



## DAFTAR PUSTAKA

- Abd-Elsayed, A. 2019. Pain : A Review Guide., Springer Nature, Switzerland
- Abdel-Tawab, M., Werz, O., Schubert-Zsilavecz, M. 2011. Boswellia serrata : An overall assessment of in vitro, preclinical, pharmacokinetic and clinical data. *Clin Pharmacokinet*; 50 (6): 349-369.
- Allegri, M. et al. 2016. Mechanisms of low back pain: a guide for diagnosis and therapy. *F1000Research*, 3-7.
- Alluri, V.K., Dodd, S., Kilari, E.K., Golakoti, T., Sengupta, K. 2019. Toxicological assessment of a standardized Boswellia serrata gum resin extract. *International Journal of Toxicology SAGE Pub*;1-13.
- Ariady, R. 2018. Perbandingan efektivitas paracetamol dengan kombinasi paracetamol dan vitamin B untuk menurunkan intensitas nyeri akut non neuropatik. Departemen Neurologi UGM.
- Argoff, C.E., Dubin, A., Pilitsis, J.G. 2018. Pain Management Secrets Fourth Edition., Elsevier, USA.
- Astuti, A., Yudiyanta., Wibowo, S. 2021. Efektivitas Penambahan Boswellia serrata dan Curcuma longa untuk Menurunkan Intensitas Nyeri Punggung Bawah Non Neuropatik. Departemen Neurologi UGM.
- Basch, E. et al. 2004. Boswellia: An Evidence-Based Systematic Review by the Natural Standard Research Collaboration. *Journal of Herbal Pharmacotherapy*, 4(3):64-72.
- Bernstein, I.A., Malik, Q., Carville, S., Ward, S. 2017. Guidelines Low back pain and sciatica: summary of NICE guidance. *BMJ*, 1-3.
- Bjorland, S., Gjerstad, J., Schistad, E., Swanson, D.M., Roe, C. 2019. Persistent lumbar radicular and low back pain; impact of genetic variability versus emotional distress. *BMC Res Notes*. 12:547.
- Boxem, K.V. et al. 2010. Evidence-Based Interventional Pain Medicine according to Clinical Diagnoses: Lumbosacral Radicular Pain. *World Institute of Pain*, 1-6.
- Calderon-Ospina CA, Nava-Mesa MO, Ariza CA. 2019. Effect of combined diclofenac and B vitamins (thiamine, pyridoxine, and cyanocobalamin) for low back pain management : systematic review and meta-analysis. *J Oxford Pain Med*, vol 0;1-16.



Campbell, W.W., Barohn, R.J. 2020. DeJong's The Neurologic Examination Eighth Edition., Wolters Kluwer, Philadelphia.

Chandran B, Goel A. 2012. A Randomized, Pilot Study to Assess the Efficacy and Safety of Curcumin in Patients with Active Rheumatoid Arthritis. *PHYTOTHERAPY RESEARCH Phytother. Res.* Published online in Wiley Online Library.

Charlier, C., Michaux, C. 2003. Dual inhibition of cyclooxygenase-2 (COX-2) and 5-lipoxygenase (5-LOX) as a new strategy to provide safer non-steroidal anti-inflammatory drugs. *European Journal of Medicinal Chemistry*, 38: 645-659.

De Oliveira Júnior, J. O., Portella Junior, C. A., Cohen, C. P. 2016. Inflammatory mediators of neuropathic pain, Mediadores inflamatórios na dor neuropática. *São Paulo*, 17: Suppl 1: S35-42.

Dower, A., Davies, M.A., Ghahreman, A. 2019. Pathologic Basis of Lumbar Radicular Pain. *World Neurosurgery* 128: 114-121.

Dworkin, R.H., Turk, D.C., Wyrwich, K.W., Beaton, D., Cleeland, C.S., Farrar, J.T., et al. 2008. Consensus Statement : Interpreting the Clinical Importance of Treatment Outcomes in Chronic Pain Clinical Trials: IMMPACT Recommendations. *The Journal of Pain*, 9(2) :105-121.

Eckeli FD, Teixeira RA, Gouvea AL. 2016. Neuropathic pain evaluation tools. *J. Rev Dor. São Paulo*, 17(Suppl 1):S20-2.

European Medicines Agency. 2009. Assessment Report On Curcuma Longa L. Rhizoma.

Govind, J. 2004. Lumbar radicular pain. *Australian Family Physician*, 33 (6) : 409-411.

Hamidpour, R., Hamidpour, S., Hamidpour, M., Sohraby, M., Hamidpour, R. 2015. Turmeric (Curcuma longa): from a variety of traditional medicinal applications to its novel roles as active antioxidant, anti-inflammatory, anti-cancer, and anti-diabetes. *International Journal of Pharmacology, Phytochemistry and Ethnomedicine*, 1, 37-45.

Hewlings, S.J., Kalman, D.S. 2017. Curcumin: a review of its' effects on human health. *Foods Journal*. pp.1-11.

Jurenka, S.J. 2009. Anti-inflammatory Properties of Curcumin, a Major Constituent of Curcuma longa: A Review of Preclinical and Clinical Research. *Alternative Medicine Review*, 14(2), pp. 141-153.



- Karcioglu, O., Topacoglu, H., Dikme, O., Dikme, O. 2018. A systematic review of the pain scales in adults: which to use?. *American Journal of Emergency Medicine.* (36):707–714.
- Katzung BG, Master SB, Trevor AJ. 2012. Basic and Clinical Pharmacology. New York : McGraw-Hill Medical
- Kew, Y., Tan, C.Y., Ng, C.J., Thang, S.S., Tan, L.H., Khoo, Y.K., et al. 2017. Prevalence and associations of neuropathic pain in a cohort of multi-ethnic Asian low back pain patients. *Rheumatol Int.* 37:633–639.
- Kizhakkedath, R. 2013. Clinical evaluation of a formulation containing curcuma longa and boswellia serrata extracts in the management of knee osteoarthritis. *Molecular Medicine Reports* (8):1542-1548.
- Laroche, F., Perrot, S. 2013. Managing Sciatica and Radicular Pain in Primary Care Practice., Springer Healthcare, London.
- Lazzaro, F., Loiero, M. 2015. Comparison between two treatment schedules with Destior® Bridge, a fixed combination of R(+) thioctic acid and phospholipid formulation of Boswellia serrata (Casperome®), in the treatment of cervical and lumbar spine radiculopathy. *Giornale Italiano di Ortopedia e Traumatologia*, 41:80-89.
- Levin, K., Philip, Armon, C.2019. Acute lumbosacral radiculopathy: Treatment and prognosis. [Updated June 2019; Cited 2020 March 23]. Available From : <https://www.uptodate.com/contents/acute-lumbosacral-radiculopathy-treatment-and-prognosis>
- Lin, J.H, Chiang, Y.H., Chen, C.C. 2014. Lumbar radiculopathy and its neurobiological basis. *World J Anesthesiol*, 3(2) : 162-173.
- Lombana, W.G., Vidal, S.E.G. 2011. Pain and gender differences : A clinical approach. *Rev Colomb Anestesiol*, 40(3) : 207-212.
- Macintyre, P.E., Walker, S.M., Rowbotham, D.J. 2008. Acute Pain. Clinical Pain Management second edition., Hodder Arnold, London.
- McMahon, S.B., Koltzenburg, M., Tracey, I., Turk, D.C. 2013. *Wall and Melzack's Textbook of Pain : Sixth Edition*. Elsevier Saunders.
- Meliala, L.KRT., et al. 2003. *Nyeri Punggung Bawah*. Kelompok Studi Nyeri Perhimpunan Dokter Spesialis Saraf Indonesia (PERDOSSI).
- Merolla, G., Dellabianca, F., Ingardia, A., Paladini, P., Porcellini, G. 2015. Co-analgesic therapy for arthroscopic supraspinatus tendon repair pain using a dietary supplement containing Boswellia serrata and Curcuma longa: a



prospective randomized placebo-controlled study. *J. Musculoskeletal Surg Springer*; pp 1-10.

Merolla, G., Cerciello, S. 2017. Conservative and Postoperative Coanalgesic Therapy for Upper Limb Tendinopathy Using Dietary Supplements. *Nutrients in pain in prevention and treatment*, 235-238.

Murray, CJ. 2018. Global, regional, and national incidence, prevalence, and years lived with disability for 354 disease and injuries for 195 countries and territories, 1990-2017: a systematic analysis for the global burden of disease study 2017. *Lancet* (392); 1789-858.

Olsen, M.F., Bjerre, E., Hansen, M.D., Tendal, B., Hilden, J., Hrobjartsson, A. 2018. Minimum clinically important differences in chronic pain vary considerable by baseline pain and methodological factors: systematic review of empirical studies. *Journal of Clinical Epidemiology* : 1-20.

Olsen, Mette Frahm, et al. "Pain Relief That Matters to Patients: Systematic Review of Empirical Studies Assessing the Minimum Clinically Important Difference in Acute Pain." *BMC Medicine*, vol. 15, no. 1, 20 Feb. 2017, 10.1186/s12916-016-0775-3. Accessed 16 Oct. 2020.

Patel, E.A., Perloff, M.D. 2018. Radicular Pain Syndromes: Cervical, Lumbar, and Spinal Stenosis. *Semin Neurol*, 38 (6):634–639.

Patel, H.D., Uppin, R.B., Nairu, A.R. 2019. Efficacy and safety of combination of NSAIDs and muscle relaxants in the management of acute low back pain. *J Pain Ther*, vol 8: 121-132.

Patel, K.V., Allen, R., Burke, L., Farrar, J.T., Gewandter, J.S., Gilron, I., et al. 2020. Evaluation of Composite Responder Outcomes of Pain Intensity and Physical Function in Neuropathic Pain Clinical Trials: An ACTTION Individual Patient Data Analysis. *Pain*, 159(11): 2245–2254.

Perhimpunan Dokter Spesialis Saraf Indonesia (PERDOSSI). 2019. *Konsensus Nasional Penatalaksanaan Nyeri*. Ar-Ruzz Media, Yogyakarta.

Pilkhwal, N., Dhaneshwar, S. 2019. An Update On Pharmacological Profile Of Boswellia Serrata. *Asian Journal Of Pharmaceutical And Clinical Research*,12 (5) : 49-56.

Pinho-Ribeiro, F.A., Waldiceu, A., Verri, Jr., Isaac, M. 2017. Feature Review : Nociceptor Sensory Neuron–Immune Interactions in Pain and Inflammation. *Trends in Immunology*. Vol. 38;No. 1 page 5-19.

Pinzon, R.T., Sanyasi, R.D. 2018. Curcuma longa for arthritis pain : systematic review of randomized controlled trial study. *Asian Journal of Pharmacy and Pharmacology*; 4(5): 528-534.



Pinzon, RT, Sanyasi RD, Pramudita EA, Periska SD. 2019. The benefit of curcuma longa and boswellia serrata to improve quality of life in osteoarthritis patients : a randomized controlled trial. *International Journal of Research in Orthopedics*, 5(6):1005-1014.

Prabhavathi, K., Shobha, U., Radhika, S., Rani, P. 2014. A randomized, double blind, placebo controlled, cross over study to evaluate the analgesic activity of Boswellia serrata in healthy volunteers using mechanical pain model. *Indian J Pharmacol*. 46(5): 475-479.

Ropper, A., Samuels, M., Klein, J., Prasad, S. Adams and Victor's Principles of Neurology 11<sup>th</sup> edition. 2019. McGraw-Hill education.

Roy, N.K., Day, R.O., Shi, K. 2019. An Update on Pharmacological Potential of Boswellic Acids against Chronic Diseases. *International Journal of Molecular Sciences*. pp. 1-27. DOI:10.3390/ijms20174101.

Santiago, S.V., et al. 2016. The effectiveness of natural diary heptanoids against trypanosoma cruzi: cytotoxicity, ultrastructural alterations and molecular modelling studies. *Plos One*. pp. 1-20.

Sharma, C.V., Mehta, V. 2013. Paracetamol: mechanisms and updates. *Anaesthesia, Critical Care & Pain*, 14 (4) 153-157.

Shiri, R., Falaj-Hassani, K., Heliovaara, M., Solovieva, S., Amiri, S., Lallukka, T. 2019. Risk factors for low back pain: A population-based longitudinal study. *Arthritis Care Res*, 71 (2):290-299.

Thapa, P., Lakhey, R.B., Shrestha, B.L. 2020. Clinical Profile of Patients Presenting with Low Back Pain to Out Patient Department of a Tertiary Level Hospital. *JIOM Nepal*, 42(3):87-91.

Treede, RD. 2018. The International Association for the Study of Pain definition of pain: as valid in 2018 as in 1979, but in need of regularly updated footnotes. *Journal of Universitat Heidelberg, Germany*; e643:1-3.

Uruts I, Burshtein A, Sharma M, Testa L, Gold PA, Orhurhu V. 2019. Low back pain, a comprehensive review : pathophysiology, diagnosis, and treatment. *Current Pain and Headache Report* (23); 1-10.

Wambeke, P.V. et al. 2017. Low Back Pain And Radicular Pain: Assessment And Management. *KCE report* 287, 38-113.

Wheeler, A.H., Murrey, D.B. 2002. Chronic Lumbar Spine and Radicular Pain: Pathophysiology and Treatment. Charlotte Spine Center. *Pain and Orthopedic Neurology*, 98-103.



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**EFEKTIVITAS KOMBINASI BOSWELLIA SERRATA DAN CURCUMA LONGA UNTUK MENURUNKAN  
INTENSITAS NYERI  
PUNGGUNG BAWAH RADIKULAR**

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Wongrakpanich, S., Wongrakpanich, A., Melhado, K., Rangaswami, J. 2017. A Comprehensive Review of Non-Steroidal AntiInflammatory Drug Use in The Elderly. *Aging and Disease*, 9 (1) : 143-150.

Xiao, L., Ding, M., Fernandez, A., Zhao, P., Jin, L., Li, X. 2017. Curcumin alleviates lumbar radiculopathy by reducing neuroinflammation, oxidative stress, and nociceptive factors. *European Cells and Materials* (33):279-293.

Yam, M.F. et al. 2018. General Pathways of Pain Sensation and the Major Neurotransmitters Involved in Pain Regulation. *Int. J. Mol. Sci.* 2164 page 1-23.

Yudiyanta, Khoirunnisa, N., Novitasari, R.W. 2015. Assessment Nyeri. CDK-226, 42:3.