

Abstract

Behandlung von Patienten mit chronischen HWS-Beschwerden

Katrin Brück

Der Symptomenkomplex des chronischen HWS-Syndroms ist in der Literatur nicht klar definiert. Die Auswahl der möglichen Therapien ist weit gefächert und häufig werden sogar mehrere Therapien gleichzeitig angewendet, was dafür spricht, dass bisher keine Therapieform eine Überlegenheit gegenüber den anderen zeigen konnte. Die Chronifizierungsrate ist hoch, der Leidensdruck der Betroffenen besonders im psychischen Kontext ebenfalls. Die apparative Diagnostik bringt häufig keine eindeutige Diagnose hervor und um die unspezifischen Ursachen der Beschwerden zu filtern, benötigt es einen erfahrenen Untersucher mit einer individuellen Befunderhebung für jeden Patienten. „Red flags“ sollten immer bedacht werden. Daraus sollte sich eine klare international gültige Nomenklatur der Befunde ergeben. Es ist empfehlenswert, die Therapie individuell an den Befund anzupassen und immer den Aspekt Nutzen und Risiko in die Überlegung mit einbeziehen.

Der bisher nur rudimentär erforschte Ansatz der Faszienbehandlung sollte mehr an Bedeutung gewinnen. Sowohl Untersuchungen von Faszien im Labor als auch an Patienten mit chronischem HWS-Syndrom sollten verstärkt durchgeführt werden.

Abstract

Treatment of patients with chronic cervical spine complaints

Katrin Brück

The symptom complex of the chronic cervical spine syndrome isn't clearly defined in literature. The choice of possible therapies is diversified and often even multiple therapies are administered at the same time, which speaks for [means] that so far no form of therapy has shown its superiority over the others. The rate of chronicity is high, the suffering of the persons affected as well – particularly in a psychic context. Non-invasive diagnostics often doesn't deliver a distinct diagnosis and, to filter the non-specific causes of the complaints, an experienced examiner with individual diagnosing of each patient is needed. "Red flags" should be thought about at all times. Out of it a distinct, internationally valid nomenclature of the findings should result. It is recommendable to adjust the therapy individually to the findings, and to always take the aspect benefit and risk into consideration.

The so far only rudimentarily researched approach to the treatment of fascia should gain in importance. Examination of fascia in the lab as well as in patients with chronic cervical spine syndrome should be carried out intensified.

Literatur

Aitken, R. (1969). Measurement of feeling using visual analogue scales, Proceedings of the royal Society of Medicine. 62:989-93.

Adorján-Schaumann, K., Höhrhan, G., Wille, H., Wolff, A. (1999). Osteopathische Behandlung der chronischen Lumbalgie: Eine randomisierte kontrollierte Studie. <http://www.osteopathic-research.com>, („zugriff am“: 07.07.2011).

Andersson, H.I., Ejlertsson, G., Leden, I., Rosenberg, C. (1993). Chronic Pain in a geographically defined general population: Studies of differences in gender, social class and pain localization. Clin J Pain 9(3):174-82.

Aoki, Y., Takahashi, K., Otori, S., Moriva, H. (2005). Neuropathology of Discogenic Low Back Pain: A Review. The Internet Journal of Spine Surgery 2(1).

Barker, P.J., Guggenheimer, K.T., Grkovic, I., Briggs, C.A., Jones, D.C., David, C., Thomas, L., Hodges, P.W. (2006). Effects of tensioning the lumbar fasciae on segmental stiffness during flexion and extension. J Spine 31(4):397-05.

Bates, M.S., Edwards, T.W., Anderson, K.O. (1993). Ethnocultural influences on variation in chronic pain perception. J Pain 52:101-12.

Benbow, S., Cossins, L., Bowsher, D. (1995). A comparison of young and elderly patients attending a regional Pain centre, Pain Clinic 8:323-32.

Bergmann S., Herrström P., Högström K., Oetersson I.F., Svensson B., Jacobsson L.T.H. (2001). Chronic musculoskeletal pain, prevalence rates and sociodemographic association in a Swedish population survey, J Rheumatol 28(1):1369-77

Binder A., Maddison P.J., Isenberg D.A., Woo P. (1993). A cervical pain syndromes, Oxford Textbook of Rheumatology, Oxford University Press 1060-70

Blozik E., Himmel W., Kochen M.M., Herrmann-Lingen C., Scherer W. (2010). Sensitivity to change of the neck pain and Disability Scale Eur Spine J, doi: 10.1007/s00586-010-1545-0.

Blozik E., Lapinskaya D., Herrmann-Lingen C., Schäfer H., Kochen M.M., Himmel W., Scherer M. (2009). Depression and anxiety as major determinants of neck pain: a cross-sectional study in general practice, BMC Musculoskeletal disorders 10:13, doi 10.1186/1471-2474-10-13

Bogduk N., Lord S.M. (1998). Cervical spine disorders, Curr opin rheumatol 10(2):110-5.

Bond A., Lader M. (1974). The use of analogue scales in rating subjective feelings, British Journal of Medical Psychology 47:211-18.

Bischoff, A., Nürnberger, A., Voigt, P., (2002). Osteopathy alleviates pain in chronic non-specific neck pain: A randomized Controlled trial. <http://www.osteopathic-research.com>, („zugriff am“: 07.07.2011).

Bove, G.M., (2008). Epi-perineurial anatomy, innervations and axonal nociceptive mechanisms. *J of Bodywork and Movement Therap* 12(3):185-90.

Bove M., Courtine G., Schieppati M. (2002). Neck Muscle Vibration and Spatial Orientation During Stepping in Place in Humans pavia Italy, *J Neurophysiol* 88:2232-41

Bovim G., Schrader H., Sand T (1994). Neck pain in the general population, *Spine* 19: 1307-9.

Boyd-Clark L.C., Briggs C.A., Galea M.P. (2002). Muscle Spindle Distribution, Morphology and Density in Longus Colli and Multifidus Muscle of the Cervical Spine 27(7):788-99

Bronfort G., Haas M., Evans R., Leiniger B., Triano J. (2010). Effectiveness of manual therapies: the UK evidence report, *Chiropractic & Osteopathy* 18:3

Butler, D.S. (1991). *Mobilisation of the Nervous System*. Churchill Livingstone: Melbourne.

Carroll L.J., Hogg-Johnson S., van der Velde G., Haldemann S., Holm L.W., Carragee E.J., Harwitz E.L., Côté P., Nordin M., Peloso P.M., Guzman J., Cassidy J.D. (2008). Course and prognostic factors for neck pain in the general population: results of the Bone and Joint decade, *Spine* 33(4):75-82

Cassidy J.D., Lopes A.A., Yong-Hink K. (1992). The immediate effect of manipulation versus mobilization on pain and range of motion in the cervical spine: a randomized controlled trial, *J Manipulative Physiol Ther* 15:570-5

Cherkin D.C., Sherman K.J., Deyo R.A., Shekelle P.G. (2003). A review of the Evidence for the Effectiveness, Safty and Cost of Acupuncture, Massage Therapy and Spinal Manipulation for Back Pain, *Ann Intern Med* 138:898-906

Chrubasik S., Junck H., Zappe H.A., Stutzke O. (1998). A survey on pain complaints and health care utilization in a German population sample, *Eur J Anaesthesiol* 15(4):397-408

Corneil B.D., Olivier E., Munoz D.P. (2002). Neck Muscle Responses to Stimulation of Monkey Superior Colliculus. I. Topography and Manipulation of Stimulation Parameters, *J Neurophys* 88(4):1980-99

Côté P., Cassidy D., Carroll L. (1998). Saskatchewan health and back pain survey, the prevalence of neck pain and related disability in Saskatchewan adults, *Spine* 23(15): 1689-98

Craig K.D. et al. (1984). Developmental changes in infant pain expression during immunization injections *Soc Sci Med* 19:1331-37

Daffner S.D., Hilibrand A.S., Hanscom B.S., Brislin B.T., Vaccaro A.R., Albert T. (2003). Impact of neck and arm pain on overall health status, *J Spine* 28(17):2030-5

DEGAM – Leitlinie Nr. 13 (2009), Nackenschmerzen, Deutsche Ges. f. Allgemein.- und Familienmedizin

Devor, M., Seltzer, Z. (1999). Pathophysiology of damaged nerves in relation to chronic pain. In: *The Textbook of Pain*. Wall, P.D., Melzack, R., Churchill Livingstone:Edinburgh

Dubin E., Patapoutian A. (2010). Nociceptors: the sensors of the pain pathway, *The Journal of Clinical Investigation* 120(11) 3760-72

Engemann K., Hofmeier G. (2009). Untersuchung der therapeutischen Wirksamkeit osteopathischer Behandlungen bei Patienten mit chronischen Nackenschmerzen nach einem posttraumatischen Zervicalsyndrom durch ein Beschleunigungstrauma: Randomized Controlled Trial, www.osteopathic-research.com

Ehrlich H.P., Allison G.M., Legett M. (2006). The myofibroblast, cadherin, alpha smooth muscle actin and the collagen effect, *Cell Biochem Funct* 24(1):63-70

Eser E, Fidaner H, Eser SY, Fidaner C, Elbi H (2000), Derivation of Response Scales for WHOQOL TR – The Effect of the Level of Education on the Use of Visual Analogue Scales, *J Eur Psych* 5(4):278-84.

Ernst, E. (2007). Spinal manipulation: are the benefits worth the risks? *Expert Rev., Neurotherapeutics* 7(11):1451-52.

Florêncio L.L., Pereira P.A., Silva B.R.T., Pegoretti K.S., Goncalves M.C., Bevilaqua D. (2010). Agreement and reliability of two non-invasive methods for assessing cervical range of motion among young adults, *J Bras Fisioter* 14(2):175-81

Folstein M.F., Luria R. (1973). Reliability, validity and clinical implications of the visual analogue scale, *Psychological Medicine* 3:479-86

Freyd M. (1923). The graphic rating scale, *Journal of Educational Psychology* 14:83-102

Gemmell H., Miller P. (2011). Relative effectiveness and adverse effects of cervical manipulation, mobilization and the activator instrument in patients with sub-acute

non-specific neck pain: results from a stopped randomized trial, *Chiropractic & Osteopathy* 18:20

Gift A.G. (1989). Visual Analogue Scales: Measurement of a subjective phenomena, *Nursing Research* 30:268-88

Göbel H., Westphal W. (1989). Experimentelle Schmerzinduktion im algesimetrischen Humanversuch: Gütekriterien, *Der Schmerz* 3:85-93

Gore M., Dukes E., Rowbotham D.J., Tai K.S., Leslie D (2007). Clinical characteristics and pain management among patients with painful peripheral neuropathic disorders in general practice settings: *Eur J Pain* 11:652-64

Gross A., Miller J., D´Sylva J., Burnie S.J., Goldsmith C.H., Graham N., Haines T., Bronfort G., Hoving J.L. (2010). Manipulation or mobilization for neck pain, *Cochrane Database of Systematic Reviews*, Issue 1.Art.No.: CD004249, DOI: 10.1002/14651858.CD004249.pub3

Gross A.R., Haines T., Goldsmith C.H., Santaguida L., McLaughlin L.M., Peloso P., Burnie S., Hoving J (2009). Knowledge to action: a challenge for neck pain treatment, *J Orthop Sports Phys Ther* 39(5):351-63

Gunzelmann T., Schumacher J., Brähler E. (2002). Prävalenz von Schmerzen im Alter: Ergebnisse repräsentativer Befragung der deutschen Altenbevölkerung mit dem Gießener Beschwerdebogen, *Schmerz* 16(4):249-54

Guss D.A., Jacoby I.J. (2002). Longus colli tendinitis causing acute neck pain *J Emerg Med* 22:211-2

Haines T., Gross A.R., Burnie S., Goldsmith C., Perry L., Graham N. (2009). A Cochrane review of patient education for neck pain, *Spine* 9(10):859-87

Hartvigsen J., Christensen K., Frederiksen H. (2004). back and neck pain exhibit many common features in old age: a population-based study of 4, 486 Danish twins 70-102 years of age, *Spine* 29:576:80

Hessel A., Geyer M., Gunzelmann I., Schumacher J., Brähler E. (2003). Somatoforme Beschwerden bei über 60-Jährigen in Deutschland, *Z Gerontol Geriat* 36(28):296

Hjermstad M.J., Fayers P.M., Haugen D.F., Caraceni A., Hanks G.W., Loge J.H., Fainsinger R., Aass N., Kaasa S. (2011). studies comparing Numerical Rating Scales, Verbal Rating Scales and Visual Analogue Scales for Assessment of Pain Intensity in Adults: A Systematic Literature Review, *J Pain Symptom Manage* 41(6):1073-93

Howe, J.F., Loeser, J.D., Calvin, W.H. (1977). Mechanosensitivity of dorsal root ganglia and chronically injured axons: a physiological basis for radicular pain of nerve root compression, *Pain* 3:25-41

- Hoy D.G., Protani M., D. R., Buchbinder R. (2010). The epidemiology of neck pain, *Best Pract Res Clin Rheumatol*, 24(6):763-92
- Irnich D., Behrens N., Molzen H., König A., Gleditsch J., Krauss M., Natalis M., Senn E., Beyer A., Schöps P. (2001). Randomised trial of acupuncture compared with conventional massage and sham laser acupuncture for treatment of chronic neck pain, *BMJ* 322(7302):1574-8
- Kalso E., Allan L., DelleMijn P.L., Faura C.C., Ilias W.K., Jensen T.S., Perrot S., Plaghki L.H., Zenz M. (2003). Recommendations for using opioids in chronic non-cancer pain, *Eur J Pain* 7:381-6
- Kay, T.M., Gross, A., Goldsmith, C. (2004). Exercises for mechanical neck disorders: a Cochrane systematic review. <http://www.thecochranelibrary.com>, Issue 3. Art. No.: CD001878. DOI: 10.1002/14651858.CD001878
- Kvistad K.A., Espeland A. (2010). Diagnostic imaging in neck and low back pain, *Tidsskr Nor Laegeforen* 18:130(22):2256-9
- Kwekkeboom K.L. Gretarsdottir E. (2006). A systematic review of relaxation interventions for pain, *J Nurs Scholarsh* 38:269-77
- Lachin, J.M. (1981). Sequential clinical trials for normal variates using interval composite hypothesis, *Biometrics*, (87- 101)
- Langworthy J.M., Forrest L (2010), Withdrawal rates as a consequence of disclosure of risk associated with manipulation of the cervical spine, *Chiropractic und Osteopathy* 18:27
- Laube W., Müller K. (2004). Der passive Muskeltonus als biophysikalische und der active Muskeltonus als neurophysiologische Zustandsgröße aus physiologischer und pathophysiologischer Sicht, *Österr Z Phys Med Rehabil* 14(1):10-28
- Lee M.S., Ernst E. (2011). Acupuncture for pain: an overview of Cochrane reviews, *Chin J Integr. Med.* 17(3):187-9
- Leonhard J.H., Choo C.P., Manal M.R.A., Isa Z. Md, Nordin N.A.M., Das S. (2009). Development and evaluation of neck pain and functional limitation scale: A validation study in the Asian context, *Indian J of Med.Sc.* 63(10):445-54
- Levine F.M., DeSimone L.L. (1991). The effects of experimenter gender on pain report in male and female subjects, *Pain* 44:69-72
- Lindstrom R., Schomacher J., Farina D., Rechter L., Falla D. (2011). Association between neck muscle coactivation, pain and strength in women with neck pain, *Manual Therapy* 16:80-86

Loreck D., Kühn A., Conradi E. (1991). Aussagewert röntgenologischer Befunde an der Halswirbelsäule in bezug zur klinischen Symptomatik bei Patienten mit Zervikalsyndrom, Radiol diag 32:360-66

MacGregor A.J., Andrew T., Sambrook P.N., Spector T.D. (2004). Structural psychological and genetic influences on low back and neck pain: a study of adult female twins, Arthritis Rheum 51(2):160-7

Mäkelä M., Heliövaara M., Sievers K., Impivaara O., Knekt P., Aromaa A. (1991). Prevalence, determinants and consequences of chronic neck pain in Finland, Am J Epidemiol 134(11):1356-67

Martinez-Segura R., Fernández-de-las-Penas C., Ruiz-Sáez M., López-Jiménez C., Rodríguez-Blanco C. (2006). Immediate effects on neck pain and active range of motion after a single cervical high-velocity low amplitude manipulation in subjects presenting with mechanical neck pain: a randomized controlled trial, National University of health sciences doi:10.1016/j.jmpt.2006.06.022

Mazanec D., Reddy A. (2007). A medical management of cervical spondylosis, Neurosurgery, 60(1):43-50

Merskey H., Bogduk N. (1994). Classification of chronic neck pain: Descriptions of chronic pain syndromes and definitions of pain terms, IASP Press 2.nd edition

Murphy D., McDonald A., Power C., Unwin A., MacSullivan R. (1987). Measurement of Pain: A Comparison of the Visual Analogue with a Nonvisual Analogue Scale, The Clinical Journal of Pain 3(4):197-99

Niala J. (2002). The effects of mobilization on cervical range of motion using C.R.O.M., www.osteopathic-research.com

Noimark S. (2002). The effects of mobilization on cervical range of motion using C.R.O.M., www.osteopathic-research.com

Paoletti S. (2011). Faszien – Anatomie-Strukturen-Techniken-Spez. Osteopathie, 2. Auflage München Urban& Fischer

Paryavi E., Jobin C.M., Ludwig S.C., Zahiri H., Cushman J. (2010). Acute exertional lumbar paraspinal compartment syndrome, Spine 35(25):E1529-33

Pedersen T. (2003). The effect of cervical high velocity thrust technique on range of motion, www.osteopathic-research.com

Picavet H.S.J., Schouten JSAG (2001). Musculoskeletal pain in the Netherlands: prevalences, consequences and risk groups, the DMC₃ – study, Pain102:167-78

Raspe H., Matthis C., Croft P., O'Neill T (2004). Variation in back pain between countries: the example of Britain and Germany, *Spine* 29:1017-21

Remington M., Tyler P.J., Newson-Smith J., Cicchetti D.V. (1979). Comparative Reliability of categorical and Analogue Rating Scales in the Assessment of Psychiatric Symptomatology, *Psychological Medicine* 9:765-70

Schellingerhout J.M., Verhagen A.P., Heymans M.W., Koes B.W., de Vet H.C., Terwee C..B. (2011). measurement properties of disease-specific questionnaires in patients with neck pain: a systematic review, *Qual Life Res.* Doi: 10.1007/s11136-011-9962-9

Scherer M., Blozik E., Himmel W., Lapinskaya D., Kochen M.M. (2008). Psychometric properties of a german version of the neck pain and disability scale, *Eur Spine J* 17:922-929

Scherer M., Niebling M. (2005). Die Primärversorgung von Patienten mit Nackenschmerzen, *Z Allg Med* 81:348-58

Schleip R. (2003). Fascial plasticity –a new neurobiological explanation: Part 1, *J Bodywork and Movement Therapies* 7(1):11-19

Schleip R., Klingler W., Lehmann-Horn F. (2008). Faszien besitzen eine der glatten Muskulatur vergleichbare Kontraktionsfähigkeit und können so die muskuloskelettale Mechanik beeinflussen, *J Osteopathische Med* 9(4):19-21

Schomacher J. (2009). The effect of an analgesic mobilization Technique when applied at symptomatic or asymptomatic levels of the cervical spine in subjects with neck pain: A randomized controlled trial, *J Man Manip Ther* 17(2):101-8

Schomacher J., Learman K. (2010). Symptom location tests in the cervical spine: a descriptive study using imaging verification, *J Man Manip Ther* 18(2) 97-101

Schumacher J., Brähler E. (1999). Prävalenzen von Schmerzen in der deutschen Bevölkerung: Ergebnisse repräsentativer Erhebung mit dem Gießener Beschwerdebogen, *Schmerz* (13):375-84

Seeger D., Pflingsten M., Mann K., Hildebrandt J. (2003). Behandlungen von chronischen HWS-Beschwerden – Effektivität eines aktivierenden Gruppenkonzeptes, *Manuelle Medizin* 41:465-571

Simpson R, Gemmell H. (2006). Accuracy of spinal orthopaedic tests: a systematic review, *Chiropractic & Osteopathy* 14:26 doi:10.1186/1746-1340-14-26

Stark J. (2004). *Stills Faszienkonzepte: Eine Studie*, Übersetzung von Pöttner M. (2007). 2. Auflage, Jolandos

Statistisches Bundesamt (2011). http://www.gbe-bund.de/gbe10/abrechnung.prc_abr_test_logon?p_uid=gast&p_aid=4711&p_sprache=D&p_knoten=TR200, (Zugriff am 18.5 2011)

Steffen S., Tempel R. (2002). Stellt die osteopathische Behandlung von Patienten mit chronischer Zervikalgie eine wirksame Alternative zur Physiotherapie dar? Eine randomisierte kontrollierte Studie, www.osteopathic-research.com

Stembach R.A. (1978). Psychological dimensions and perceptual analysis, including pathologies of pain, *Handbook of Perception Vol. VIB*, 231-61

Taylor, J.R., Kalkulas, B.A. (1991). Neck Injuries. *Lancet* 338:1343-45

The Canadian Chiropractic Association.

[http://www.ccachiro.org/client/cca/cca.nsf/object/binder/\\$file/jcca-v49-3-158.pdf](http://www.ccachiro.org/client/cca/cca.nsf/object/binder/$file/jcca-v49-3-158.pdf) (Stand 2007).

Tousignant M., Smeezers C. Breton A.M., Breton E., Corriveau H. (2006). Criterion validity study of the cervical range of motion (CROM) device for rotational range of motion on healthy adults, *J Orthop Sports Phys. Ther.* 36(4):242-8

Treleaven J., LowChoy G.J., LowChoy N. (2005). Smooth pursuit neck torsion test in whiplash-associated disorders: relationship to self-reports of neck pain and disability, dizziness and anxiety, *J Rehabil Med* 37:219-23

van Tulder M. et al. (1997). Spinal radiographic findings and non-specific low back pain, *Spine* 22:427-34

Vitiello A.L., Bonello R., Pollard H. (2007). The effectiveness of ENAR for the treatment of chronic neck pain in Australian adults: a preliminary single-blind, randomized controlled trial, *Chiropractic & Osteopathy* 15:9 doi 10.1186/1746-1340-15-9

Vuillerme N., Pinsault N., Vaillant J. (2005). Postural control during quiet standing following cervical muscular fatigue: Effects of changes in sensory inputs, *Neuroscience Letters* 378:135-39

Wal van der J. (2009). The architecture of the Connective Tissue in the Musculoskeletal System – An often overlooked Functional Parameter as to Proprioception in the Locomotor Apparatus, *Jof Therapeutic Massage and Bodywork* 2(4)

Waling K., Järvholm B., Sundelin G. (2002). Effects of training on female trapezius Myalgia: an intervention study with a 3-year follow-up period, *J Spine* 27(8):789-96

Webb R., Brammah T., Lunt M., Urwin M., Allison T., Symmons D. (2003). Prevalence and Predictors of intense, Chronic, and Disabling Neck and Back Pain in the UK General Population, *Spine* 28(11):1195-1202

Williams M.A., McCarthy C.J., Chorti A., Cooke M.W., Gates S. (2010). A systematic review of reliability and validity studies of methods for measuring active and passive cervical range of motion, *J Manipulative Physiol Ther* 33(2):138-55

Ylinen J., Takala E.P., Nykanen M., et al. (2003). Active neck muscle training in the treatment of chronic neck pain in women: a randomized controlled trial, *Jama*; 289; 2509-16.

Youdas J., Garrett T.R., Suman V.J., Bogard C.L., Hallman H.O., Carey J.R. (1992). Normal range of motion of the cervical spine: An initial goniometric study, *J Phys Ther* 72(11):770-80