Current educational status of paediatric rheumatology in Europe: the results of PReS survey

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Abstract

Objectives

To understand the status of education and problems in paediatric rheumatology practice in Europe, through a survey.

Methods

A 26-item questionnaire was conducted during the 14th Congress of the Paediatric Rheumatology European Society in Istanbul, 2007. Physicians who were practicing or studying within the field of paediatric rheumatology for at least one year were included in the survey.

Results

One hundred and twenty eight physicians, 79 paediatric rheumatologists (including 5 paediatric immunologists and 10 paediatric nephrologists), 34 paediatric rheumatology fellows and 15 adult rheumatologists completed the survey. The physicians were from: Europe 95 (81.9%), South America 12 (10.4%), Middle East 5 (4.3%), Asia 2 (1.7%), Africa 2 (1.7%). The duration of training for paediatric rheumatology ranged between 1-5 years (mean: 3.12±1.11). Sixty physicians scored their education as unsatisfactory and among those, 48 physicians were from Europe. Physicians reported good skills in the following items; intraarticular injections (83.3%); soft tissue injections (47.6%); evaluation of radiographs (67.5%); whereas competence in the evaluation of computed tomography/magnetic resonance imaging (30.5%); and musculoskeletal sonography (16.7%) was much lower. A need for improved basic science and rotations among relevant fields were specifically expressed.

Conclusion

Being a relatively new speciality in the realm of paediatrics, paediatric rheumatology education at the European level needs to be further discussed, revised and uniformed.

Key words

Paediatric/juvenile rheumatology, education research, health policies, skills, subspeciality, survey.

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Introduction

Paediatric rheumatology is a relatively new but booming paediatric subspeciality around the world. Despite certification in the United States since 1992 (1) and in the European Union since 2001 (http://www.cesp-eap.org/_public/lay_docs.cfm) the subspeciality is still not recognized in all European countries and has certain problems mainly related to the standards of education. There is a need to raise awareness for the subspeciality since the scope of the field is unrecognized. On the other hand, paediatric rheumatic diseases are among the first five groups of diseases presenting to paediatric clinics, calling for a fast act in the training programs (2).

Besides, awareness for the importance of paediatric rheumatology is growing since the foundation of PReS 1998. In 2003, paediatric rheumatology was a recognized paediatric subspeciality in 12/30 European countries but a training program was implemented only in 4. These numbers grew to 19/30 countries with national recognition and 11 countries with established paediatric rheumatology training programs by 2007. However, training centre visitation programs only existed in 1 country by the end of 2007 (data from PReS Education and Training Committee). Also, big differences in the national training programs exist and many physicians practicing paediatric rheumatology may never have undergone a formal training in this speciality.

To date, a few studies from North America have been carried out in an attempt to address the challenges of paediatric rheumatology education (1, 3), whereas similar reports do not exist in Europe. Therefore, the objectives of our first and preliminary study were to characterize the paediatric rheumatology education mainly in Europe, to understand the status/education of paediatric rheumatology in several countries and to obtain relevant comments regarding the future of paediatric rheumatology and its education.

Materials and methods

A survey was conducted with a 26-item questionnaire among the participants of the 14th Congress of the Paediatric Rheumatology European Society (PReS) in Istanbul, 2007, to assess the status of paediatric rheumatology education from a wide perspective. Physicians who were practicing or studying within the field of paediatric rheumatology for at least one year were included in the survey. The questions were of multiple-choice type and questioned: physicians' interest/education in paediatric rheumatology, the status of paediatric rheumatology in their centre/country and physicians' recommendations concerning future paediatric rheumatology education. For the whole questionnaire see Appendix A. As some questions were not answered by all physicians the percentages cited in this report have been corrected according to the number of the respondents for each question and expressed as valid percentages.

The statistical analysis was carried out with Statistical Package for Social Sciences 15.0 for windows. Data were expressed as numbers, percentages and mean values.

Results

One hundred and twenty eight physicians (78 female and 50 male; one fourth of all the congress attendants) completed the survey. The group comprised 79 (61.7%) paediatric rheumatologists (including 5 paediatric immunologists and 10 paediatric nephrologists), 34 (26.5%) paediatric rheumatology fellows and 15 (11.7%) adult rheumatologists. The mean age of the physicians was 41.12±8.78 years (range 26-69). The distribution of the 37 countries were from the following regions: Europe 95 (81.9%), South America 12 (10.4%), Middle East 5 (4.3%), Asia 2 (1.7%), Africa 2 (1.7%).

Among the physicians, 94.5% reported that they had been working in the field of paediatric rheumatology for at least three years. Seventeen (13.3%) physicians got interested in paediatric rheumatology first during medical school, 64 (50.0%) during residency and 47 (36.7%) after residency. Table I summarizes the results pertaining to the individuals' education with regard to paediatric rheumatology. The duration of training for paediatric rheumatology ranged between 1-5 years (mean: 3.12±1.11)

Table I. Respondants' educational status (n (%)).

	Yes	No
Formal paediatric rheumatology education	90 (70.3)	38 (29.7)
Paediatric rheumatology accepted as a subspeciality in their country	55 (33)	73 (57)
Hold a paediatric rheumatology certificate	51 (41.2)	73 (58.8)
Thesis required for speciality certificate	51 (42.9)	68 (57.1)
Established training programme for paediatric rheumatology in their country	63 (50.8)	61 (49.2)

Table II. Answers of the respondants regarding relations with other departments (n (%)).

	Able to work with	Wish to collaborate with	Completed rotations in	Consider rotations necessary
Ophthalmology	100 (78.7)	118 (92.9)	18 (14.3)	50 (39.7)
Orthopedics	104 (81.9)	121 (95.3)	26 (20.6)	73 (57.9)
Paediatric nephrology	102 (80.3)	119 (93.7)	53 (42.1)	77 (61.1)
Physical medicine and rehabilitation	83 (65.4)	113 (89.0)	26 (20.6)	70 (55.6)
Adult rheumatology	88 (69.3)	106 (83.5)	46 (36.5)	76 (60.3)
Physiotherapy	95 (74.8)	117 (92.1)	19 (15.1)	59 (46.8)
Occupational therapy	56 (44.1)	98 (77.2)	10 (7.9)	42 (33.3)
Radiology	104 (81.9)	115 (90.6)	28 (22.2)	70 (55.6)
None	7 (5.5)		33 (26.2)	9 (7.1)

among countries. Sixty physicians (47.2%) evaluated their education as unsatisfactory. Among those, 48/95 (50.5%) physicians were from Europe. The fields in which the physicians have declared to be unsatisfied were as follows; clinical practice (33/60), research (40/60), basic education (31/60) and all the three fields (19/60). Twenty-eight of the physicians described this dissatisfaction due to financial problems, 26 of them due to insufficiency of the trainers, 20 of them due to low motivation and 16 of them due to limited number of patients. Physicians reported good abilities in skills as; intra-articular injections, 105 (83.3%); soft tissue injections, 60 (47.6%); evaluation of radiographs, 85 (67.5%); evaluation of computed tomography/magnetic resonance imaging, 39 (30.5%); musculoskeletal sonography, 21 (16.7%).

When the time spared for the research during their education was asked, we learned that 90 (71.4%) physicians were using 0–25% of their time for research, 17 (13.4%) were using 25–50%, and 8 (6.3%) were spending >50% of their time but 11 (8.7%) were not sparing any time for research during their education. They were asked to mark the diseases that they know best. Chronic arthritis was well known by 116 physicians, connective tissue disorders by 104, vasculitis by 89 and periodic fever syndromes by 42 physicians.

One hundred and eight subjects (87.1%) declared that paediatric rheumatology education should follow residency in paediatrics; however in case of absence of a paediatric rheumatologist, the following specialties were suggested to take care of the patients: paediatrics, 70 (55.1%); paediatric immunology, 43 (33.9%); (adult) rheumatology, 38 (29.9%); paediatric nephrology, 24 (18.9%); physical medicine and rehabilitation, 9 (7.1%); and orthopaedics, 5 (3.9%). Data with respect to the relations with other departments are given in Table II. Ninety-five (74.3%) subjects proposed that rotations between countries would be necessary for their education.

Discussion

This is the first survey undertaken in a relatively large group of physicians in the field of paediatric rheumatology. We hope that the results will shed light on the needs and the future of the field of paediatric rheumatology.

The respondents were mainly doctors practicing in Europe. A number of points deserve emphasis. One was the lack of consistency in the education for paediatric rheumatology. There was marked inconsistency in the time of education and the acquired skills. This stresses the need for a uniform education program accepted by all countries. Paediatric rheumatology is a recognized paediatric subspeciality in the EU since 2001. When the Paediatric Rheumatology European Society was established in 1999 one of the main goals was to improve and standardize education throughout the European countries (www.pres.org.uk). A European training programme and syllabus exists and efforts are going on in many European countries to recognize the subspeciality and install training centre visitation programs. Due to the decentralized structure of the EU this programs only have the value of recommendations and no country government is forced to comply with them. Paediatric rheumatology needs and deserves a widespread recognition to improve standards of training and raise awareness for these diseases. This will definitely lead to better management of children who are affected by rheumatologic diseases.

Many respondents reported their training program as inadequate. Because many of the participants likely underwent training before the recognition of paediatric rheumatology as a speciality and implementation of an official training program in their country, these results may not actually reflect the current situation of paediatric rheumatology trainees. Nevertheless the high number of physicians with subjectively inadequate training is of concern.

Most of the respondents are not satisfied with the level of research offered in their institution. This should be an important topic to address in the future for paediatric rheumatology. It was interesting that 55% are not satisfied with the clinical practice they acquired during their training as well. More studies are required to address this in detail. A basic education may need to be implemented in the programs since again 51% express unsatisfactory basic education. When the reasons for inadequate education were sought for in this survey, 43% declared this to be due to insufficiency of trainers which may be explained by the fact that this is a new field in paediatrics. Only 70.3% of the

respondents had a specific education for paediatric rheumatology. Financial problems with regard to difficulties in research funding were raised by 46%. This remains as a challenge in the field since rheumatology is known to be less "profitable" as compared to other subspecialties (3).

Many of the respondents became interested in paediatric rheumatology after their undergraduate training. On the other hand, keeping in mind the fact that rheumatic diseases are among the top five causes of paediatric admissions, it would be sound to call more attention towards the field during undergraduate training.

The respondents overall had a satisfactory collaboration with other professions. This survey also addressed the thoughts and needs for more rotations in relevant subspecialties. It was the general feeling that many of the listed rotations were required for better education. This in fact reflects the interdisciplinary approach and the desire for collaboration across speciality borders in this young discipline. On the other hand the trainees also expressed their wish for multicenter rotations. This is especially important on the background of the known big geographic and ethnic differences in the prevalence of certain diseases. An additional factor, however, may be the wish for exchange with peers and may stem from the warm atmosphere created in annual meetings.

Paediatric rheumatology is a young speciality. As paediatricians dedicated to this field we need to know where we stand and what our needs for the future are. Similar surveys will serve to guide us in this regard.

Key message: The training programme and syllabus developed by PReS should be applied in all countries for a uniform education. The needs for basic training, rotations among other professions and centres have also been expressed.

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14th PReS' Congress Trainee Meeting Survey*

Country: Age: Sex:

1. Please choose your occupation:
   a. General Paediatrician b. Paediatric Rheumatology Fellow c. Paediatric Rheumatologist d. Adult rheumatologist
   e. Paediatric nephrologist f. Paediatric immunologist g. Other (Please specify)……..

2. How long have you been working in the field of paediatric rheumatology ?
   a. 1 b. 2 c. 3 or more

3. Have you received a specific education on paediatric rheumatology ?
   a. Yes b. No

4. When did you get interested in paediatric rheumatology for the first time ?
   a. Before medical school b At medical school c. During paediatric residency d. After becoming a specialist

5. Why did you choose to become a paediatric rheumatologist ?
   a. Because it is a new developing area b. Due to its numerous investigation topics c. Because I like to deal with musculoskeletal problems d. Due to absence of other alternatives
   e. Other ……..

6. Do your national paediatric organizations accept paediatric rheumatology as a separate subspeciality ?
   a. Yes b. No

7. How long is the official duration of the fellowship program in your country ? ……..

8. Do you get a paediatric rheumatology certificate at the end of your fellowship ?
   a. Yes b. No

9. Is a finishing thesis or at least one study compulsory to complete your education ?
   a. Yes b. No

10. Do you think the education for paediatric rheumatology is satisfactory in your center ?
    a. Yes b. No

11. If your answer is 'no' for question 10, which side do you think is lacking ?
    a. Clinical practice b. Research c. Basic education

12. If your answer is 'no' for question 10, what do you think the reason would be ?
    a. The absence or insufficiency of trainers b. The spectrum of the rheumatology patients in my country being narrow c. The low academic motivation in many paediatric departments d. Financial problems
    e. Other (Please explain)

13. Do you have an established paediatric rheumatology education schedule ?
    a. Yes b. No

14. Do you believe that the trainees should be paediatricians ?
    a. Yes b. No

15. Which of the following departments are you able to work with in your center ?
    a. Ophthalmology b. Orthopedics c. Paediatric nephrology d. Physical Medicine and Rehabilitation
    e. Adult rheumatology f. Physiotherapy g. Occupational therapy h. Radiology
    i. None

*The results will be collected unanimously. The results may be published.

16. Which of the following departments do you believe a paediatric rheumatologist should collaborate with ?

a. None b. Ophthalmology c. Orthopaedics d. Paediatric nephrology
e. Physical Medicine and Rehabilitation f. Adult rheumatology g. Physiotherapy h. Occupational therapy
i. Radiology j. Other……

17. Which of the following rotations do you complete during your education ?

a. Ophthalmology b. Orthopedics c. Paediatric nephrology d. Physical Medicine and Rehabilitation
e. Adult rheumatology f. Physiotherapy g. Occupational therapy h. Radiology
i. None

18. Which of the following rotations do you think are necessary during paediatric rheumatology education ?

a. None b. Ophthalmology c. Orthopaedics d. Paediatric nephrology
e. Physical Medicine and Rehabilitation f. Adult rheumatology g. Physiotherapy h. Occupational therapy
i. Radiology j. Other…….

19. Please mark three of the following diseases that you know the best.

a. Chronic arthritis b. Connective disease disorders (SLE, scleroderma etc.) c. Vasculitides d. Periodic fever syndromes
e. Cryopyrinopathies

20. Do you think rotations among different countries are required especially due to different distributions of various rheumatic diseases ?

a. Yes b. No

21. How much of your time during education are you able to use for research ?

a. None b. 0-25% c. 25-50% d. >50%

22. If you believe that this time period is not enough, what is the reason ?

a. Financial problems b. Low motivation c. Patient overload d. Insufficient laboratory facilities
e. Other……

23. Which of the following ways do you use to keep yourself update ?

a. Internet b. Textbook c. Congress d. Journals

24. Which of the followings are you capable to perform ?

a. Intraarticular injection b. Soft tissue injection c. Evaluation of musculoskeletal radiographs d. Evaluation of musculoskeletal CT&MRI
e. Musculoskeletal sonography f. Other……

25. Do you think that the interaction between the adult rheumatologists and paediatric rheumatologists needs to be improved ?

a Yes b. No

26. In places where a paediatric rheumatologist is not present, which department should take over ?

a. Paediatrics b. Paediatric nephrology c. Paediatric immunology d. Adult rheumatology
e. Physical Medicine and Rehabilitation f. Orthopaedics

*The results will be collected unanimously. The results may be published.