管理颞下颌关节关节炎在成人风湿病学实践：一项成人风湿病学家关于颞下颌关节炎的调查

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摘要

背景：颞下颌关节（TMJ）在幼年类风湿性关节炎（JIA）中经常涉及，然而，关于患者从儿童到成人护理和关于如何评估TMJ在类风湿性关节炎（RA）中的参与方式，我们知道的很少。本项目的目标是描述成人风湿病学家对JIA或RA中的TMJ关节炎的诊断和治疗方案。

发现：118名风湿病学家对美国和加拿大的成人风湿病学家进行了在线调查。响应者估计，1-25%的他们患者有RA或JIA TMJ关节炎。响应者报告的MRI使用率（19%）和使用支撑/功能设备的率（50%）低于预期。大约80%的响应者表示，他们的实践对TMJ关节炎的评估有一个标准化的方案。最常用的医学疗法是非甾体抗炎药、抗肿瘤坏死因子alpha药物和甲氨喋呤。

结论：尽管大多数响应者表示，他们的实践对TMJ关节炎的诊断和治疗有一个标准化的方案，但仍然存在各种实践的报告。在实践中标准化的评估和治疗可能对成人和儿科患者有益。

关键词：颞下颌关节关节炎，幼年类风湿性关节炎，类风湿性关节炎

发现

颞下颌关节的关节炎在幼年类风湿性关节炎（JIA）中经常涉及，其发生率为75% [1,2]。患有JIA和TMJ关节炎的儿童的关节炎放射学进展的显著比例已被报告 [3]。患有JIA和TMJ关节炎的儿童可能更容易报告TMJ功能障碍的症状，包括头痛、颈部疼痛和开口困难 [4]。然而，很少有关于这些患者的评估和治疗的数据，从JIA儿科风湿病学家到成人风湿病学家的过渡。该报告的目的是评估成人风湿病学家如何评估和治疗患有JIA和已知或可疑TMJ关节炎的成人患者，并将这些数据与他们的RA病人的实践进行比较。

患者和方法

一个20个问题的调查表在SurveyMonkey™中开发。参与者被要求回答一组关于他们JIA患者（诊断年龄<16岁）的护理问题，以及一组关于他们的RA患者的问题。调查问卷在一组儿科风湿病学家中进行了测试，随后通过电子邮件分发给阿拉巴马州风湿病学会的成员，以及随机选择的美国ACR成员。该调查链接被分发给ACR成员，以用于电子邮件的分配。

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Descriptive statistics were generated using the statistical analysis software embedded within the SurveyMonkey™ site.

Approval for this study was obtained from the Seattle Children’s Hospital institutional review board.

Results
One hundred and eighteen responses were received. The response rate for this survey could not be calculated as we were not able to assess the number of email addresses which were active or the number of active members within each Listserv, and unable to assess the number of surveys actually received (e.g. versus those routed to spam folders). The majority of respondents (86.5%) practiced within the US and had been in practice >15 years (67.8%) since completion of fellowship training. Approximately half of respondents provided care for both children and adults in their practice. Ninety-three percent of respondents cared for at least one adult patient with JIA in their practice.

The majority of physicians (58%) estimated that between 1-25% of their adult patients with JIA had a history of TMJ arthritis and approximately 60% of their adult patients with JIA were currently being treated for active TMJ disease. Similarly, respondents estimated that between 1-25% of their patients with RA had TMJ arthritis and were being actively treated for it.

The majority of physicians (58%) estimated that between 1-25% of their adult patients with JIA currently had symptoms of TMJ arthritis. This was similar to their estimates for their patients with RA, although several respondents also noted that they found it difficult to distinguish TMJ arthritis symptoms from TMJ dysfunction in their patients with RA. The most common symptoms were pain with chewing and/or difficulty chewing, decreased mouth opening, and jaw clicking or popping (Figure 1).

Physicians most frequently reported evaluating TMJ arthritis in their adult patients with JIA and in their patients with RA by history and physical, and by referral to dentist or orthodontist (Figure 2). Orthopantomogram was the most frequently used imaging modality, used by 28% of providers for patients with RA and by 20% for patients with JIA. Magnetic resonance imaging was used by 19% of providers for assessing TMJ arthritis in both sets of patients. Approximately 75-80% of respondents reported that their practice did have a standardized approach to the evaluation of TMJ arthritis in patients with either diagnosis.

The systemic medical therapies most commonly used specifically for the treatment of TMJ arthritis included non-steroidal anti-inflammatory drugs, methotrexate, and tumor necrosis factor-alpha inhibitors (Figure 3). Over half of respondents reported using functional orthodontic devices (e.g. soft splints and activator splints) as therapy, and over one-third reported using intra-articular corticosteroid injections.

Discussion
The above results suggest that adult rheumatologists approach the evaluation and treatment of TMJ arthritis in adults with JIA and those with RA similarly. However, these results highlight two important differences in practice between pediatric and adult rheumatologists. Although the high prevalence of TMJ arthritis in JIA is now well-recognized by pediatric providers, respondents to this survey estimated that only as many as 25% of their adult patients with JIA had TMJ involvement. Similarly, while published series indicate that the prevalence of TMJ

Figure 1 Tempromandibular joint symptoms. RA: Rheumatoid Arthritis; JIA: Juvenile idiopathic arthritis.
involvement in RA may be as high as 45%, the majority of respondents estimated that only as many as 25% of their patients with RA had TMJ involvement [5]. Because we would anticipate that the rheumatologists who responded to this survey might have a particular interest in the TMJ, it is likely that awareness of the high prevalence of TMJ involvement in adults with JIA would be even lower among the broader community of adult rheumatologists. This discrepancy suggests that improved communication between pediatric and adult providers regarding the high prevalence of TMJ involvement in JIA is still needed. Secondly, only a small percentage of respondents indicated using MRI for imaging of the TMJ. MRI with gadolinium is considered the most sensitive modality for detecting active TMJ arthritis in children [1]. While orthopantomogram may define condylar damage, it does not provide information about whether there is synovitis that would impact treatment decisions. In terms of therapy, almost half of the adult rheumatologists reported using systemic methotrexate and/or TNF inhibitors. And while these

![Figure 2 Evaluation of temporomandibular joint arthritis.](image)

![Figure 3 Treatment of temporomandibular joint arthritis.](image)
therapies may help, TMJ arthritis can still occur while taking these systemic treatments [6-8]. Interestingly, almost 40% of adult rheumatologists reported using intra-articular corticosteroids treatments, as has been championed in pediatric rheumatology [9]. Lastly, the number of respondents who reported using splints and/or functional orthodontic appliances to treat TMJ arthritis in adults with JIA or RA was higher than anticipated. While the anticipated effects of splinting are different for adults versus children, the recent data regarding the potential benefit of splinting on dentoalveolar development in JIA, with subsequent improvements in mandibular growth, suggest that splinting may be a treatment modality that pediatric rheumatologists will begin to use more frequently as well [10,11].

Although this survey was limited by its small sample size and reliance on participants’ recall, and may not be representative of the larger community of adult rheumatologists, the results nevertheless highlight the value of the development of standardized practice around TMJ arthritis and the specific discussion of TMJ arthritis, when relevant, during the transition of patients between pediatric and adult providers.

Competing interest
There are no competing of interest for the authors above and this work.

Authors’ contributions
SR, NT, RC contributed to the design of the survey. SR and RC participated in administration of the survey. SR conceived of the study and drafted the manuscript. NT and RC read, contributed to, and approved the final manuscript. All authors read and approved the final manuscript.

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