

1. Research Study of Atlas Prophylaxis as developed by René-C. Schümperli

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Expert Report on René-C. Schümperli's Atlas Prophylaxis

In April 2006, we launched a research study about René-C. Schümperli's Atlas Prophylaxis at our university institute. We examined a total of 114 subjects in this study. The initial evaluation of the data has been completed. The academic publication of these findings is anticipated for the near future. We conducted an MRI (nuclear magnetic resonance) examination of the cervical spine with special attention to the atlas. Afterwards, an atlas prophylaxis was performed. Subsequently, we conducted a follow-up MRI examination of the cervical spine.

The atlas is the first cervical vertebra and together with the joint surfaces of the occiput, it forms the craniocervical joint. Together with the second cervical vertebra, the axis, the occiput and the atlas constitute a major functional unit of the locomotor apparatus and the spine.

In contrast to its importance, the atlas has generally occupied a lowly position in radiological diagnostics, since there are no intervertebral discs in the first or the second craniocervical joints, and thus no disc prolapse can occur at this level. Instead, there is only cartilage between these joints and ligamentous connections. A number of short and long neck muscles allow great mobility for the head. Fractures of the first cervical spine are relatively rare and are generally seen only with specific types of injuries, such as swimming pool trauma, and even in these cases, fractures of the second cervical vertebra (the axis) are significantly more common. In this type of injury, the head is compressed upon the spine. The type of fracture known as Jefferson's fracture (1) is a "burst" type fracture, where parts of the atlas joint are displaced laterally. Neurological symptoms do not typically occur, since the spinal canal is very broad at this level and broken fragments of the atlas do not penetrate into the spinal cord of the spinal canal. (Figure 1).



Fig. 1 Jefferson fracture of the atlas with displacement of the lateral portions. The vertebral arteries are also displaced as a result of this type of fracture. As a result of the arch of the atlas, which enables some injury-free mobility

of the arteries during normal rotation of the head, there is sufficient compensatory capacity available to prevent tears of the vertebral arteries at this level.

It is only since the introduction of MRI that we have been able to obtain detailed images of the craniocervical junction. High-resolution computer tomography of the cervical spine is likewise capable of precisely demonstrating malpositioning of the vertebral bodies. However, it is much more difficult to differentiate the soft tissues. X-ray images of the upper cervical spine are typically overlain by the surrounding bony structures and are not sufficiently reliable for estimating the position of the atlas. In addition, similar to computer tomography, they involve some radiation exposure.

MRI examination of the cervical spine is usually performed by radiologists in two views (sagittal and axial). Most often, this procedure allows scarcely any estimation of malpositioning of the atlas, especially as the atlas is almost never examined in an axial view. This is related to the fact that most intervertebral disc problems are located in the middle and lower third of the cervical spine. It is specifically the coronal view that allows for a precise diagnosis of malpositioning of the first and second cervical vertebrae.

At our institute, we have always performed examinations of the cervical spine in three views. We have been engaged in research about diseases of the spine for over 23 years and we diagnose and treat diseases of the spine (2). Our special study on the atlas was begun about 4 years ago. Our objective was to be able to determine the precise position of the atlas in relation to the occiput and the axis. In a prospective study, we performed MRI examinations in three views using standardized examination sequences. Subsequently, René-C. Schümperli's atlas prophylaxis was performed on each of the subjects examined, after which they underwent a second MRI examination. The images were evaluated at medical workstations to determine the position of the craniocervical joints, the position of the vertebrae in relation to each other, and the rotation of the atlas. The examinations were evaluated by two independent physicians. The results showed in almost all cases a rotational malpositioning of the atlas with respect to the occipital joint surfaces prior to atlas prophylaxis therapy. After the massage, the joint surfaces were shown to be in the proper position.

In a second phase of the study, I endeavored to learn about the procedure personally and had the practitioners give me a precise description of the technique in order to be able to judge what changes might occur, what the physiological and physical mechanism of action might be, and especially to be able to assess the possible damage that might result from the treatment. To facilitate this process, Mr. Schümperli traveled personally to visit our university institute in Mülheim.

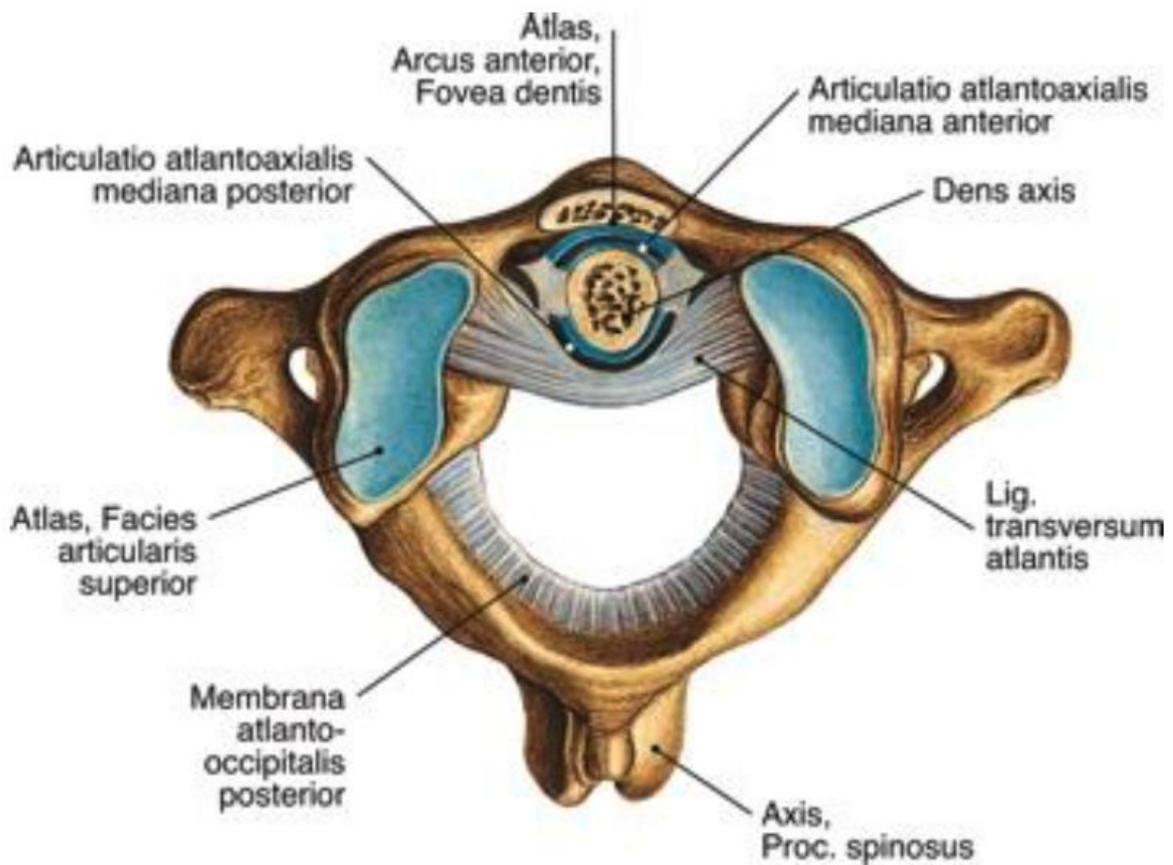


Fig. 2

Atlas from above

Anatomically correct position of the atlas. A trained examiner can palpate the transverse processes of the atlas in normal-weight individuals. (Sobotta, Atlas of Anatomy)

The procedures developed by René-C. Schümperli constitute a massage technique for ameliorating symptoms arising from problems in the craniocervical junction. The technique most often leads to success by relieving the muscular tension that has been caused by malpositioning of the upper cervical spine. Other massage techniques have also achieved positive results for other regions of the body. These include massage for spinal conditions as well as Ayurvedic massage in Indian medicine and in traditional Chinese medicine (TCM). These methods are sometimes employed in the wellness area, and sometimes for medical treatment. It has taken a long time for such methods that have been employed for centuries in Ayurveda and TCM to establish themselves in Western medicine and for them to achieve general acceptance. It has not been unusual for certain individual methods to be practiced both in medicine and in the wellness area.

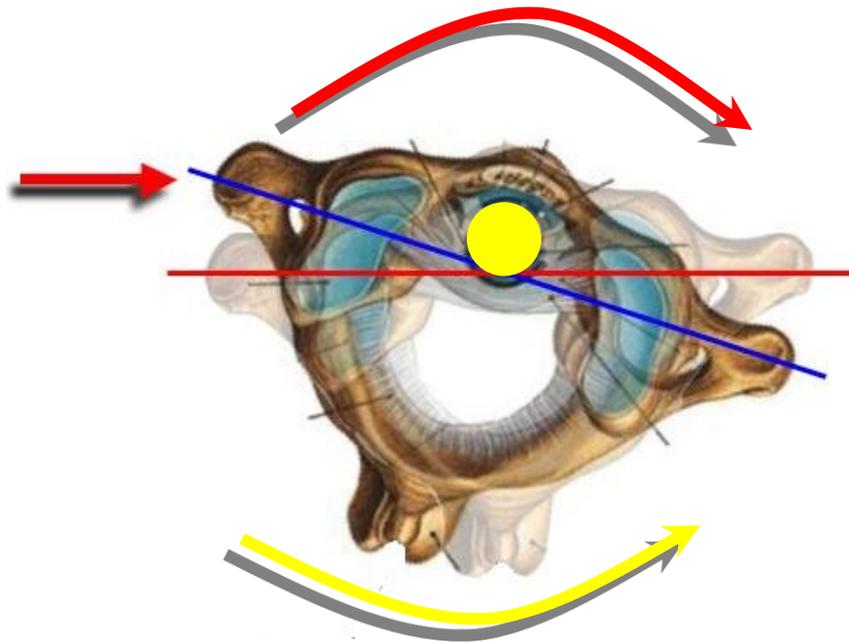


Fig. 3

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Atlas from above in a rotational malposition

Blue Line: Malrotation of the atlas

Red Line: Correct position of the Atlas

Red arrow: force effect of the “impulses” as they are applied by Dr. Lohse-Busch.

Curved red arrow: incorrect direction of rotation

Curved yellow arrow: correct direction of rotation of the Atlas

Yellow circle: center of rotation

The massage developed by Schümperli does not work directly on the vertebra, but rather, it has an indirect effect through muscle relaxation and movement in the nuchal ligament. In contrast, it is possible that the Arlen technique (3,4), as described by Dr. Lohse-Busch, which uses “impulses” over a site in front of the sternocleidomastoid muscle may have a harmful effect on the craniocervical joint. This method generates a direct effect on the transverse process of the atlas, which could lead to an aggravation of the malposition of the atlas. The reason for this is that the force exerted works in the wrong direction, and can result in further malrotation of the atlas, which was already rotated toward the left before the treatment (Fig. 3). Overall, the Arlen treatment that is performed by Dr. Lohse-Busch is not without controversy in academic medicine (6). Its use in KISS (“Craniocervical joint induced symmetry disorder”) in babies, as described in Dr. Lohse-Busch’s publication, is open to question. Prior to each of these treatments, an X-ray image of the cervical spine is supposed to be taken. These are of minimal value for assessing the position of the cervical spine, since the spinal structures are to some degree overlain by other bony structures and are difficult to visualize in a standardized manner. In addition, parts of the atlas are not calcified yet in babies and are thus invisible on X-ray examination.

The KiSS syndrome itself is declared to be only an unproven hypothesis in a position statement by the Society for Neuropediatrics:

The existence of “the ‘craniocervical-induced-symmetry-disorder’ (KiSS) as a defined disease leading to specific clinical disturbances in head posture in infants and babies, or responsible for a host of behavioral disorders remains an unsubstantiated hypothesis.” (7)

Arlen’s treatment method, as promoted by Dr. Lohse-Busch (5), has been evaluated in the following terms according to the summary report of the Working Committee on “medical treatment” of the National Committee of Doctors and FHI Funds regarding their consultation in accordance with § 135 Paragraph 1 SGB V of 24 September 2002:

Summary:

Considering the current scientific literature, the uses, necessity and effectiveness of Arlen’s Atlas Therapy have not been sufficiently proven. Therefore, the method cannot be recognized as a statutory medical service.

According to our study, all cases of malrotation have been shown to occur in one direction (toward the anterior left). This corresponds to the thesis proposed by René-C. Schümperli in 1993, according to which the first cervical vertebra is found in a rotational malposition tilted forward, upward and toward the left. There was a significant rotational disturbance that could be demonstrated on MRI in coronal sections. This condition is unrelated to any prior injury to the cervical spine. The findings of our study help to elucidate the anatomic relationships in the area of the craniocervical joints. Additional studies and analyses will have to be undertaken to evaluate any claims for distant effects on the autonomic nervous system of atlas prophyllaxis or other measures applied to the craniocervical junction.

Our subjects consistently achieved an improvement in head rotation after the atlas prophyllaxis. This result is primarily attributable to relaxation of the short neck muscles at the craniocervical junction. What is surprising is that this improvement in head rotation is sustained. We documented this in the follow-up studies on our subjects. We witnessed no negative effects after atlas prophyllaxis. According to our findings, and in keeping with the physical and anatomical conditions, we would rate Schümperli’s method, when properly applied, to be without risk. The breadth of the spinal canal at the craniocervical junction and the associated distance of the bony mass of the atlas from nerves and the spinal cord (significantly greater than for other vertebrae) would lend support to this. Specific training in this massage technique is a prerequisite for performing atlas prophyllaxis, and in our opinion, should result in approval for practice.

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Literature

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Abitur diploma, Altsprachliches Otfried v. Weissenburg
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University of the Saarland, Saarbrücken/Homburg,
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Dr. med. University of Mainz

Post-doctoral habilitation, Lecturer, *venia legendi*
Radiology and Interventional Radiology,
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Advanced training in radiology in Trier

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Acting Senior Practitioner in Radiation Therapy at St. Josefs-Hospital in
Wiesbaden

Advanced training in radiology,

Institute for Clinical Radiology, University of Mainz

Senior Physician at the Department of Radiology,
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Since March 1986

Since July 1988

Director of the Mülheimer Hospital Institute

Director of the Institute for Diagnostic and
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Since October 1990

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Director of the Mülheimer Radiology Institute (MRI)

Founder of the EFMT - Development and
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Founder Mediport Consult GmbH, Berlin

Director of the Department of Radiology and Nuclear Medicine, St. Marien
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Since October 1993

Since October 1993

Since June 1993

Since January 1997

Invited Consultant for the NIH (National Institute of Health, USA) for
Interventional Radiology

Invited Consultant for the NCI (National Cancer Institute, USA) for breast
cancer

Invited Consultant Department of Defense, USA, for telemedicine

Invited Consultant Department of Health, USA, for
Minimally Invasive Therapy

Since October 1994	Visiting Professor at Harvard Medical School in Boston
1997	Visiting Professor at the University of Arkansas, Little Rock
1995	Co-editor Medizin im Bild
1996	Co-editor Medic Online
1997	Editor-in-Chief Medizin im Bild
Diverse international publications and book articles	
Books	
1989	Editor and author "Interventional Computed Tomography" (German)
1990	Editor and author "Interventional Computed Tomography"
1997	Honorary member European Society for Endoscopic Surgery
1998	OP 2000 Study for North-Rhine Westphalia
1998	Professor of Radiology
1997	President 1st Technology Forum of the International Hospital Federation in Hanover
1998	President 2 nd Technology Forum in Hanover
1999	Member Steering committee of the Society for Minimally Invasive Therapy
2000	President for the XII annual meeting of the Society for Minimally Invasive Therapy
2000	Treasurer of the Society for Minimally Invasive Therapy
1998	OP 2000 Study for the NRW Ministry of Economics (North-Rhine Westphalia)
2000	Director of the NRW OP of the Future Project
2001	First cure of a long-term quadriplegic through a new treatment procedures
2001	Development of the first open computer tomography
2002	Consultant for the Economics Ministry in NRW (North-Rhine Westphalia)
2002	Winner of the Ruhr Prize for 2001
2002	Acceptance to the Acatech, Konvent Technikwissenschaften (National Academy of Science and Engineering) of the Union of German Academies of Sciences, in the working groups on Life Sciences, Information Technology and Communication Sciences
2003	Member of the International Academy for Informatization Cluster manager for O.Vision
2004	Delegation member for the State of North-Rhine Westphalia in the United Arab Emirates
2005	Consultant for HH Sheik Hamdan Abu Dhabi, UAE
2005	Director of the Roundtable of the nrw.bank Network for High-quality Medicine
2006	Consultant for the Federation Council of the Russian Federation
2008	Member of the German Academy of Technological Sciences
Special research and development areas of interest:	
Interventional radiology, minimal invasive therapy, computer-assisted surgery, developing instruments for interventional radiology and minimal invasive therapy, development of CT and MRI interventions and equipment, development of operating systems of the future, telemedicine, teleteaching, development of software and hardware components for digital networks, New fields of multimedia for students in all subject areas. Developer of the digital hospital Radiology information systems (RIS), digital radiology archives (PACS)	

