

## Abstract

### **Zervikogener Kopfschmerz. Ein systematischer Review über Genese und Diagnostik von Zervikogenem Kopfschmerz und deren Bedeutung für die Osteopathie**

Inga Micksch

Hintergrund: Zervikogener Kopfschmerz (ZK) tritt bei ca. vier Prozent der Bevölkerung auf und ist ein häufiges Krankheitsbild in der Osteopathie. Die Datenlage zur ZK Definition und Diagnostik ist unklar.

Methodik: Es erfolgte eine systematische Literaturrecherche der von 1960-2012 publizierten Studien unter Berücksichtigung osteopathischer Aspekte. Suchbegriffe waren *cervicogenic headache, diagnosis, treatment* und *osteopathy* in den Datenbanken *Pubmed, Medline* und *Osteomed*. Ergebnisse: 29 Studien wurden identifiziert und ausgewertet. ZK wird als ein durch eine Dysfunktion der HWS weitergeleiteter Schmerz definiert. Eine von zwei Kopfschmerz-Gesellschaften fordert die anästhetische Blockade als spezifischeres diagnostisches Kriterium im Vgl. zur klinischen Diagnostik.

Konklusion: Es besteht weitgehend Konsens über die ZK Definition. Es ist scheint jedoch unklar, ob eine klinische ZK Diagnose Kriterien durch anästhetische Blockade validiert werden muss. Für zukünftige osteopathische Studien sollten neue, klinisch anwendbare Tests gegen anästhetische Blockade validiert werden.

## Abstract

### **Cervicogen headache. A systematic review of genesis and diagnosis of cervikogen headache and its importance in osteopathy**

Inga Micksch

Background: The prevalence of cervicogenic headache (CH) is four percent. CH is a frequent disease entity in osteopathic clinics. Current evidence of definition and diagnosis of CH remains to be determined.

Methods: Considering osteopathic aspects, a systematic review of studies published between 1960-2012 was performed. The search terms *cervicogenic headache, diagnosis, treatment, and osteopathy* were applied to the electronic databases *Pubmed, Medline, and Osteomed*.

Results: 29 studies were identified. CH is characterised by pain referred to the head from the dysfunctional cervical spine. One out of two headache societies recommend anaesthetic block as a more specific CH diagnosis criterion compared to clinical criteria.

Conclusion: There is broad consensus regarding CH definition. The importance of anesthetic block on the validity of CH diagnosis remains unclear. New, clinically applicable tests should be validated against anaesthetic block to provide a basis for future osteopathic trials.

## Literatur

Afridi S.K., Shields K.G., Bholra R., Goadsby P.J. (2006). Greater occipital nerve injection in primary headache syndromes-prolonged effects from a single injection. *Pain* 122, 126–29.

Angus-Leppan H., Lambert G.A., Michalick J. (1997) Convergence of occipital nerve and superior sagittal sinus input in the cervical spinal cord of the cat. *Cephalalgia* 17, 625–630.

Antonaci F., Ghirmai S., Bono S., Sandrini G., Nappi G. (2001). Cervicogenic headache: evaluation of the original diagnostic criteria. *Cephalalgia* 21, 573–83.

Bigal M.E., Bordini C.A., Speciali J.G. (2000). Etiology and distribution of headaches in two Brazilian primary care units. *Headache* 40, 241.

Biondi D.M. (2000), Cervicogenic headache: mechanismus, evaluation and treatment strategies, *JAOA*, Vol.100, No.9, 7-14.

Biondi D.M. (2005), Cervicogenic headache: A review of Diagnostic and Treatment Strategies, *JAOA*, Vol. 105, No.4, 17-22.

Bogduk N. (1980). The anatomy of occipital neuralgia. *Clin. Exp. Neurol.* 17,167–184.  
Bogduk N. (2001) Cervicogenic headache: anatomic basis and pathophysiologic mechanisms. *Cur. Pain Head Rep.* 5, 382–386.

Bogduk, N. (2005). Distinguishing primary headache disorders from cervicogenic headache: clinical and therapeutic implications. *Headache Currents* 2, 27.

Bogduk N., Govind J. (2009). Cervicogenic headache: an assessment of the evidence on clinical diagnosis, invasive tests, and treatment, *The Lancet* 8, 959-968.

Campos C.R., Calderaro M., Scaff M., Conforto A.B. (2007). Primary headaches and painful spontaneous cervical artery dissection. *J. Headache Pain* 8, 180–184.

Chudler E.H., Foote W.E., Poletti C.E. (1991). Responses of cat C1 spinal cord dorsal and ventral horn neurons to noxious and nonnoxious stimulation of the head and face. *Brain Res.* 555, 181–192.

Coskun O., Ucler S., Karakurum B., Atasoy H.T., Yildirim T., Ozkan S. (2003) Magnetic resonance imaging of patients with cervicogenic headache. *Cephalalgia* 23, 842-845.

De Sousa J.E., Halfon M.J., Bonardo P., Reisin R.C., Fernández Pardal M.M. (2005). Different pain patterns in patients with vertebral artery dissections. *Neurology* 64, 925–26.

Dowson A., Dahlof C., Tepper S., Newman L. (2002). Prevalence and diagnosis of migraine in a primary care setting. *Cephalalgia* 22, 590.

Drenckhahn D., Zenker W. (1994), Benninghoff Anatomie, Band 2, 15. Aufl., München, Wien, Baltimore: Urban & Schwarzenberg.

Dwyer A., Aprill C., Bogduk N. (1990). Cervical zygapophysial joint pain patterns I: a study in normal volunteers. *Spine* 15, 453–57.

Frese A., Schilgen M., Husstedt I.W., Evers S. (2003), Pathophysiologie und Klinik zervikogener Kopfschmerzen, *Der Schmerz* 17, 125-130.

Goadsby P.J., Lipton R.B., Ferrari M.D. (2002). Migraine-current understanding and treatment. *N. Engl. J. Med.* 346, 257–70.

Guidelines for controlled trials of drugs in migraine (1991). International Headache Society Committee on Clinical Trials in Migraine. *Cephalalgia* 11, 1.

Hall T., Robinson K. (2004). The flexion-rotation test and active cervical mobility—a comparative measurement study in cervicogenic headache. *Manual Therapie* 9, 197-202.

Headache Classification Committee of the International Headache Society (1988). Classification and diagnostic criteria for headache disorders, cranial neuralgias and facial pain. *Cephalalgia* 8, 1–96.

Hildebrandt J., Jansen J. (1984). Vascular compression of the C2 and C3 roots - yet another cause of chronic intermittent hemicrania? *Cephalalgia* 4, 167.

International Headache Society (2004). The International Classification of Headache Disorders. 2nd edn.. *Cephalalgia* 24, 115-116.

Kaniecki R.G. (2002). Migraine and tension-type headache: an assessment of challenges in diagnosis. *Neurology* 58, 15.

Kerr F.W.L. (1972). Central relationships of trigeminal and cervical primary afferents in the spinal cord and medulla. *Brain Res.* 43, 561-572.

Kimmel D.L. (1959). The cervical sympathetic rami and the vertebral plexus in the human foetus. *Journal Comp. Neurol.* 112, 141–161.

King W., Lau P., Lees R., Bogduk N. (2007). The validity of manual examination in assessing patients with neck pain. *Spine* 7, 22–26.

Lance J.W., Anthony M. (1980). Neck tongue syndrome on sudden turning of the head. *J. Neurol Neurosurg Psychiatr.* 48, 97–101.

Leone M., D'Amico D., Grazzi L., Attanasio A., Bussone G. (1998). Cervicogenic headache: a critical review of the current diagnostic Criteria. *Pain* 78, 1–5.

Leone M., Cecchini A.P., Mea E., Tullo V., Bussone G. (2008). Epidemiology of fixed unilateral headaches. *Cephalalgia* 28, 8–11.

Lord S., Barnsley L., Wallis B., Bogduk N. (1994). Third occipital headache: a prevalence study. *Journal Neurol. Neurosurg. Psychiatr.* 57, 1187–90.

Lyngberg A.C., Rasmussen B.K., Jørgensen T., Jensen R. (2005). Incidence of primary headache: a Danish epidemiologic follow-up study. *Am. J. Epidemiol.* 161, 1066.

Nilsson N. (1976). The prevalence of cervicogenic headache in a random population sample of 20-59 year olds. *Spine* 20, 1884

Pöllmann W., Keidel M., Pfaffenrath V. (1997). Headache and the cervical spine: a critical review. *Cephalalgia* 17, 801.

Rasmussen B.K., Jensen R., Schroll M., Olesen J. (1991). Epidemiology of headache in a general population - a prevalence study. *Journal Clinical Epidemiology* 44, 1147.

Rasmussen B.K. (1995). Epidemiology of migraine. *Biomed Pharmacother* 49, 452.

Schünke M., Schulte E., Schumacher U. (2005), *Prometheus - Hals und Innere Organe*, 1. Aufl., Stuttgart: Thieme Verlag.

Schwartz B.S., Stewart W.F., Simon D., Lipton R.B. (1998). Epidemiology of tension-type headache. *JAMA* 279, 381.

Sjaastad O., Saunte C., Hovdal H., Breivik H., Groenbaek E. (1983) „Cervicogenic“ headache. An hypothesis. *Cephalalgia* 3, 249–256.

Sjaastad O., Fredriksen T.A., Pfaffenrath V. (1990). Cervicogenic headache: diagnostic criteria. *Headache* 30, 725–726.

Sjaastad O., Fredriksen T.A., Pfaffenrath V. (1998). Cervicogenic headache: diagnostic criteria. *Headache* 38, 442–445.

Sjaastad O. (2008). Cervicogenic headache: comparison with migraine without aura. *Cephalalgia* 28, 1-18.

Van Suijlekom H. A., De Vet H., Van den Berg S., Weber W. (2000), Interobserver Reliability in Physical Examination of the Cervical Spine in Patients with Headache, *Headache* 40, 581-586.