



EDITORIAL

Paediatric rheumatology: The importance of anamnesis and physical examination[☆]



Reumatología pediátrica: la importancia de la anamnesis y la exploración

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Paediatric rheumatology (PR) is the medical speciality that focuses on inflammatory and non-inflammatory conditions of the musculoskeletal system in children and adolescents. It is one of the most recent paediatric specialities, and this may explain why it is still not as well known as it should be to families and to many paediatricians. It would be difficult otherwise to explain the observation that whereas children with non-surgical heart, respiratory or kidney conditions are referred to the appropriate paediatric specialist, rather than to a cardiovascular, thoracic or urological surgeon, respectively, children with non-surgical, non-orthopaedic and non-traumatic conditions of the musculoskeletal system are commonly referred to an orthopaedic surgeon, even if paediatric rheumatology units are available in their area.

Paediatric rheumatology may be young, but it is well past puberty. An editorial published in 2014 discussed its origins,¹ placing them in the 1950s, both in the USA and in Europe. The speciality was officially recognised in the US in 1992, with the first accreditation examination in paediatric rheumatology, the Subboard of Pediatric Rheumatology, conducted by the American Board of Pediatrics. The United Kingdom followed a similar process, and the Royal College of Paediatrics and Child Health recognised the speciality in 1996. As for Spain, the paediatric rheumatology section

of the Spanish Association of Paediatrics was founded in 1995 and the Sociedad Española de Reumatología Pediátrica (Spanish Paediatric Rheumatology Society) in 1998.

The low priority given to teaching the musculoskeletal system compared with other organs and systems in undergraduate² and postgraduate courses also does not help to divulge PR. This inadequate training in musculoskeletal medicine could explain why examination of the locomotor system is rarely recorded in the clinical history of paediatric patients who are hospitalised³ or assessed in the emergency services. Indeed, in emergency reports on patients receiving attention for non-traumatic limp or limb pain it is not uncommon to find an exhaustive assessment of their level of consciousness, capillary refill or absence of meningeal signs, while the exploration of their musculoskeletal system, often incomplete, is based on descriptions such as “there does not seem to be *much* pain”, “knee *somewhat* swollen” or “*apparently* without limitation of motion”. Such vague terms indicate the lack of confidence of the person conducting the assessment when examining the musculoskeletal system or, being more optimistic, their uncertainty about how to record such an examination.

An additional difficulty in rheumatology is that the response pattern of the joint to insults is limited: either it is inflamed or it swells or not. Therefore full anamnesis and physical examination, important in all areas of medicine, are crucial in rheumatology. A monoarthritis of the ankle is a monoarthritis, but it can have many possible causes. Taking a good medical history can provide clues to its aetiology, even before confirming that the ankle is swollen.

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The type of pain pattern, "inflammatory" when the pain increases at rest (morning stiffness) and improves with activity, or "mechanical" when the opposite is true, is as important as the date of onset, clinical course or functional limitations. A history of low-grade fever, macular rash and joint pain will raise suspicions of a viral infection, intense pain accompanied by fever and functional limitation will suggest a septic arthritis, history of a direct trauma will point towards a fracture or traumatic arthritis, the appearance of a purpuric rash on the lower extremities in a child without fever will guide us towards Schönlein–Henoch purpura, and so on. In this same clinical context a personal history of juvenile idiopathic arthritis, bleeding disorder or primary immunodeficiency changes the spectrum of possible aetiologies.

It is also important to take the family history. Although there is not usually any history of rheumatic diseases in the family, with the exception of systemic lupus erythematosus or HLA-B27-associated diseases (spondyloarthropathies or inflammatory bowel disease), it is common for family members to have been diagnosed with other autoimmune diseases (thyroiditis, psoriasis, vitiligo).

The information obtained in the medical history is supplemented by the examination, which must be complete and systematic, including the skin, skin appendages and mucous membranes, cardiopulmonary auscultation and assessment of enlarged organs and glands. Only after performing the complete general examination should one proceed to examine the joints.⁴

The examination of the joints, crucial in rheumatology, is what finally confirms both the diagnostic impression suggested by the medical history (presence of arthritis or other findings) and the type (oligoarthritis or polyarthritis). This calls for technical skill and training that a large number of paediatricians, for various reasons, have not received, which explains the interest aroused by the practical joint examination workshops organised by various paediatric societies.

The limited expression of articular disease in paediatrics makes it essential to examine all the joints, because (1) paediatric inflammatory diseases tend to be asymmetrical and joint range of motion varies with age and sex, and therefore the best reference is the mobility of the contralateral joint; (2) inflammatory arthritis, unlike septic arthritis, does not usually associate pain or other external signs of inflammation (heat, redness), not being uncommon that subclinical arthritis alter the differential diagnosis (oligoarthritis versus monoarthritis); (3) the presence of referred pain; (4) the articular pattern of the disease (symmetrical or asymmetrical, involving large or small joints) may suggest the diagnosis; and (5) some findings are pathognomonic, including the dactylitis characteristic of psoriatic arthritis or the

tarsitis characteristic of spondyloarthropathies/enthesitis-related arthritis.

Paediatric rheumatology is a recognised speciality in many countries, with clearly defined (1) which inflammatory and non-inflammatory conditions are within its scope; (2) what theoretical and practical training the professionals who practise it should receive; (3) what its specific techniques are, including arthrocentesis and joint injections, capillaroscopy and musculoskeletal ultrasound; and (4) which criteria must be met by the units where care is delivered.

Despite the fact that paediatric rheumatology fulfils the criteria for a *specific training area*, children with rheumatic diseases are still frequently cared for by physicians who, at best, have received minimal training in paediatric rheumatology or have spent a short-term elective in a specialised unit, but who, for organisational reasons, have had to undertake the treatment of these children. This situation is not confined to Spain, and it gave rise to an editorial in the *Pediatric Rheumatology* online journal which highlighted the unsuitability of both paediatricians and rheumatologists without specific training to practise this speciality.⁵

In Spain there are paediatric rheumatology units with properly trained staff who have the capacity and experience needed to treat patients with these conditions. In 2016 it is no longer acceptable for physicians without specific training, whether paediatricians or rheumatologists, to take on the task of treating these patients on a more or less occasional basis, at their own wish or on the instructions of their superiors. This was the standard scenario when paediatric specialities began to be developed in the 1970s, but it is far from being the appropriate model forty years later. As the above-mentioned editorial concluded,¹ our patients deserve better.

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