smell and taste dysfunction in patients with SARS-CoV-2 infection: A review of epidemiology, pathogenesis, prognosis, and treatment options. *Asian Pac J Allergy Immunol.* 2020;38(2):69–77.
10. Farasani A. Biochemical role of serum ferritin and d-dimer parameters in COVID 19 diagnosis. *Saudi J Biol Sci.* 2021;28(12):7488–9.
11. Vaira LA, De Vito A, Deiana G, Pes C, Giovanditto F, Fiore V, et al.

- Systemic inflammatory markers and psychophysical olfactory scores in coronavirus disease 2019 patients: is there any correlation? *J Laryngol Otol.* 2021;135(8):723–8.
12. Fang X, Li S, Yu H, Wang P, Zhang Y, Chen Z, et al. Epidemiological, comorbidity factors with severity and prognosis. *Aging (Albany NY).* 2020;12(13):12498–500.
 13. Landis BN, Konnerth CG, Hummel T. A study on the frequency of olfactory dysfunction. *Laryngoscope.* 2004;114(10):1764–9.
 14. Jalessi M, Barati M, Rohani M, Amini E, Ourang A, Azad Z, et al. Frequency and outcome of olfactory impairment and sinonasal involvement in hospitalized patients with COVID-19. *Neurol Sci.* 2020;41(9):2333–6.
 15. Fortunato F, Martinelli D, Iannelli G, Milazzo M, Farina U, Di Matteo G, et al. Self-reported olfactory and gustatory dysfunctions in COVID-19 patients: a 1-year follow-up study in Foggia district, Italy. *BMC Infect Dis.* 2022;22(77):2.
 16. Susilo A, Rumende CM, Pitoyo CW, Santoso WD, Yulianti M, Herikurniawan H, et al. Coronavirus Disease 2019: Tinjauan Literatur Terkini. *J Penyakit Dalam Indones.* 2020;7(1):45–6.
 17. Atmojo joko tri, Akbar PS, Kuntari S, Yulianti I, Darmayanti AT. Definisi dan Jalur Penularan Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) atau COVID-19. *J Pendidik Kesehat.* 2020;9(1):59–61.
 18. Rahman S, Montero MTV, Rowe K, Kirton R, Kunik F. Epidemiology, pathogenesis, clinical presentations, diagnosis and treatment of COVID-19: a review of current evidence. *Expert Rev Clin Pharmacol.* 2021;14(5):2–3.
 19. Kementerian Kesehatan Republik Indonesia. Pedoman Pencegahan dan Pengendalian Coronavirus Disease (COVID-19) Revisi Ke-5. 2020;17–20.
 20. Hu B, Guo H, Zhou P, Shi ZL. Characteristics of SARS-CoV-2 and COVID-19. *Nat Rev Microbiol.* 2021;19(3):141–2.
 21. Shereen MA, Khan S, Kazmi A, Bashir N, Siddique R. COVID-19 infection : Emergence, transmission, and characteristics of human coronaviruses. *J Adv*

- Res. 2020;24:92–3.
22. Hikmawati I, Setiyabudi R. Epidemiology of COVID-19 in Indonesia: common source and propagated source as a cause for outbreaks. *J Infect Dev Ctries*. 2021;15(5):647.
 23. Harapan H, Itoh N, Yufika A, Winardi W, Keam S, Te H, et al. Coronavirus disease 2019 (COVID-19): A literature review. *J Infect Public Heal*. 2020;13(5):668.
 24. Cascell M, Rajnik M, Aleem A, Dulebohn SC, Napoli R Di. Features, evaluation, and treatment of Coronavirus (COVID-19). Statpearls publ. 2020;
 25. Sharma A, Farouk IA, Lal SK. COVID-19 : A Review on the Novel Coronavirus Disease. *Viruses*. 2021;13(2):1–25.
 26. Umakanthan S, Sahu P, Ranade A V., Bukelo MM, Rao JS, Abrahao-Machado LF, et al. Origin, transmission, diagnosis and management of coronavirus disease 2019 (COVID-19). *Postgrad Med J*. 2020;96(1142):754.
 27. Atzrodt CL, Maknojia I, McCarthy RDP, Oldfield TM, Po J, Ta KTL, et al. A Guide to COVID-19: a global pandemic caused by the novel coronavirus SARS-CoV-2. *FEBS J*. 2020;287(17):3638.
 28. Asadi S, Bouvier N, Wexler AS, Ristenpart WD. The coronavirus pandemic and aerosols: Does COVID-19 transmit via exhalation particles? *Aerosol Sci Technol*. 2020;54(6):2–3.
 29. Gao Y dong, Ding M, Dong X, Zhang J jin, Kursat Azkur A, Azkur D, et al. Risk factors for severe and critically ill COVID-19 patients: A review. *Allergy Eur J Allergy Clin Immunol*. 2021;76(2):429–30.
 30. Zhang J jin, Dong X, Cao Y yuan, Yuan Y dong, Yang Y bin, Yan Y qin, et al. Clinical characteristics of 140 patients infected with SARS-CoV-2 in Wuhan, China. *Allergy Eur J Allergy Clin Immunol*. 2020;75(7):1730–41.
 31. Mesquita R, Carlos L, Silva F, Fernanda J, Santos M, Farias T, et al. Clinical manifestations of COVID-19 in the general population : systematic review. *Wien Klin Wochenschr*. 2021;133(7–8):377–81.

32. Krishnan A, Hamilton JP, Alqahtani SA, Woreta TA. COVID-19: An overview and a clinical update. *World J Clin Cases*. 2021;9(1):8–23.
33. Zimmermann P, Curtis N. Coronavirus infections in children including COVID-19: An overview of the epidemiology, clinical features, diagnosis, treatment and prevention options in children. *Pediatr Infect Dis J*. 2020;39(5):355–68.
34. Alsharif W, Qurashi A. Effectiveness of COVID-19 diagnosis and management tools: A review. *Radiography*. 2021;27(2):682–4.
35. Rai P, Kuma BK, Deekshit VK, Karunasagar I, Karunasagar I. Detection technologies and recent developments in the diagnosis. *Appl Microbiol Biotechnol*. 2021;105(2):442–3.
36. Anka AU, Tahir MI, Abubakar SD, Alsabbagh M, Zian Z, Hamedifar H, et al. Coronavirus disease 2019 (COVID-19): an overview of the immunopathology, serological diagnosis and management. *Scand J Immunol*. 2021;93(4):2.
37. Fu L, Wang B, Yuan T, Chen X, Ao Y, Fitzpatrick T, et al. Clinical characteristics of coronavirus disease 2019 (COVID-19) in China: A systematic review and meta-analysis. *Int J Infect*. 2020;80(6):662–4.
38. Desai M, Oppenheimer J. The importance of considering olfactory dysfunction during the COVID-19 pandemic and in clinical practice. *J Allergy Clin Immunol Pr*. 2021;9(1):7–9.
39. Izquierdo-Dominguez A, Rojas-Lechuga MJ, Mullol J, Alobid I. Olfactory dysfunction in the covid-19 outbreak. *J Investig Allergol Clin Immunol*. 2020;30(5):317–26.
40. Pang KW, Chee J, Subramaniam S, Ng CL. Frequency and clinical utility of olfactory dysfunction in COVID-19: a systematic review and meta-analysis. *Curr Allergy Asthma Rep*. 2020;20(76):2.
41. Lop Gros J, Iglesias Coma M, González Farré M, Serra Pujadas C. Olfactory Dysfunction in COVID-19, a Review of the Evidence and Implications for Pandemic Management. *Acta Otorhinolaryngol (English Ed)*. 2020;71(6):381.

42. Brann DH, Tsukahara T, Weinreb C, Lipovsek M, Van Den Berge K, Gong B, et al. Non-neuronal expression of SARS-CoV-2 entry genes in the olfactory system suggests mechanisms underlying COVID-19-associated anosmia. *Sci Adv.* 2020;6(31):2.
43. Araújo L, Arata V, Figueiredo RG. Olfactory disorders in post-acute COVID-19 syndrome. *Sinusitis.* 2021;5(2):116–8.
44. Najaflou R, Majidi J, Asghari A, Aleemardani M, Kamrava SK, Simorgh S, et al. Mechanism of Anosmia Caused by Symptoms of COVID-19 and Emerging Treatments. *ACS Chemi Neurosci.* 2021;12(20):3799–3799.
45. Amin M Al, Dwi J. Klasifikasi kelompok umur manusia berdasarkan analisis dimensi fraktal box counting dari citra wajah dengan deteksi tepi canny. *J Ilm Mat.* 2017;2(6):34.
46. Pratiwi D, Sudrajad H, Hendradewi S, Setiamika M, Kandhi PW, Primadewi N, et al. Gambaran Klinis Telinga Hidung Tenggorokan Pasien SARS CoV-2 di RSUD Dr. Moewardi. *SmedJour.* 2022;5(1):62–3.
47. Lechien JR, Chiesa-Estomba CM, De Sisti DR, Horoi M, Le Bon SD, Rodriguez A, 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-Laryngol.* 2020;277(8):2253–5.
48. Mao Y, Ye B, Fan C, Wu J, Wang B, Shen Y, et al. Correlation Between Coronavirus Disease 2019 and Olfactory Dysfunction. *Public Heal Front.* 2022;10(March):2.
49. Mao L, Jin H, Wang M, Hu Y, Chen S, He Q, et al. Neurologic Manifestations of Hospitalized Patients with Coronavirus Disease 2019 in Wuhan, China. *JAMA Neurol.* 2020;77(6):683–90.
50. Tong JY, Wong A, Zhu D, Fastenberg JH, Tham T. The Prevalence of Olfactory and Gustatory Dysfunction in COVID-19 Patients: A Systematic Review and Meta-analysis. *Otolaryngol - Head Neck Surg (United States).* 2020;163(1):3–11.
51. Dan X, Wechter N, Gray S, Mohanty JG, Croteau DL, Bohr VA. Olfactory

- dysfunction in aging and neurodegenerative diseases. *Ageing Res Rev.* 2021;70:1–2.
52. Saussez S, Lechien JR, Hopkins C. Anosmia: an evolution of our understanding of its importance in COVID-19 and what questions remain to be answered. *Eur Arch Oto-Rhino-Laryngol.* 2021;278(7):2187–91.
 53. Meini S, Suardi LR, Busoni M, Roberts AT, Fortini A. Olfactory and gustatory dysfunctions in 100 patients hospitalized for COVID-19: sex differences and recovery time in real-life. *Eur Arch Oto-Rhino-Laryngol.* 2020;277(12):3520–1.
 54. Husain Q, Kokinakos K, Kuo YH, Zaidi F, Houston S, Shargorodsky J. Characteristics of COVID-19 smell and taste dysfunction in hospitalized patients. *Am J Otolaryngol - Head Neck Med Surg.* 2021;42(6):2–4.
 55. Castillo-López IY, Govea-Camacho LH, Rodríguez-Torres IA, Recio-Macías DA, Alobid I, Mullol J. Olfactory Dysfunction in a Mexican Population Outside of COVID-19 Pandemic: Prevalence and Associated Factors (the OLFAMEX Study). *Curr Allergy Asthma Rep.* 2020;20(12).
 56. Hidayani WR. Faktor Faktor Risiko Yang Berhubungan Dengan COVID 19 : Literature Review | Hidayani | Jurnal Untuk Masyarakat Sehat (JUKMAS). *J Untuk Masy Sehat.* 2020;4(2):125–6.
 57. Wehling E, Nordin S, Espeseth T, Reinvang I, Lundervold AJ. Unawareness of olfactory dysfunction and its association with cognitive functioning in middle aged and old adults. *Arch Clin Neuropsychol.* 2011;26(3):264–6.
 58. Kumar L, Kahlon N, Jain A, Kaur J, Singh M, Pandey AK. Loss of smell and taste in COVID-19 infection in adolescents. *Int J Pediatr Otorhinolaryngol.* 2021;142:2–3.
 59. Alcas O, Saldaña D, Triveño A, Salazar M, Mejía P. Association between olfactory dysfunction and COVID-19 severity: A prospective study in a highly complex hospital in Peru. *Ear Nose Throat J.* 2021;0(0):3–7.
 60. Moein ST, Hashemian SMR, Mansourafshar B, Khorram-Tousi A, Tabarsi P, Doty RL. Smell dysfunction: a biomarker for COVID-19. *Int Forum Allergy Rhinol.* 2020;10(8):946–9.

61. D'Ascanio L, Pandolfini M, Cingolani C, Latini G, Gradoni P, Capalbo M, et al. Olfactory Dysfunction in COVID-19 Patients: Prevalence and Prognosis for Recovering Sense of Smell. *Otolaryngol Head Neck Surg* (United States). 2021;164(1):2–4.
62. Li JH, Sun Y, Li MR, Yuan H, Yang CL, Huang CC, et al. A cross-sectional study of olfactory and taste disorders among COVID-19 patients in China. *Mil Med Res*. 2021;8(51):1–3.
63. Bhatia K, Zimmerman MA, Sullivan JC. Sex differences in angiotensin-converting enzyme modulation of ang (1-7) levels in normotensive WKY rats. *Am J Hypertens*. 2013;26(5):593–6.
64. Wang X, Zhang C, Xia X, Yang Y, Zhou C. Effect of gender on odor identification at different life stages: A meta-analysis. *Rhinology*. 2019;57(5):3–7.
65. de Melo EGM, Andrade RM, de Abreu de Vasconcellos SJ, dos Santos PL, Tanajura DM, Quintans-Júnior LJ, et al. Association between chemosensory dysfunctions and inflammatory biomarkers in patients with SARS-CoV-2 infection: a systematic review and meta-analysis. *Inflammopharmacology*. 2022;3–8.
66. Benkirane H, Heikel J, Laamiri FZ, Bouziani A, Lahmam H, Al-Jawaldeh A, et al. Study of Clinical and Biological Characteristics of Moroccan Covid-19 Patients With and Without Olfactory and/or Gustatory Dysfunction. *Front physiol*. 2020;11:7–9.
67. Pourbagheri-Sigaroodi A, Bashash D, Fateh F, Abolghasemi H. Laboratory findings in COVID-19 diagnosis and prognosis. *Clin Chim Acta*. 2020;510:477–80.
68. Yamada S, Asakura H. Coagulopathy and Fibrinolytic Pathophysiology in COVID-19 and SARS-CoV-2 Vaccination. *Int J Mol Sci*. 2022;23(6):3–4.
69. Lam M, Celicia L. Kadar C-Reactive Protein, D-Dimer, Dan Laktat Dehidrogenase Sebagai Prediktor Luaran Covid-19 Pada Anak: Sebuah Kajian Sistematis. *JIMKI J Ilm Mhs Kedokt Indones*. 2021;9(2):104.
70. Yu HH, Qin C, Chen M, Wang W, Tian DS. D-dimer level is associated with

- the severity of COVID-19. *Thromb Res.* 2020;195:222–4.
71. Samaranayake LP, Fakhruddin KS, Mohammad OE, Panduwawala C, Bandara N, Ngo HC. Attributes of dysgeusia and anosmia of coronavirus disease 2019 (COVID-19) in hospitalized patients. *Oral Dis.* 2022;28(1):893–6.
 72. Indriyani N, Sabri YS, Afriani A. Association Between Comorbidities and Outcome of COVID-19 Patients at dr. M. Djamil General Hospital Padang. *Respir Sci.* 2022;3(1):44–7.
 73. Kaya KS, Mazı EE, Demir ST, Tetik F, Tuna M, Turgut S. Relationship between progression of type 2 diabetes mellitus and olfactory function. *Am J Otolaryngol.* 2020;41(2):2–4.
 74. Sanke H, Mita T, Yoshii H, Yokota A, Yamashiro K, Ingaki N, et al. Relationship between olfactory dysfunction and cognitive impairment in elderly patients with type 2 diabetes mellitus. *Diabetes Res Clin Pr.* 2014;106(3):468–71.
 75. Gasmi A, Peana M, Pivina L, Srinath S, Gasmi Benahmed A, Semenova Y, et al. Interrelations between COVID-19 and other disorders. *Clin Immunol.* 2021;224:2–3.
 76. Widjaja JT, Kwee L, Giantara AK, Subagiyo HA, Edwin C, Putri RL. Karakteristik Pasien COVID-19 Rawat Inap di RS Immanuel Bandung, Indonesia Characteristics of Inpatient Covid-19 Patients at Immanuel Hospital Bandung, Indonesia. *J Med.* 2021;3(2):164–75.
 77. Talavera B, García-azorín D, Martínez-pías E, Trigo J, Hernández-pérez I, Valle-peñacoba G, et al. Anosmia is associated with lower in-hospital mortality in COVID-19. *J Neurol Sci.* 2020;419:5–6.