Research letter

Interviews with paediatric rheumatologists about psoriasis and psoriatic arthritis in children: how can specialties learn from each other?

DOI: 10.1111/bjd.15090

DEAR EDITOR, Opportunities exist for cross-specialty learning between dermatology and other medical disciplines, to the benefit of patients, clinical decision making and professional development. The Group for Research and Assessment of Psoriasis and Psoriatic Arthritis promotes the concept of ‘psoriatic disease’ to encompass psoriasis and psoriatic arthritis, and their new disease management recommendations emphasize the importance of collaborative working between dermatologists and rheumatologists.1 While the group focuses primarily on adult disease we suggest that a similar model should exist for the paediatric population. Juvenile psoriatic arthritis (JPsA) is a separate disease from psoriatic arthritis in adults and is a distinct subset of juvenile idiopathic arthritis, an inflammatory arthritis with onset under the age of 16 years and unknown aetiology.2 Cutaneous psoriasis and psoriatic nail disease are both core components of the diagnostic classification of JPsA.3 However, recognition of psoriasis in children can be more challenging compared with adult disease, as the signs are often more subtle.4

Local experience in our Nottingham combined paediatric dermatology and rheumatology clinics has demonstrated the shared benefit of cross-specialty learning for the assessment and management of JPsA. To identify learning opportunities we conducted structured telephone interviews with U.K. paediatric rheumatologists. The interviews aimed to ascertain paediatric rheumatologists’ current practice for assessing for psoriasis, the impact a diagnosis of JPsA has on the management of arthritis, experience of the presentation of skin and joint disease, and recommendations on improving the detection of JPsA.

In the U.K., paediatric rheumatology is a specialist commissioned service with 12 designated centres; a rheumatologist at each centre was identified through the British Society of Paediatrics and Adolescent Rheumatology. Rheumatologists were contacted and provided study information by e-mail, verbally consented for audio recording and undertook the interviews as part of service evaluation. The interviews were conducted by one interviewer (E.B.-T.) following an interview guide of open and closed questions and were transcribed as intelligent verbatim. Categorical responses were analysed quantitatively as percentages, and framework analysis was used to identify common themes in open responses.5

Rheumatologists at 10 of 12 (83%) centres of paediatric rheumatology expertise were interviewed, based in England, Scotland and Northern Ireland. These form a moderate sample that is likely to be representative of current paediatric rheumatology practice. All clinicians had children with inflammatory arthritis under their care.

Table 1 presents the results of questions about the assessment for psoriasis and the impact a diagnosis of JPsA has on the management of arthritis. Hidden-site psoriasis was defined as psoriasis occurring behind the ears or in the umbilicus, flexures, groin, genitals or natal cleft. Only 50% of rheumatologists ask about or examine at least one hidden site, and a smaller number examine the groin (20%), genitals (10%) and natal cleft (10%). However, paediatric rheumatologists rated their confidence in assessing for psoriasis on average at 6.4 (0, no confidence at all; 10, very confident).

The three most frequent suggestions to improve rheumatologists’ recognition of psoriasis were a close working relationship with dermatologists, experiential training and a diagnostic tool. The majority of rheumatologists felt a diagnostic tool of JPsA compared with other juvenile idiopathic arthritis subtypes made an impact on the explanation given to patients and families (70%), the treatment plan (80%) and long-term outcomes (70%), highlighting the likely chronic and aggressive course of JPsA.

Eight rheumatologists (80%) found it difficult to estimate the percentage of patients presenting with skin, joint or simultaneous disease. Nine rheumatologists (90%) recommended that paediatric dermatologists could use the Paediatric Gait Arms Legs Spine (pGALS) tool to screen children with psoriasis for JPsA, and one-third (30%) commented that it is important to practise the technique.6

Opportunities exist for paediatric dermatologists and rheumatologists to learn from each other. JPsA may be missed by paediatric rheumatologists if psoriasis occurring in hidden sites is not asked about and examined. It is important to examine these sites as there is sometimes discordance between patients’ awareness of psoriasis and changes detected on examination. Future work could further explore dermatological practice among rheumatologists, including recognition of nail disease and disease severity. Dermatologists are best placed to develop paediatric psoriasis training material and diagnostic guidance for their rheumatology colleagues.

Currently there is no specific guidance on how children with psoriasis should be screened for JPsA. Available screening
Table 1 Responses to questions about how paediatric rheumatologists assess children with inflammatory arthritis for psoriasis and the impact a diagnosis of juvenile psoriatic arthritis has on their management of arthritis. Hidden psoriasis refers to psoriasis behind the ears and in the umbilicus, flexures, groin, genitals and natal cleft.

| Structured question                                                                 | Number of respondents |
|-------------------------------------------------------------------------------------|-----------------------|
| When assessing children with inflammatory arthritis, do you routinely ask any questions about skin disorders? | Yes 10/10 (100%). Directly ask about psoriasis 7/10 (70%) |
| When assessing children with inflammatory arthritis, are there any specific areas of the body where you ask about changes to the skin? | Scalp 7/10 (70%), behind the ears 1/10 (10%), face 0/10 (0%), trunk 0/10 (0%), umbilicus 3/10 (30%), limbs 3/10 (30%), acral 0/10 (0%), nails 4/10 (40%), flexures 0/10 (0%), groin 2/10 (20%), genitals 0/10 (0%), natal cleft 3/10 (30%). Hidden sites asked about 3/10 (30%) |
| When assessing children with inflammatory arthritis, are there any specific areas of the body where you examine for skin changes? | Scalp 9/10 (90%), behind the ears 3/10 (30%), face 2/10 (20%), trunk 3/10 (30%), umbilicus 3/10 (30%), limbs 5/10 (50%), acral 1/10 (10%), nails 5/10 (50%), flexures 2/10 (20%), groin 2/10 (20%), genitals 1/10 (10%), natal cleft 1/10 (10%). Hidden sites examined 5/10 (50%) |
| How confident do you feel about diagnosing psoriasis on a scale of 1 to 10, 1 being not at all confident to 10 very confident? | 4, 1/10 (10%); 5, 2/10 (20%); 7, 6/10 (60%); 8, 1/10 (10%). Mean average score 6-4 |
| In your experience, are there any reasons why making a diagnosis of psoriasis can be difficult? Example quotations are provided | Atypical appearance, 8/10 (80%). ‘Appearance is not characteristic.’ ‘Not very scalp in the scalp … difficult if the GP has already started treatment. You aren’t seeing the true clinical picture’ |
| From your expertise, do you consider there to be a difference between juvenile idiopathic arthritis and JPsA? | Yes, 8/10 (80%); no, 2/10 (20%). Specific rheumatological features in JPsA, 7/10 (70%), which include dactylitis 5/10 (50%), enthesitis 1/10 (10%), small joints of the hand/DIP 4/10 (40%), minimal swelling/drier synovitis/subtle 3/10 (30%), more aggressive 1/10 (10%), systemic inflammation 1/10 (10%). Each subtype is a different disease 1/10 (10%) |
| Can you make any suggestions about what would help you diagnose psoriasis and therefore psoriatic arthritis? Example quotations are provided | No family history, 2/10 (20%). ‘No family history of psoriasis’ |
| Diagnostic test, 1/10 (10%). ‘Any imaging … skin ultrasound’ | Diagnostic criteria, 3/10 (30%). ‘A list of criteria for diagnosing psoriasis’ |
| Experiential training and clinical education, 4/10 (40%). ‘Active learning from colleagues … courses … clinical experience’ | Close working relationship between rheumatology and dermatology, 6/10 (60%). ‘We have a combined clinic monthly.’ ‘Review by a dermatologist who has experience around children and understands the importance around making an accurate diagnosis’ |
| In your experience do you feel there are any particular joint patterns in children with psoriatic arthritis? Does a diagnosis of JPsA instead of juvenile idiopathic arthritis influence what you explain to children and their parents? Example quotations are provided | Small joints of the hand/DIP (60%), large joints (50%), dactylitis (40%), oligoarthritis or asymmetric (40%), mid/hind foot (30%), sacroiliitis (20%), polyarticular (20%), minimal swelling (10%) and no clear pattern (10%) |
| Yes, 7/10 (70%); no, 3/10 (30%) | Helps disease explanation (skin and joints), 2/10 (20%). ‘Starting point for explaining autoimmune disease … helps explain treatment as you can use methotrexate for skin and joints’ |
| Comorbidities, 2/10 (20%). ‘Need to monitor eyes for uveitis’ | Cautious explanation of genetics, 2/10 (20%). ‘Try to stay away from the blame of genetics’ |
| Persistent disease and risk of joint damage, 6/10 (60%). ‘Prolonged … can be more damaging.’ ‘Less reassuring regarding spontaneous remission’ | Treatment strategy, 4/10 (40%). ‘Early intervention can be very effective … slightly different approach.’ ‘Intermittent lifelong immunosuppression’ |

(continued)
tools for adult psoriatic arthritis have not been validated for use in children. Paediatric rheumatologists are likewise best placed to develop screening recommendations and related training for JPsA assessment by dermatologists. From these interviews pGALS should be considered as an annual screening tool for use in paediatric dermatology clinics.

We conclude that these interviews provide clear examples of the need for paediatric dermatologists and rheumatologists to learn from each other. Working groups, consensus work and research studies are needed to take forward these strategies to improve the detection of JPsA. At a time of limited healthcare resources, this work should open discussions about electronic multidisciplinary working and teaching material.

Acknowledgments

We would like to acknowledge the following rheumatologists who supported this study by participating in the interviews: K. Bailey, Department of Paediatric Rheumatology, Nuffield Orthopaedic Centre, Oxford OX3 7HE, U.K.; D. Hawley, Department of Paediatric Rheumatology, Sheffield Children’s NHS Foundation Trust, Sheffield S10 2TH, U.K.; L. McCann, Department of Paediatric Rheumatology, Alder Hey Children’s NHS Foundation Trust, West Derby, Liverpool L12 2AP, U.K.; J. McDonagh, Department of Paediatric Rheumatology, Birmingham Children’s Hospital NHS Foundation Trust, Birmingham B4 6NH, U.K.; K. Warrior, Department of Paediatric Rheumatology, Nottingham Children’s Hospital, Nottingham NG7 2UH, U.K. and M. Wood, Department of Paediatric Rheumatology, Leeds General Infirmary, Leeds LS1 3EX, U.K.

Hospital, Nottingham, U.K.
2Department of Dermatology, Sheffield
Teaching Hospitals NHS Foundation Trust,
Sheffield, U.K.
E-mail: Esther.Burden-Teh@nottingham.ac.uk

References

1 Coates LC, Murphy R, Helliwell PS. New GRAPPA recommendations for the management of psoriasis and psoriatic arthritis: process, challenges and implementation. Br J Dermatol 2016; 174:1174–8.
2 Cassidy JT, Petty R, Laxer RM, Lindsley CB. Juvenile psoriatic arthritis. In: Textbook of Paediatric Rheumatology (Cassidy JT, ed), 6th edn. Milton, ON: Saunders Elsevier, 2011; 287–97.
3 Petty RE, Southwood TR, Manners P et al. International League of Associations for Rheumatology classification of juvenile idiopathic arthritis: second revision, Edmonton, 2001. J Rheumatol 2004; 31: 390–2.
4 Kapila S, Hong E, Fischer G. A comparative study of childhood psoriasis and atopic dermatitis and greater understanding of the overlapping condition, psoriasis-dermatitis. Australas J Dermatol 2012; 53: 98–105.
5 Gale NK, Heath G, Cameron E et al. Using the framework method for the analysis of qualitative data in multi-disciplinary health research. BMC Med Res Methodol 2013; 13:117.
6 Foster HE, Jandial S. pGALS – paediatric Gait Arms Legs and Spine: a simple examination of the musculoskeletal system. Pediatr Rheumatol Online J 2013; 11:44.
7 Coates LC, Aslam T, Al Balushi F et al. Comparison of three screening tools to detect psoriatic arthritis in patients with psoriasis (CONTEST study). Br J Dermatol 2013; 168:802–7.

Conflicts of interest: none declared.