Shoulder osteoarthritis across the lifespan

Andreas Voss, Knut Beitzel

PII: S2059-7754(23)00587-4
DOI: https://doi.org/10.1016/j.jisako.2023.10.012
Reference: JISAKO 179

To appear in: Journal of ISAKOS

Received Date: 21 August 2023
Revised Date: 18 October 2023
Accepted Date: 25 October 2023


This is a PDF file of an article that has undergone enhancements after acceptance, such as the addition of a cover page and metadata, and formatting for readability, but it is not yet the definitive version of record. This version will undergo additional copyediting, typesetting and review before it is published in its final form, but we are providing this version to give early visibility of the article. Please note that, during the production process, errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

© 2023 Published by Elsevier Inc. on behalf of International Society of Arthroscopy, Knee Surgery and Orthopedic Sports Medicine.
Shoulder osteoarthritis across the lifespan

Andreas Voss\textsuperscript{1,2}, Knut Beitzel\textsuperscript{3}

1) sporthopaedicum, Regensburg, Germany

2) Department of Trauma Surgery, University Hospital Regensburg, Germany

3) ATOS Orthoparc Clinic, Cologne, Germany

Corresponding author:
Andreas Voss, M.D.
Sporthopaedicum Regensburg
Hildegard-von-Bingen-Str. 1
93053 Regensburg
Germany

&

Department of Trauma Surgery
University Hospital
Franz-Josef-Strauß-Allee 11
93053 Regensburg
Germany

Mail: andreas.voss@ukr.de
Shoulder osteoarthritis across the lifespan

Osteoarthritis in the shoulder is a common problem in our patients. Thereby in patients older than 60 years a prevalence of up to 20% is mentioned.\textsuperscript{3, 5} However, due to the unique anatomic of the shoulder as a non-weightbearing joint, surgical options such as arthroplasty have been traditionally used to a much lower extent as known as for example for the hip and knee joint.\textsuperscript{1}.\textsuperscript{2} This is also based on the fact, that the symptomatic glenohumeral osteoarthritis (GHOA) is not as common as osteoarthritis of the weight bearing joints such as hip and knee.\textsuperscript{3} Demographic change with an increasingly aging population and an increasing incidence will make the problem of glenohumeral osteoarthritis more serious and relevant in the future.

When it comes to the evolution of cartilage degeneration, there are basically two evolving concepts influencing each other: The first describes the overuse and repetitive stress of the cartilage leading to a surface break up with subsequent degeneration. Whereas the other concepts describes a cartilage weakness itself, which then leads to degeneration. A specific difference to the knee and the hip is the small amount of bone present especially at the scapula, which limits the availability of secure fixation of the glenoidal component, as well as the significant reduced cartilage thickness. This being said, the specific anatomy or “laxity” allows for much more freedom of motion, but comes with less joint guidance. It is still unknow if this “laxity” or a joint instability per se is a risk factor for the devolvement of OA. However, the association between shoulder dislocations “to which instability is a predisposing factor” and the development of OA has been proofed in numerous studies.\textsuperscript{3, 4}

The cartilage damage and typical subsequent subchondral sclerosis were mainly found in the superior 2/3 of the humeral head. This area gets in contact with the glenoid between 60-100°
of abduction and therefore explaining pain and reduced range of motion in symptomatic GHOA.6

Since we encounter patients with degeneration of the glenohumeral joint in all age groups, it is important to oversee the entire span of different treatment options within the different age groups. It is common sense that the primary treatment of symptomatic GHOA is a conservative approach, unless pain and limited function strongly influence the quality of life. Multiple treatment options have been shown how and when to start this first line treatment. In this issue there is a specific article exactly highlighting this approach.

If surgical treatment is necessary, the execution of the surgical technique should be performed according to the latest knowledge to ensure the best survival of the implants with long lasting functional benefits for the patients. At this point the discussion is about whether to choose an anatomical resurfacing or to use a reversed implant design. Both concepts are also described within this issue, with deep insights in the process of indication and what to expect as outcome parameters.

Therefore, the aim of this special issue is to evaluate the different treatment options with a special focus on the different age groups of the patients and the optimal application of each treatment tool. The spectrum should cover all the options for treatment of shoulder OA across all our patients.

We hope that this issue will be refreshing, educative and helping understanding the treatment of GHOA.
References


Both authors have no conflict of interest related to this editorial