Top Tips for Swollen Joint(s)

1. In the context of a single swollen joint, infection and malignancy must always be considered. The possibility of mycobacterial disease and rheumatic fever must be considered in at risk groups. Check for red flags.

2. In the context of multiple swollen joints, there is a wide spectrum of causes including inflammatory, reactive, multi-system disease (connective tissue diseases/vasculitis), metabolic causes and malignancy.

3. Common pitfalls in making a diagnosis of JIA include: a) false belief that children cannot develop arthritis (they can !): b) ascribing joint swelling to trauma (even when the presentation is not in keeping with a history of trauma or appropriate interval since trauma): c) false reassurance when blood tests and radiographs are normal: d) false reassurance when rheumatoid factor is not present: e) the child with arthritis will complain of pain (25% will not). Children with Downs syndrome are at risk of arthritis and the diagnosis should be considered with a change in functional abilities.

4. The diagnosis rests on careful clinical assessment and interpretation of investigations. Joint swelling is often associated with trauma (e.g., ankle sprain) but should resolve after several days. If there is systemic upset or fever with joint pain or swelling, then referral to paediatric rheumatology or orthopaedics is indicated.

5. In hypermobility, transient and usually subtle, joint swelling can be seen, often after activity and particularly involving the knees; such swelling will be mild and resolve spontaneously. If there is persistent swelling then referral is needed to paediatric rheumatology.

6. Reactive arthritis follows infection, which may be mild (e.g., upper respiratory tract infection), or more obvious (tonsillitis, gastroenteritis). In the adolescent consider sexually acquired infection. Limp may be present. Reactive arthritis will usually settle within a few weeks. Septic arthritis or osteomyelitis needs to be considered. Rheumatic fever should be considered, especially in Maori and Pacific patients and check for evidence of streptococcal infection by serology and throat swab. If joint swelling is persistent beyond 3 weeks then referral to paediatric rheumatology is indicated.

7. In the absence of trauma or infection or rheumatic fever in at risk groups, the most common cause of a swollen joint (or joints) is Juvenile Idiopathic Arthritis (JIA). JIA is a spectrum of subtypes with various clinical presentations and differs from adult rheumatoid arthritis. The commonest presentation of JIA is a single swollen joint, often knee or ankle, in a well child. Blood tests and radiographs can be normal.

8. Children with JIA are at risk of visual loss from chronic anterior uveitis, which is asymptomatic in the early stages. Eye screening is important.

9. Connective tissue diseases present with a spectrum of features, often joint pain (arthralgia) rather than arthritis.

10. Early referral to a specialist team improves clinical outcomes irrespective of the cause.

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