without chromosome abnormality did not develop psoriasis or arthritis even though they were homozygous for *CARD14* rs11652075. However, the combination of trisomy and the variant might be coincidental and therefore unrelated to PsA in the patient. In conclusion, to our knowledge this case is the first to suggest that a combination of chromosome 21 trisomy and psoriasis susceptibility variant *CARD14* rs11652075 can lead to childhood-onset PsA.

Rheumatology key message

- A combination of Down syndrome and *CARD14* rs11652075 can lead to childhood-onset PsA.

Acknowledgements

The authors thank Haruka Ozeki, Yuka Terashita and Akemi Tanaka for their technical help in analysing variants of *CARD14* and HLA-C. This study was supported in part by a Grant-in-Aid for Challenging Exploratory Research (26670526; to K.S.) and a Grant-in-Aid for Scientific Research (A) (23249058; to M.A.), both from the Ministry of Education, Culture, Sports, Science and Technology of Japan, and by a grant for Research on Measures for Intractable Diseases (to M.M.) from the Ministry of Health, Labor and Welfare of Japan.

Funding: None.

Disclosure statement: The authors have declared no conflicts of interest.

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Rheumatology 2015;54:199–200
doi:10.1093/rheumatology/keu397
Advance Access publication 6 October 2014

Salivary gland ultrasound to diagnose Sjögren's syndrome: a claim to standardize the procedure

SIR, We read with great interest the recent study by Takagi *et al*. [1], which reports on the clinical usefulness of major salivary gland ultrasound (SGUS) to classify SS patients. This study shows that SGUS could replace any item of the ACR classification criteria without modifying their concordance with American–European Consensus Group (AECG) classification criteria.

Using a different study design with physician diagnosis as a gold standard, we have shown that the adjunction of SGUS as an independent item improves the diagnostic performance of both AECG and ACR classification criteria [2, 3]. Despite notable differences in our results, mainly on the concordance between AECG and ACR criteria [4], the global conclusion of these studies is the same: SGUS should be included in future classification criteria.

However, as highlighted recently by Goules and Tzioufas [5], further steps in the validation of this test have to be overcome before its definitive inclusion in new classification criteria for primary SS. First, all recent studies published on the topic have shown good performance of SGUS in diagnosing SS, but each team uses a different definition of a pathological procedure [6–8]. The main abnormal SGUS feature related to SS diagnosis seems to be parenchyma heterogeneity, due to the occurrence of a hypoechogenic area resembling fluid cysts (even if no data exist on the histological significance of these sonographic findings). However, several other items are optionally included in the different proposed sonographic scores, such as gland size, hyperechogenic bands, precision of the borders, intraglandular calcification, parenchyma inflammation assessed by power Doppler or vascular abnormalities assessed by colour Doppler. The relative diagnostic value of these items has to be determined in order to develop a consensual scoring system that could be used by all physicians.

Second, US may be more examiner dependent than other imaging procedures. Scarce data exist on the intra- and interobserver reproducibility of SGUS. In the current context of the wide diffusion of US among rheumatologists, specific formations will have to be developed to ensure the accuracy of the procedure performed in clinical practice. The stability of SGUS

findings over time in a given patient also has to be carefully investigated. In our first study we showed that the diagnostic value of SGUS was the same when patients were stratified according to the duration of the disease [2], but the performance of the test has to be assessed in patients with very early disease. Longitudinal data are mandatory to determine whether it would be valuable to repeat the procedure in a patient with an initially normal SGUS.

Third, the specificity of SGUS for SS compared with other chronic salivary gland inflammatory conditions, such as sarcoidosis, IgG4-related disease, granulomatosis with polyangiitis, chronic HCV or HIV infection, graft-versus-host disease or head-and-neck radiation therapy, has not been widely described. Most of the published studies have assessed the diagnostic value of SGUS using healthy controls, other systemic autoimmune diseases or idiopathic age-related sicca syndromes. However, in a real-life clinical setting of SS suspicion, all these differential diagnoses seem to be extremely rare: in our cohort of 250 patients with suspected SS, HCV and sarcoidosis were diagnosed in only one patient each, and no patients were diagnosed with these other diseases.

To resolve these issues and consider the integration of SGUS into future classification criteria for SS, an international task force was created in 2012 to validate SGUS through the OMERACT filter. The first step of this project has been to perform an extensive and systematic literature analysis (article in preparation) in order to determine which precise SGUS findings should be assessed when the new score is developed. A web exercise on static images has been organized between 12 ultrasonographers to determine the intra- and interrater reliability of the different components of US echostructural abnormalities. The next step in the process will be to repeat the same exercise with acquisition of the images on patients and healthy controls to assess reliability and feasibility. Ultimately a prospective international study will be launched to validate the proposed score, using salivary gland biopsy as a gold standard to assess criterion validity. Only then will SGUS be considered a definitely useful tool to diagnose SS able to be included in new classification criteria.

Rheumatology key message

- Salivary gland US needs standardization and validation before its use in SS diagnosis.

Disclosure statement: The authors have declared no conflicts of interest.

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Accepted 5 August 2014
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Rheumatology 2015;54:200–202
doi:10.1093/rheumatology/keu426
Advance Access publication 3 November 2014

Screening psoriatic arthritis tools: analysis of the Early Arthritis for Psoriatic Patients questionnaire

SIR, PsA is a chronic, seronegative inflammatory arthritis associated with psoriasis. Early diagnosis and treatment are needed, since the disease can lead to irreversible changes (such as erosive arthritis), which lead to permanent physical disability and deformity. Recent studies have shown that PsA is often overlooked in patients with psoriasis. Reich *et al*. [1] studied 1511 patients with psoriasis, and found 17.5% patients who were newly diagnosed with PsA. In a further study including 2009 patients with psoriasis, 4.2% were newly diagnosed with PsA.