HONG KONG COLLEGE OF PAEDIATRICIANS WORKING GROUP ON CURRICULUM REVIEW SYLLABUS PROPOSAL

AREA: Rheumatology

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# BASIC TRAINING

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| **TOPICS** | **SUBTOPICS** |
| Basic clinical skills in rheumatology  Aim:   * Recognizing children presenting with a rheumatic condition * Evaluation of common symptoms in rheumatic condition * Be familiar with musculoskeletal and joint examination * Understanding the investigations commonly used in rheumatology * Principle in patient management * Recognizing the psychosocial aspect of patients and their families | 1. Obtain a thorough rheumatological **history** from the patient or caretakers, with adjustment to the respective developmental stage and growth of the child or adolescent. 2. Perform **clinical examination** on a child and adolescent suspected to have rheumatological disease or musculoskeletal disorder. 3. Application of pGALS (paediatric Gait, Arms, Legs and Spine) as screening musculoskeletal assessment 4. Perform musculoskeletal examination of individual joints. 5. Assess the physical function of a child and adolescent with rheumatological diseases 6. Formulate differential diagnoses in children and adolescent with musculoskeletal complaints or rheumatological complaints. 7. Knowledge on commonly used laboratory investigations, e.g. various autoimmune markers, autoantibodies , acute phase reactants, complements, hematological changes and their role in the diagnoses and evaluation of rheumatological diseases. 8. Interprets laboratory results that may accompany rheumatic disease in children and adolescent 9. Knowledge on the role of various radiological investigations, in assessing and in making diagnosis of rheumatic diseases. 10. Basic knowledge on the pathophysiology of rheumatic diseases 11. Knowledge on the work up including sepsis screening for patients before starting DMARDs or immunosuppressant. 12. Basic knowledge on the pharmacological treatment of common childhood rheumatological disease 13. Appreciate the impact of rheumatic diseases on the patient as well as the family |
| **Specific Disease Categories (knowledge requirement): understanding rheumatic diseases that are prevalent in our locality and to recognize serious mimicking conditions** | |
| Juvenile Idiopathic arthritis | 1. Approach to children presenting with musculoskeletal symptoms, e.g. joint pain, joint swelling, etc. Ability to differentiate inflammatory versus non-inflammatory joint symptoms 2. Diagnoses JIA and it’s classification 3. Familiar with the clinical presentations (articular &extra-articular) of of JIA and the assessment of disease severity. 4. Select relevant Investigations and appropriately interpret the results. 5. Recognize the differential diagnoses and the conditions that mimic JIA. 6. Recognize the need for assessing eye inflammation and initiate appropriate treatment, especially in young onset ANA positive JIA, so to prevent potential devastating visual complication e.g. cataract, etc. 7. Understanding the general principle in managing JIA, which involves both pharmacological and non-pharmacological aspects. Have a broad idea of commonly used medication e.g. NSAIDS, disease modifying anti-rheumatic drugs [csDMARD and bDMARDs], intra-articular steroid therapy). |
| Childhood –onset Systemic lupus erythematosus (cSLE) | 1. Approach to symptoms commonly seen in cSLE patients, e.g. rash, joint symptoms, constitutional symptoms including prolong fever, abnormal urinalysis, etc. 2. Diagnosis of cSLE and diagnostic criteria 3. Knowledge on the clinical use of various autoantibodies in cSLE and their application 4. Knowledge onthe commonly used investigations and their role in the managing cSLE including diagnosis and disease monitoring 5. Knowledge on the general principle on managing cSLE, which involves both pharmacological and non-pharmacological aspects. Appreciate the importance of general measures including sun protection, vaccination, etc. Have a broad idea of different medication used in the treatment of cSLE 6. Aware of other systemic connective diseases in the lists of differential diagnosis for cSLE, e.g. Sjogren’s syndrome, mixed connective tissue disease, etc. |
| Infection related arthritis and reactive arthritis | 1. Recognizing the presentation of serious musculoskeletal infection including acute septic arthritis and osteomyelitis. Knowledge on their differential diagnoses, investigations and immediate management. 2. Understanding the common etiologies, clinical presentation, diagnosis, and management of ~~infective arthritis Differential diagnosis of~~ reactive arthritis – including rheumatic fever, post-streptococcal reactive arthritis etc. |

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| Vasculitis | 1. Knowledge on the classification of systemic vasculitis 2. Knowledge on the clinical presentation, diagnosis and management of common vasculitic syndrome e.g. Henoch-Schonlein Purpura/IgA vasculitis, Kawasaki disease, etc |
| Paediatric rheumatological emergencies | 1. Recognize the presentation of infection in a patient who is immunocompromised and to formulate initial plan of management |
| Non-inflammatory musculoskeletal conditions | 1. Clinical feature of growing pain, hypermobility and its management 2. ~~Clinical presentation, diagnosis and management of hypermobility syndrome~~ 3. Approach to differential diagnosis of non-inflammatory musculoskeletal pain |
| Other less common rheumatological diseases | 1. Clinical presentation and physical signs ~~and diagnosis~~ of other rheumatological diseases like juvenile dermatomyositis, Bechet’s disease, etc. |

Essential skills:

Domain 1: professional value and knowledge Domain 2: communication

Domain 4: patient management

**HIGHER TRAINING**

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| **TOPICS** | **SUBTOPICS** |
| Additional clinical skills to the basic knowledge   * Have a more in-depth knowledge on the core topics including musculoskeletal examination, use of special investigations, etc * Detect and initiate necessary immediate management of serious presentation or complications in children with rheumatic condition * Understanding less common but important rheumatic condition * Therapeutic agents for selected rheumatic disease * Use of steroid sparing agents | 1. Master the joint assessment skill 2. Recognize the role and interpretation of selected investigations in children with rheumatological disease, including histological examination (muscle biopsy, skin biopsy, renal biopsy, capillaroscopy, pulmonary function tests and joint aspiration etc. 3. Choice of different therapeutic options for selected rheumatological diseases and manifestations. Knowledge on the pharmacology and understand the potential side effect and complications of these medications. 4. Recognize the risk of various opportunistic infection in this group of patients with knowledge on its prophylaxis, and work up on suspected opportunistic infection. 5. Brief knowledge of the expanding spectrum of therapeutic options e.g biological or target synthetic DMARDs in childhood rheumatic diseases. 6. ~~the application of plasmapheresis in rheumatological disease~~ 7. ~~Knowledge on the tools or assessment scale of disease activity, specific functional score, and quality of life for different rheumatological conditions~~ 8. Basic understanding of the many existing or evolving assessment tools 9. Able to coordinate an MDT approach, e.g. including orthopedic surgeons, ophthalmologist, endocrinologist, neurologist, nurses, allied health workers to the management of childhood rheumatic diseases. 10. Recognize the psychosocial impact of rheumatic diseases on child’s development and subsequent adult transition. |
| Juvenile idiopathic arthritis | 1. Have a broad idea of more delicate investigation and possible biomarkers e.g. the potential role of bedside USG as point-of-care in managing JIA, cytokine assay, etc. 2. Multidisciplinary collaborative management plan 3. Aware of the commonly used disease activity scores and health quality assessment scores in JIA |
| Systemic lupus erythematosus & other systemic connective tissue disease | 1. Knowledge on how to assess and track the disease activity, severity, flare and organ damages in cSLE 2. Knowledge on early detection of opportunistic infections in cSLE. 3. Knowledge on less common systemic connective tissue diseases. Their presentation, diagnostic workup and clinical implications. |

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| Vasculitis | 1. Knowledge on other less common form of systemic vasculitis syndromes (e.g. polyarteritis nodosa, Takayasu arteritis), their clinical presentations, evaluation and mimics 2. Aware of organ-threatening scenarios in systemic vasculitis and the need for urgent expertise consultation. |
| Paediatric rheumatological emergency | 1. Recognize the change in clinical condition and pick up evolving rheumatological emergencies like hyperinflammatory states, macrophage activation syndrome, catastrophic antiphospholipid syndrome, severe Raynaud’s phenomenon that is limbs threatening, overwhelming sepsis, etc 2. Reasonable understanding in the management of these rheumatological emergencies and the differential diagnoses |
| Other rare rheumatological diseases | As in basis training but a more detailed understanding |

Essential skills:

Domain 1: professional value and knowledge Domain 2: communication

Domain 4: patient management

Domain 5: leadership and team management

~~Desirable skills (but~~ optional for General Paediatric Training)

Observation: Intra-articular corticosteroid injection, skin biopsy, etc