

Abstract

Dysmenorrhoe. Schulmedizinische Grundlagen sowie Wirksamkeit von osteopathischen und manuellen Behandlungsmöglichkeiten. Eine Literaturanalyse

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In dieser Literaturanalyse wurden nach einer definierten Literaturrecherche Studien und Dokumentationen, die auf klinischen Anwendungen beruhen und sich mit osteopathischen oder manuellen Behandlungen bei Dysmenorrhoe beschäftigen, eingeschlossen. Die Studien wurden im Hinblick auf Planung/Design, Durchführung, Auswertung und Ergebnisse detailliert dargestellt.

Ein Schwerpunkt der veröffentlichten Studien liegt im chiropraktischen Bereich mit dem Fokus auf spinalen Manipulationen. Ein zweiter Schwerpunkt sind Studien mit osteopathischen, meist individuell auf den Patienten abgestimmten, Behandlungen. Unabhängig vom Schwerpunkt ist in den meisten Studien bei Behandlung eine Reduktion menstrualer Schmerzen zu beobachten. Der am häufigsten untersuchte Wirksamkeitsparameter ist die Schmerzintensität, häufig erfasst in einem validierten Patientenfragebogen mit visueller oder numerischer Schmerzskala.

Erste Daten und Erfahrungsberichte deuten darauf hin, dass die Verringerung der Schmerzen nach der Behandlungssequenz anhält. In zukünftigen Studien mit einer mehrmonatigen Nachbeobachtungszeit sollte dies noch weiter untersucht werden.

Mehrere kleinere Studien ohne Kontrollgruppe zeigten positive Effekte einer osteopathischen Behandlung bei primärer Dysmenorrhoe. Eine randomisierte, kontrollierte Studie mit einer individuellen osteopathischen Behandlung über drei menstruale Zyklen ergab eine hochsignifikante Verbesserung von Schmerzintensität und Schmerzdauer nach Behandlung. Für eine abschließende Beurteilung sind weitere klinische Studien mit mehr Patientinnen, klaren Definitionen und einer guten Auswertung nötig.

Abstract

Dysmenorrhea. Medical background and effectiveness of osteopathic and manual therapeutic treatments – a literature study

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This critical literature-review is based on a defined search comprising studies and reports focused on clinical application of osteopathic and manual treatment of dysmenorrhea. Studies are illustrated with regard to study-plan, design, implementation of the study, assessment and results.

One part of the published studies focuses on spinal manipulation in the context of chiropractic application. Another cluster of studies focuses on individual, patient-specific osteopathic treatment. Independent of the type of treatment, most studies report a reduction in menstrual pain, whereby pain intensity turns to be the most frequently investigated efficacy parameter. The intensity of pain is mostly captured in a validated patient questionnaire containing a visual or numeric scale.

Initial data and reports suggest a persistent reduction of pain following the treatment. This should be confirmed by future studies with several months of follow-up.

Some smaller studies without control group showed a beneficial effect of an osteopathic treatment of primary dysmenorrhea. One randomized controlled study with individual osteopathic treatment over the course of three menstrual cycles resulted in a highly significant reduction of pain-intensity and pain-duration after treatment.

Further well-designed clinical studies with more study subjects will be beneficial to confirm the initial results and to come to a final conclusion.

Literatur

- Abu, J.L., Konje J. C. (2000). Leukotrienes in gynaecology: the hypothetical value of anti-leukotriene therapy in dysmenorrhea and endometriosis. *Human Reproduction Update*, 6(2), 200-205.
- Akerlund, M. (2004). Vasopressin and oxytocin in normal reproduction and in the pathophysiology of preterm labour and primary dysmenorrhea. Development of receptor antagonists for therapeutic use in these conditions. *Rocznik Akademii Medycznej w Bialymostku*, 49, 18-21
- Andresh, B., Milsom, I. (1982). An epidemiological study of young women with dysmenorrhoea. *American Journal of Obstetrics and Gynecology*, 144, 655-672.
- Ayan M., Sogut, E., Tas, U., Erdemir, F., Sahin, M., Suren, M., Kaya, Z., Demirturk, F. (2012). Pain levels associated with renal colic and primary dysmenorrhea: a prospective controlled study with objective and subjective outcomes. *Arch Gynecol Obstet* 2012 Apr 4 [Epub ahead of print].
- Bajaj, P. Madsen, H., Arendt-Nielsen, L. (2002). A comparison of modality-specific somatosensory changes during menstruation in dysmenorrheic and nondysmenorrheic women. *Clinical Journal of Pain*, 18, 180-190.
- Bieglmayer, C. Hofer, G., Kainz, C., Reinhaller, A., Kopp, B., Janisch, H. (1995). Concentrations of various arachidonic acid metabolites in menstrual fluid are associated with menstrual pain and are influenced by hormonal contraceptives. *Gynecological Endocrinology*, 9, 307-312.
- Bley, K.R., Hunter, J.C., Eglen, R.M., Smith J.A.M. (1998). The role of IP prostanoid receptors in inflammatory pain. *Trends in Pharmacological Sciences*, 19(4), 141-147.
- Boesler, D., Warner, M., Alpers, A., Finnerty, E.P., Kilmore, M.A. (1993). Efficacy of high-velocity low-amplitude manipulative technique in subjects with low-back pain during menstrual cramping. *Journal of the American Osteopathic Association*, 93(2), 203-208+213.
- Bolles, N.A. (1899). Dysmenorrhea. *The Popular Osteopath*, 1(12), 270-272.
- Brotanek, V., Hendricks, C.H., Yoshida, T. (1962). Changes in uterine blood flow during uterine contraction. *American Journal of Obstetrics and Gynecology*, 103, 1108-1116.
- Brühwiler, H. Sieger, D., Lüscher, K.P. (2006). Primäre Dysmenorrhoe. *Schweiz Med Forum*, 6, 919-922.
- Bull, P.W., Genders, W.G., Hopkins, S.S., Lean, E.K. (2003) Dysmenorrhea and pelvic dysfunction: A possible clinical relationship. *Chiropractic Journal of Australia*, 33(1), 23-29.

Burnett, M.A., Antao, V., Black, A., Feldman, K., Grenville, A., Lea, R., Lefebvre, G., Pinsonneault, O., Robert, M. (2005). Prevalence of primary dysmenorrhea in Canada. *Journal of obstetrics and gynaecology Canada*, 27(8), 765-770.

Burns, L. (1907). Studies in the osteopathic sciences. Basic principles, Vol. 1, Occident Printery, Los Angeles.

Chadwick, K., Morgan, A. (1996). The efficacy of osteopathic treatment for primary dysmenorrhea in young women. *American Academy of Osteopathy (AAO) Journal*, 6(3), 15-16.

Chan, W.Y., Dawood, M.Y., Fuchs, F. (1979). Relief of dysmenorrhea with the prostaglandin synthetase inhibitor ibuprofen: effect on prostaglandin levels in menstrual fluid. *American Journal of Obstetrics and Gynecology*, 135, 102-108.

Chan, W.Y., Hill, J.C. (1978). Determination of menstrual prostaglandin levels in nondysmenorrheic and dysmenorrheic subjects. *Prostaglandins*, 15, 365-375.

Chapman, J.D. (1993). Progress in scientifically proving the benefits of OMT in treating symptoms of dysmenorrhea. *Journal of the American Osteopathic Association (JAOA)*, 93(2), 196.

Chen, Y., Shang, G., Fu, G. (2011). Effect of massage on hemodynamics parameters of uterine artery and serum prostaglandin in treating patients with primary dysmenorrhea. *Zhongguo Zhong xi yi jie he za zhi* = Chinese journal of integrated traditional and Western medicine, 31(10), 1355-1358.

Chen-Hao, T., Niddam, D.M., Chao, H.T., Chen, L.F., Chen, Y.S., Wu, Y.T., Yeh, T.C., Lirng, J.F., Hsieh, J.C. (2010). Brain morphological changes associated with cyclic menstrual pain. *Pain*, 150, 462-468.

Chen-Hao, T., Niddam, D.M., Chao, H.T., Liu R.S., Hwang R.J., Yeh, T.C., Hsieh, J.C. (2009). Abnormal cerebral metabolism during menstrual pain in primary dysmenorrhea. *NeuroImage*, 47, 28-35.

Chiou, M.H., Wang, H.H. (2004). The relationship between dysmenorrhea and menstrual attitudes among female students in vocational nursing schools. *Hu Li Za Zhi*, 51: 45-52.

Coco, A.S. (1999). Primary dysmenorrhea. *American Family Physician*, 60, 489-496.

Cooper, R.M. (1905). Dysmenorrhea. *The Journal of Osteopathy*, 12(7), 215.

Crowley, F.G. (1906). Four typical cases of membranous dysmenorrhea cured. *The Journal of Osteopathy*, 13(11), 338-340.

Davis, A.R., Westhoff, C.L. (2001). Primary dysmenorrheal in adolescent girls and treatment with oral contraceptives. *Journal of Pediatric & Adolescent Gynecology*, 14, 1-2.

Dawood, M. Y. (2006). Primary Dysmenorrhea: Advances in Pathogenesis and Management. *Obstetrics & Gynecology*, 108(2). 428-441.

Deutsche Gesellschaft für Gynäkologie und Geburtshilfe e.V. (2009). Chronischer Unterbauchschmerz der Frau (Praxisleitlinie/Kurzfassung), URL: http://www.dggg.de/fileadmin/public_docs/Leitlinien/g_01_05_01_chronischer_unterbauchschmerz_methodenreport.pdf (Zugriff am: 3. Juni 2012)

Durain D. (2004). Primary dysmenorrhea: assessment and management update. *J Midwifery Womens Health*, 49, 520-528.

Gol, M., Altunyurt, S., Sezer, O., Demir, N. (2005). Primary dysmenorrhea and uterine blood flow: a color Doppler study. *Journal of Reproductive Medicine for the Obstetrician and Gynecologist*, 50(4), 251-255.

Ham, E.A., Cirillo, V.J., Zanetti, M.E., Kuehl, F.A. Jr. (1975). Estrogen-directed synthesis of specific prostaglandins in uterus. *Proceedings of the National Academy of Sciences USA (PNAS)*, 72(4), 1420-1424.

Harada, T., Momoeda, M., Terakawa, N., Taketani, Y., Hoshiai, H. (2011). Evaluation of a low-dose oral contraceptive pill for primary dysmenorrhea: a placebo-controlled, double-blind, randomized trial. *Fertility and Sterility*, 95(6), 1928-1931.

Harel, Z. (2008). Dysmenorrhea in adolescents and young adults: from pathophysiology to pharmacological treatments and management strategies. *Expert Opin Pharmacother.*, 9(15), 2661-2672.

Harel, Z., Riggs, S., Vaz, R., Flanagan, P., Harel, D. (2004). The use of the leukotriene receptor antagonist montelukast (Singulair) in the management of dysmenorrhea in adolescence. *Journal of Pediatric & Adolescent Gynecology*, 17(3), 183-186.

Hawk, C., Azad, A., Phongphua, C., Long, C.R. (1999). Preliminary study of the effects of a placebo chiropractic treatment with sham adjustments. *Journal of Manipulative and Physiological Therapeutics*, 22(7), 436-443.

Hawker, G. A., Mian, S., Kendzerska, T., French, M. (2011). Measures of Adult Pain. *Arthritis Care & Research*, 63(S11), 240-252

Hellmann, C. (2001). Systematische Untersuchung osteopathischer Befunde bei primärer Dysmenorrhoe. Münchener Colleg für Osteopathie (Abschlussarbeit). Hinterlegt bei Akademie für Osteopathie (AFO).

Hitchcock, M.E. (1976). The manipulative approach to the management of primary dysmenorrhea. Journal of American Osteopathic Association (JAOA), 75(10), 909-918.

Holtzman, D.A., Petrocco-Napoli, K.L., Burke, J.R. Prospective Case Series on the Effects of Lumbosacral Manipulation on Dysmenorrhea. (2008). Journal of Manipulative and Physiological Therapeutics, 31(3), 237-246.

Hondras, M.A., Long, C.R., Brennan, P.C. (1999). Spinal manipulative therapy versus a low force mimic maneuver for women with primary dysmenorrhea: A randomised, observer-blinded, clinical trial. Pain, 81, 105-114.

Ingraham, E. M. (1901). Dysmenorrhea with migraine. The Journal of Osteopathy. 8(6), 196.

Jabbour, H.N., Kelly R.W., Fraser H.M., Critchley H.O.D. (2006). Endocrine regulation of menstruation. Endocrine Reviews, 27(1), 17-46.

Jamison, J.R., McEwen, A.P., Thomas, S.J. (1992). Chiropractic adjustment in the management of visceral conditions: a critical appraisal. Journal of Manipulative and Physiological Therapeutics, 15(3), 171-180.

Karl-Schindler, H. (2006). Osteopathic treatment of primary dysmenorrhoea: possible consequences. Donau Universität Krems (Master Thesis), URL:
http://www.osteopathic-research.com/index.php?option=com_jresearch&view=publication&task=show&id=12351&lang=en (Zugriff am: 06. Juni 2012)

Klein, J., Litt, I.F. (1981). Epidemiology of adolescent dysmenorrhea. Pediatrics, 68(5), 661-664.

Kokjohn, K., Schmid, D. M.: Triano, J.J.: Brennan, P. C. (1992). The effect of spinal manipulation on pain and prostaglandin levels in women with primary dysmenorrhea. Journal of Manipulative and Physiological Therapeutics, 15(5), 279-285.

Larroy, C. (2002). Comparing visual-analog and numeric scales for assessing menstrual pain. Behav Med, 27(4), 179-181.

Latthe P. 2006. Factors predisposing women to chronic pelvic pain: systematic review. British Medical Journal (BMJ), 332(7544), 749-755.

Lewis, R.J., Wasserman, E., Denney, N.W., Gerrard, M. (1983). The etiology and treatment of primary dysmenorrhea: a review. Clinical Psychology Review, 3, 371-389.

Liebl, N.A., Butler, L.M. (1990). A chiropractic approach to the treatment of dysmenorrhea. Journal of Manipulative and Physiological Therapeutics, 13(2), 101-106.

Lundstrom V. 1978. Endogenous levels of F2-alpha and its main metabolites in plasma and endometrium of normal and dysmenorrheic women. American Journal of Obstetrics and Gynecology, 130: 640.

Masters, P. (2010). Body adjustment in gynecology. Osteopathische Medizin, 11(2), 14-17.

Moos R.H. (1968). The development of a menstrual distress questionnaire. Psychosomatic Medicine, 30(6), 853-867.

Owen P.R. (1984). Prostaglandin synthetase inhibitors in the treatment of primary dysmenorrhea. American Journal of Obstetrics Gynecology, 148, 96-101.

Pinter-Haas, A., Schach-Hirte, J., Wirthwein, P. (2007). Osteopathische Behandlung von Frauen mit primärer Dysmenorrhoe. Eine randomisierte, kontrollierte Studie. Diplomarbeit zum Erwerb des Titels D.O., hinterlegt bei Akademie für Osteopathie (AFO).

Pinter-Haas, A., Schach-Hirte, J., Wirthwein, P., Metcalfe D., Schwerla, F. (2010). Osteopathic treatment of women with primary dysmenorrhoea: A randomised controlled trial. International Journal of Osteopathic Medicine, 13, 127.

Posadzki, P. and Ernst, E. (2011). Osteopathy for musculoskeletal pain patients: a systematic review of randomized controlled trials. Clinical Rheumatology, 30, 285-291.

Proctor, M.L., Farquhar, C. M. (2007). Dysmenorrhoea. Clinical Evidence, 03, 813-832.

Proctor, M.L., Hing, W., Johnson, T.C., Murphy, P. A., Brown, J. (2010). Spinal manipulation for dysmenorrhoea. Cochrane Review, in: The Cochrane Library 2010, Issue 1, published by John Wiley & Sons, Ltd.

Proctor, M.L., Hing, W., Johnson, T.C., Murphy, P.A. (2006). Spinal manipulation for primary and secondary dysmenorrhoea. Cochrane Review, in: The Cochrane Library 2006, Issue 2, published by John Wiley & Sons, Ltd.

Rees M.C. (1984). Prostaglandins in menstrual fluid in menorrhagia and dysmenorrhea. British Journal of Obstetrics and Gynaecology, 91:673-680.

Rees, M.C., DiMarzo, V., Tippins, J.R., Morris, H.R., Turnbull, A.C. (1987). Leukotriene release by endometrium and myometrium throughout the menstrual cycle in dysmenorrheal and menorrhagia. Journal of Endocrinology, 113, 291-295.

Reid, G.W. (1900). Dysmenorrhya. The Journal of Osteopathy, 7(7), 323.

Sanfilippo J., Erb, T. (2008). Evaluation and Management of Dysmenorrhea in Adolescents. Clinical Obstetrics and Gynaecology, 51(2), 257-267.

Silbernagl, S. (2001). Taschenbuch der Physiologie. Georg Thieme Verlag. Stuttgart-New York. Deutscher Taschenbuchverlag, 5. Auflage

Simopoulos A. P. (1991). Omega-3 fatty acids in health and disease and in growth and development. *AM J Clin Nutr*, 54: 438-463.

Smith, D. (2007). Chiropractic care of a patient with low back pain and primary dysmenorrhoea (case report). *Chiropractic Journal of Australia*, 37(4), 141-144.

Snyder, B.J., Sanders, G.E. (1996). Evaluation of the Toftness system of chiropractic adjusting for subjects with chronic back pain, chronic tension headaches, or primary dysmenorrhoea. *Chiropractic Technique*, 8(1), 3-9.

Spears, L.G. (2005). A narrative review of medical chiropractic, and alternative health practices in the treatment of primary dysmenorrhea. *Journal of Chiropractic Medicine*, 4(2), 76-88.

Sundell G. (1990). Factors influencing the prevalence and severity of dysmenorrhoea in young women. *British Journal of Obstetrics and Gynaecology*, 97, 588-594.

Tassorelli, C., Sandrini, G., Cecchini, A. P., Nappi, R. E., Sanges, G., Martignoni, E. (2002). Changes in nociceptive flexion reflex threshold across the menstrual cycle in healthy women. *Psychosomatic Medicine*, 64, 621-626.

Thomason, P.R., Fisher, B.L., Carpenter, P. A., Fike, G.L. (1979). Effectiveness of spinal manipulative therapy in treatment of primary dysmenorrhea: a pilot study. *Journal of Manipulative & Physiological Therapeutics*, 2, 140-145.

Ulmsten U. (1985). Uterine activity and blood flow in normal and dysmenorrheic women. In: Dawood M.Y., McGuire J.L., DemersL.M. editors. *Premenstrual syndrome and dysmenorrhea*. Baltimore (MD). Urban and Schwarzenberg; 103-124.

Unsal, A., Ayrancı U., Mustafa T., Arslan G., Calik E. (2010). Prevalence of dysmenorrhea and its effect on quality of life among a group of female university students. *Upsala Journal of Medicine Sciences*, 115, 138-145.

Ylikorkala, O., Puolakka, J., Kauppila, A. (1979). Serum gonadotrophins, prolactin and ovarian steroids in primary dysmenorrhoea. *British Journal of Obstetrics and Gynaecology*, 86, 648-653.

Ylikorkala, O., Puolakka, J., Kauppila, A. (1979). Serum gonadotrophins, prolactin and ovarian steroids in primary dysmenorrhoea. *British Journal of Obstetrics and Gynaecology*, 86(8), 648-53.

Zahradník, H.P., Hanjalic-Beck, A., Groth, K. (2010). Nonsteroidal anit-inflammatory drugs and hormonal contraceptives for pain relief from dysmenorrheal: a review. *Contraception*, 81, 185-196.