

DAFTAR PUSTAKA

- ABAQUS 6.12., 2012, *Analysis User's Manual*, Dassault Systemes Simulia Corp., Providence, RI., USA.
- Agarwal, S., Nagpal, R., dan Singh, UP, 2018, NiTi Endodontics: Contemporary Views Reviewed, *Austin J Dent.* 5(4): h.1112.
- Ahamed, S.B.B.A., Vanajassun, P.P., Rajkumar, Mahalaxmi, S., 2018, Comparative Evaluation of Stress Distribution in Experimentally Designed Nickel-titanium Rotary Files with Varying Cross Sections: A Finite Element Analysis, *Journal of Endodontics*, Vol.44(4), h.654-4.
- Alchazin, Syaiful, 2011, *Modul Training Autodesk Inventor 2012*, Lapan, Bogor.
- Alfadley dan Abdulmohsen, 2020, Comparison of cyclic fatigue resistance of three NiTi glide path files with different cross-sectional geometric characteristics: An in vitro experimental study. *Journal of International Oral Health*, vol. 12, no. 2, h. 158.
- Alhashimi, R., dan Al-huwaizi, H., 2015, Iraqi Endodontic Society.
- Ansari, I., dan Maria, R., 2012, Managing curved canals, *Contemp Clin Dent.* 2012 Apr-Jun; 3(2): h. 237–41.
- Aoun C.M., Nehme W.B., Naaman A.S., Khalil I.T., 2017, Review and Classification of Heat Treatment Procedures and Their Impact on Mechanical Behavior of Endodontics Files., *International Journal of Current Research* Vol 9, Issue 05, h.51300-6.
- Arens, F.C., Hoen, M.M., Steiman, H.R., Dietz, G.C., Jr., 2003, Evaluation of single-use rotary nickel-titanium instruments. *J Endod*, 29, h. 664–6.
- Atmeh A.R., dan Watson T.F., 2016, Root Dentine and Endodontic Instrumentation: Cutting Edge Microscopic Imaging, *Interface Focus*, 6: 20150113.
- Badami V., dan Ahuja B., 2014, Biosmart Materials: Breaking New Ground in Dentistry, *Hindawi Publishing Corporation The Scientific World Journal*.
- Baruah K., Augustine V., Tiwari R, Singh S., Dixit H., dan Thmpala VK., 2017, Advances in Rotary Endodontics. A Review, *J Adv Med Dent Scie Res*; 5(7), h.17-22.
- Bathe, K.J., 2014, *Finite element procedures. Second edition.* h. 338-566, Prentice Hall, Pearson Education, Inc, United States of America.

- Brown, L. J., 1997, Characterization of MSC / NASTRAN & MSC / ABAQUS Elements for Turbine Engine Blade Frequency Analysis An accuracy study of MSC / NASTRAN and MSC / ABAQUS three dimensional element types was conducted for turbine engine blade natural frequency analysis . L', *MSC 1997 Aerospace Uses' Conference Proceedings*, h. 1–15.
- Burns R.C., 1994, *Pathways of The Pulp*. 6 ed.: Mosby; h. 179-216, Philadelphia.
- Caicedo, D.R., dan Clark, S.J., 2016, HyFlex ® CM rotary files : an excellent innovation for endodontic treatment, *Endodontic Practice*, Vol 4 No.6, h.11-7.
- Carvalho, F.M.A, Oliveira Gonçalves, L.C., Marques, A.A.F., Alves, V., Silveira Bueno, C.A. dan Martin, A.S., 2016, Cleaning Effectiveness of a Reciprocating Single-file and a Conventional Rotary Instrumentation System, *The Open Dentistry Journal*, 10, h.704-13.
- Diemer, F., dan Calas, P., 2006, Effect Of Pitch Length On The Behavior Of Rotary Triple Helix Root Canal Instruments, *Journal Of Endodontics*, Vol. 30, No. 10, h. 716-7.
- El-anwar, M. I., Yousief, S.A., Soliman, T.A., Saleh, M.M., 2015, A finite element study on the mechanical behavior of reciprocating endodontic files', *Brazilian Dental Journal*, 14(1), h. 52–9.
- El-anwar, M. I., Yousief, S.A., Soliman, T.A., Saleh, M.M., 2016, Finite Element Study on Continuous Rotating versus Reciprocating Nickel-Titanium Instruments', *Brazilian Dental Journal*, 27, h. 436–41.
- Faizin, A., 2010, Analisis Konsentrasi Tegangan pada Gelagar Berlubang Menggunakan Pemodelan dan Eksperimen. *Prosiding SENTIA 2011*, Vol 3(1), h. 26.
- Fayyad, D., EL Ashry, S. dan Ibrahim, A., 2018, Stress Analysis Of Two Ni-Ti Rotary Files In Simulated Root, *Egyptian Dental Journal*, Vol. 63, h.833-40.
- Fernandes, F. M. B., Oliveira, J. P., Machado, A. M., Alves, A. R., dan Schell, N., 2015, Effect of heat treatment on K3, K3XF and MTwo endodontic files, *MATEC Web of Conference*.
- Gagliardi, J., Versaini, M.A., Neto, M.D.S., Plazas-Garzon, A., Basriani, B., 2015, Evaluation of the Shaping Characteristics of ProTaper Gold, ProTaper Next and ProTaper Universal in Curved Canals, *Journal of Endodontics*, 41(10).

- Galal, M., dan Hamdy, T.M., 2020, Evaluation of stress distribution in nickeltitanium rotary instruments with different geometrical designs subjected to bending and torsional load: a finite element study, *Bulletin of the National Research Centre*, Vol. 44:121, h. 1-11.
- Gambarini, g., Gergi, R., Naaman, A., Osta, N., Al Sudani, D., 2012, Cyclic fatigue analysis of twisted file rotary NiTi instruments used in reciprocating motion, *International Endodontics Journal*, 45(9): h.802-6.
- Goel, A., Radhika, R., Rajkumar, B., Choudari, T.M., Boruah, L., Gupta, V., Arora, R., dan Bhatt, A., 2015, An Overview of Modern Endodontics Niti Systems, *Research Paper*, Volume: 4/issues: 4. ISSN No. 2277-8179.
- Hibbeler, R.C., 2001, *Mechanics Of Materials*. Eighth Edi. Edited by Daniel Sandin. Pearson Prentice Hall. United States of America.
- Ho Kim, N., 2000, *Finite Element Analysis & Design*, edisi 2, Springer, New York.
- Hu, T., Cheng, R., Shao, M., Yang, H., Zang, R., Gao, Q., dan Guo, L., 2010, Application of Finite Element Analysis in Root Canal Therapy.
- Ibrahim, A.A., Salma Hassan El Ashry, S.H., Fayyad, D.M., 2017, Stress Analysis Of Two Ni-Ti Rotary Files In Simulated Root Canals Using Finite Element Method - Part Ii: Root Analysis, *Egyptian Dental Journal*, Vol. 63, No. 2, h. 841-8.
- Ingle, J., Himel V.T, Hawrish C.E., Gerald N., Glickman, Serene, T., Rosenberg, P.A., 2002, *Endodontic Cavity Preparation*, 5 ed. Hamilton: BC Decker Inc.; h. 540-45.
- Khasnis, S.A., Kar, P.P., Kamal, A., Patil, J.D., 2018, Rotary science and its impact on instrument separation: A focused review. *J. Conserv. Dent.*, (7):21, h.116-24.
- Kim, T.O., Cheung, G. S. P., Lee, J. M., Kim, B. M., Hur, B., dan Kim, H.C., 2009, Stress distribution of three NiTi rotary files under bending and torsional conditions using a mathematic analysis', *International Endodontic Journal*, 42, h. 14–21.
- Kwak, S.W., Ha, J.H., Lee, C.J., El Abed, R., Abu, I.H., Kim, H.C., 2016, Effects of Pitch Length and Heat Treatment on the Mechanical Properties of the Glide Path Preparation Instruments, *Journal of Endodontic*, h. 1-5.
- Kuzakanani, M., 2018, Review Articles: Nickel–Titanium Rotary Instruments: Development of the Single-File Systems, *Journal of International Society of Preventive and Community Dentistry*, 8(5), h.386- 90.

Laporan Hasil Riset Kesehatan Dasar (Riskesdas) Nasional, 2018, Kementerian Kesehatan RI, Jakarta.

Lopes, H.P., Ferreira, A.A.P., Elias, C.N., Moreira, E.J.L., Oliveira, J.C.M., Siqueira, J.F., 2009, Influence of Rotational Speed on Cyclic Fatigue of Rotary Nickel-Titanium Endodontic Instruments, *Journal of Endodontic*, Vol. 35, No. 7, h. 1013-6.

Lopes, H.P., Lopes, W.S.P., Vieira, V.T.L., Elias, C.N., dan Cunha, R.S., 2016, Evaluation of The Flexibility, Cyclic Fatigue, and Torsional Resistance of Rotary Endodontic Files Made of Different Nickel-Titanium Alloys, *Int J Dentistry Oral Sci*. S8:001, h.1-5.

Mangat, P., Rain, A.A., Vaidya, S., Bhattacharya, A., Dhingra, A., Sharma, V., 2018, *Torque and Speed in Endodontics: A Review*, *International Journal of Oral Care and Research*, Vol. 6(2), h. 97-100.

Maravić, T., Vasiljević, D., Kantardžić, I., Lainović T., Lužanin, O., dan Blažić L., 2018, Influence of restorative procedures on endodontically treated premolars: Finite element analysis of a CT-scan based three-dimensional model'. *Dental Materials Journal*, h. 1-8.

Medha, A., Patil, S., dan Bandekar, S., 2014, Evaluation of Forces Generated on Three Different Rotary File Systems in Apical Third of Root Canal using Finite Element Analysis, *Journal of Clinical and Diagnostic Research*.

Metzger Z.V.I., Basrani B., dan Goodis H.E., 2006, *Instruments, Materials, dan Devices*, dalam: Hargreaves KM., dan Cohen S., Editors. *Cohen's Pathways of The Pulp Tenth Edition*, Mosby Inc., an affiliate of Elsevier Inc, h.223-43.

Moazzami, F., Khojastepour, L., Nabavizadeh, M., dan Habashi, M.S., 2015, Cone-Beam Computed Tomography Assessment of Root Canal Transportation by Neoniti and Reciproc Single-File Systems, *Iranian Endodontics Journal*, 11(2), h.96-100.

Neto, I.M., Borges, A.H., Guedes, O.A., de Oliveira, D., Pedro, F.L.M., dan Estrela, C., 2017, Root Canal Transportation and Centering Ability of Nickel-Titanium Rotary Instruments in Mandibular Premolars Assessed Using Cone-Beam Computed Tomography, *The Open Journal Dentistry*, 11, h. 71-8.

Nurliza, C., Dennis, Abidin, T., 2014, Prinsip-Prinsip Dasar Preparasi Saluran Akar (Basic Principles Of Chemomechanical Preparation Of Root, *Dentika Dental Journal*, 18(No. 2), h. 177–84.

- Parashos, P., and Messer, H. H., 2006, Rotary NiTi Instrument Fracture and its Consequences, *Journal of Endodontics*, 32(11), h. 30–4.
- Pedulla, E., Plotino, G., Grande, M.N., Scibilia¹, M., Pappalardo¹, A., Malagnino, V. A., Rapisarda¹, E., 2014., Influence of rotational speed on the cyclic fatigue of Mtwo instruments, *International Endodontic Journal*, Vol. 47, h. 514–519.
- Peters, O.A., Boessler, C., Paque, F., 2010, Root Canal Preparation with a Novel Nickel-Titanium Instrument Evaluated with Micro-computed Tomography: Canal Surface Preparation Over Time, *Journal of Endodontics*, Vol 36 (6), h.1068-72.
- Pereira, F., Martins, R.F., Ginjeira, A., 2018, Cyclic Fatigue Resistance of ProTaper Gold and Comparison with ProTaper Universal Instruments, *Rev Port Estomatol Med Dent Cir Maxilofac.* 59(2), h.75-9.
- Plotino G., Aly Ahmed, H.M., Grande, N.M., Cohen, S., dan Bukiet, S., 2015, Current Assessment of Reciprocation in Endodontic Preparation: A Comprehensive Review: Part II: Properties and Effectiveness, *Article in Journal of Endodontics*.
- Rzhanov E.A., dan Belyaeva T.S., 2012, Design Features of Rotary Root Canal Instruments, *ENDO (Long Engl)*; 6(1), h.29-39.
- Ruddle, C.J., 2016, Single-File Shaping Technique Achieving a Gold Medal Result, *Advance Endodontic*, h.1-7.
- Sanghvi Z., dan Mistry K., 2011, Design Features of Rotary Instruments in Endodontics, *The Journal of Ahmedabad Dental College and Hospital*; 2(1).
- Schäfer E, Tepel J., 2001, Relationship Between Design Features of Endodontic Instruments and Their Properties. Part 3. Resistance to Bending and Fracture. *Journal of Endodontics*, 27(4), h.299-303.
- Singh, H., 2018, Hyflex CM and EDM Files : Revolutionizing the Art and Science of Endodontics, *Journal of Dental Health, Oral Disorders and Therapy*, 5(7), h. 1–5.
- Srivastava, S., Alghadouni, M. A. and Alotheem, H. S., 2018, Current strategies in metallurgical advances of rotary niti instruments : a review, *Journal of Dental Health, Oral Disorders and Therapy*, 9(1), h. 72–77.
- Suffridge C, Hartwell G, and Walker T., 2003, Cleaning Efficiency of Nickel-Titanium GT and .04 Rotary Files when used in a Torque-Controlled Rotary Handpiece. *J Endod.*, Vol.29(5), h.346–8.

- Swain, M. V and Xue, J., 2014, State of the Art of Micro-CT Applications in Dental Research State of the Art of Micro-CT Applications in Dental Research, *International Journal of Oral Science*. 1(4), h.177–88.
- Timotius, K. H., 2017, *Pengantar Metodologi Penelitian : Pendekatan Manajemen Pengetahuan untuk Perkembangan Pengetahuan*. 1st ed. CV. Andi offset, Yogyakarta.
- Torabinejad, M., dan White, S.N., 2016, Endodontic treatment options after unsuccessful initial root canal treatment'. *JADA*, h. 1–7.
- Tzanetakakis G.N., Kontakiotis E.G., Maurikou D.V., Marzelou M.P., 2008, Prevalence and management of instrument fracture in the postgraduate endodontic program at the Dental School of Athens: a five-year retrospective clinical study. *J Endod*. Vol.34, h. 675-8.
- Utama, D.W., 2014, *Hands On Autodesk Inventor 2014*, Universitas Tarumanegara, Indonesia.
- Versluis, A., Kim, H.C., Lee, W.C., Kim, B.M., Lee,C.J., 2012, Flexural Stiffness and Stresses in Nickel-Titanium Rotary Files for Various Pitch and Cross-sectional Geometries, *Journal of Endodontic*, Volume 38, Number 10, h. 1339-403.
- Weaver, William, dan Johnston, P.R., 1993, *Structural Dynamics by Finite Element*, Prentice Hall, Amerika Serikat.
- West, J.D., Roane, J.B., Goerig, A.C., 1994, Cleaning and Shaping the Root Canal System. In: Cohen S, Burns RC, editors. *Pathways of The Pulp*. 6 ed., Mosby, Philadelphia, h. 179-216.
- Widodo S, 2006, *Modul Kuliah Mekanika Teknik 3*, Departemen Pendidikan Nasional Universitas Negeri Yogyakarta.
- Yared, G., 2011, *Canal Preparation with Only One Reciprocating Instrument without Prior Hand Filing: a New Concept*. Toronto: Iniversity of Toronto.
- Young, G.R., 2007, The Principle of Technique for Cleaning Root Canals. *Australian Dental Journal Supplement*, 52: (1 Suppl), h.S52-S63.
- Yilmaz, K., Uslu, G., Ozyurek, 2017, *In vitro* comparison of the cyclic fatigue resistance of HyFlex EDM, One G, and ProGlider nickel titanium glide path instruments in single and double curvature canals, *Restor Dent Endod*. , 42(4), h.282-9.

Yuan, G., dan Yang, G., 2018, Comparative evaluation of the shaping ability of single-*file* system versus multi-*file* system in severely curved root canals, *Journal of Dental Sciences*, 13, h.37-42.

Zhao D, Shen Y, Peng B, et al. Root Canal Preparation of Mandibular Molars with 3 Nickel-Titanium Rotary Instruments: A Micro-Computed Tomographic Study, *J Endod*. 2014;40(11), h.1860-4.

Zupanc, J., Vahdat-Pajouh, N., dan Schafer, E., 2018, New Thermomechanically Treated NiTi Alloys – a Review, *International Endodontic Journal*, 51, h. 1088-103.