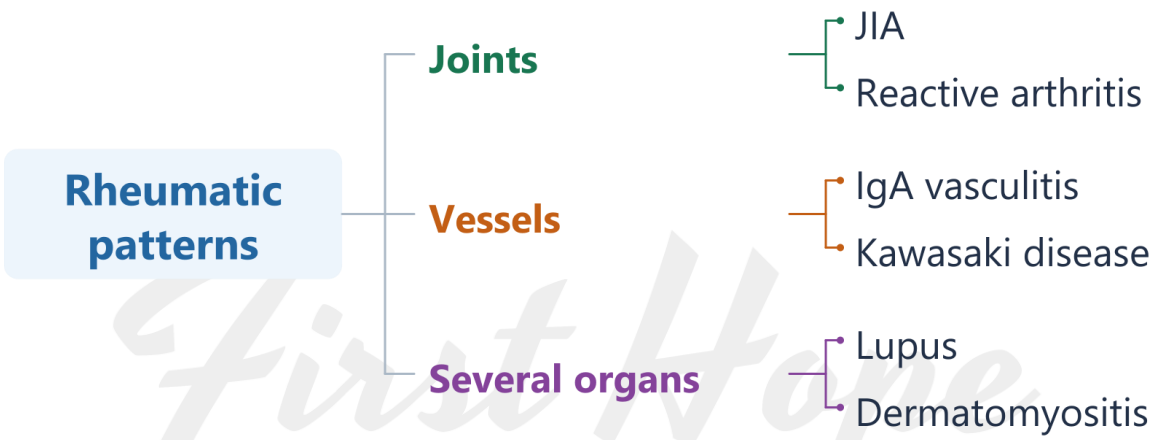
Pediatrics - Topic 21 - Approach to and recognition of a child with possible Rheumatologic problem

Recognizing Rheumatic Disease in a Child

- Rheumatic disorders cause inflammation in joints, blood vessels, muscles or several organs together.
- Important childhood conditions include juvenile idiopathic arthritis, IgA vasculitis, Kawasaki disease, systemic lupus erythematosus and juvenile dermatomyositis.

The First Clinical Assessment

- A painful joint does not automatically mean arthritis, and a swollen joint does not automatically mean an autoimmune disease.



History That Separates the Main Possibilities

- Ask when symptoms began, which joints are involved, and whether stiffness is worse after sleep or rest.
- Morning stiffness, persistent swelling and loss of movement support an inflammatory problem.
- Pain after activity with preserved movement may be mechanical, but persistent symptoms still require examination.
- Ask about fever, rash, mouth ulcers, red eyes, muscle weakness, abdominal pain and changes in urine.
- Review preceding infection, trauma, medicines, tuberculosis exposure, family history and school attendance.
- Night pain, weight loss, unexplained bruising or persistent fever require assessment for malignancy or infection.

Examination and Initial Tests

Functional and Systemic Examination

- Observe walking, standing, getting up from the floor and using the hands before examining individual joints.

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- Look for warmth, swelling, effusion, tenderness and limitation of both active and passive movement.
- Compare both sides and examine the spine, entheses, skin, nails, mouth, eyes and lymph nodes.
- Record temperature, growth and blood pressure, and assess the heart, lungs, abdomen and nervous system.

Selected Tests and Diagnostic Limits

- Choose blood count, inflammatory markers, urine testing, kidney tests and imaging according to the clinical pattern.
- A positive antinuclear antibody alone does not diagnose lupus or juvenile arthritis.
- Normal inflammatory markers do not exclude every rheumatic condition.

Recognizing When Referral Is Urgent

- A hot, very painful joint with fever or refusal to bear weight requires urgent exclusion of septic arthritis.
- Do not start corticosteroids for unexplained arthritis before considering infection and malignancy.
- Shock, breathing difficulty, neurological change, major bleeding or reduced urine output require emergency care.
- Persistent arthritis, unexplained multisystem inflammation or suspected uveitis needs early paediatric rheumatology assessment.
- A child with proximal weakness and a characteristic rash may have juvenile dermatomyositis and needs specialist evaluation.
- Document the findings and explain the reason for referral without labelling the child prematurely.

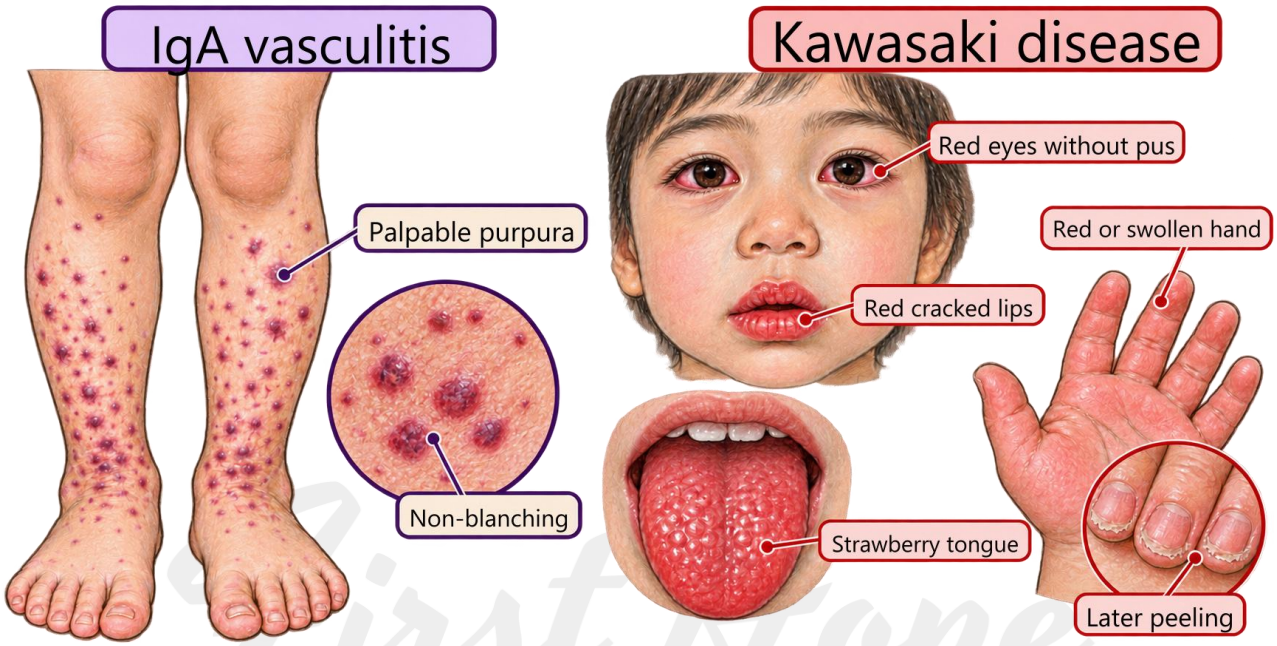
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IgA Vasculitis

- IgA vasculitis, previously called Henoch–Schönlein purpura, is an immune-mediated inflammation of small blood vessels.

Immune Mechanism

- IgA-containing immune deposits commonly affect the skin, joints, bowel and kidneys.
- It often follows a respiratory infection, although a single trigger is not always found.



Palpable purpura is typical of IgA vasculitis, while Kawasaki disease may cause these eye, mouth and hand changes; the findings must be interpreted with the full clinical picture

Organ Involvement in IgA Vasculitis

Skin and Joint Features

- The usual rash is palpable purpura that does not blanch, mainly on the lower limbs and buttocks.
- The distribution may be influenced by pressure and gravity, and lesions can appear in crops.
- The platelet count is usually normal, which helps distinguish it from thrombocytopenic purpura.
- Ankles and knees may be painful or swollen, but the arthritis usually resolves without permanent joint damage.
- Swelling of the hands, feet or scalp can occur, especially in younger children.

Bowel and Kidney Features

Bowel Involvement and Acute Abdominal Complications

- Colicky abdominal pain, vomiting or gastrointestinal bleeding may occur before or after the rash.

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- Severe pain can indicate intussusception, bowel ischaemia or another surgical complication.

Kidney Findings and Delayed Nephritis

- Kidney involvement may produce microscopic haematuria, proteinuria, hypertension or a nephritic syndrome.
- Renal findings may appear after the rash has improved, so an initially normal urine test does not end follow-up.

Scrotal Pain and Torsion Exclusion

- Scrotal pain requires urgent assessment because testicular torsion must be excluded.

Confirming the Pattern and Excluding Mimics

- Diagnosis is usually clinical when the characteristic purpura occurs with compatible joint, abdominal or renal features.
- Check blood pressure and urinalysis in every suspected case.
- Measure urine protein and kidney function when urine findings are abnormal or the child is unwell.
- A blood count helps assess anaemia and platelet count when bleeding or a diagnostic alternative is suspected.
- A toxic child with a non-blanching rash must first be assessed for sepsis rather than assumed to have vasculitis.
- Skin or kidney biopsy is reserved for selected atypical or significant disease after specialist assessment.

Treatment According to Severity

Supportive Care and Severe Abdominal Symptoms

- Most children need rest during painful episodes, adequate fluids and suitable analgesia.
- Avoid non-steroidal anti-inflammatory drugs when kidney injury, dehydration or gastrointestinal bleeding is present.
- Severe abdominal pain or bleeding requires admission, repeated examination and appropriate imaging or surgical review.

Selected Steroid Treatment and Renal Referral

- After complications are considered, a specialist may use oral prednisolone at 1–2 mg/kg/day, up to 60 mg/day, for severe symptoms.
- The duration and taper depend on the indication and response, often beginning with a course of one to two weeks.
- Corticosteroids for pain do not reliably prevent later nephritis and should not be prescribed for that purpose.

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- Persistent proteinuria, hypertension, impaired kidney function or nephritic or nephrotic features require renal referral.

Follow-up After the Rash Improves

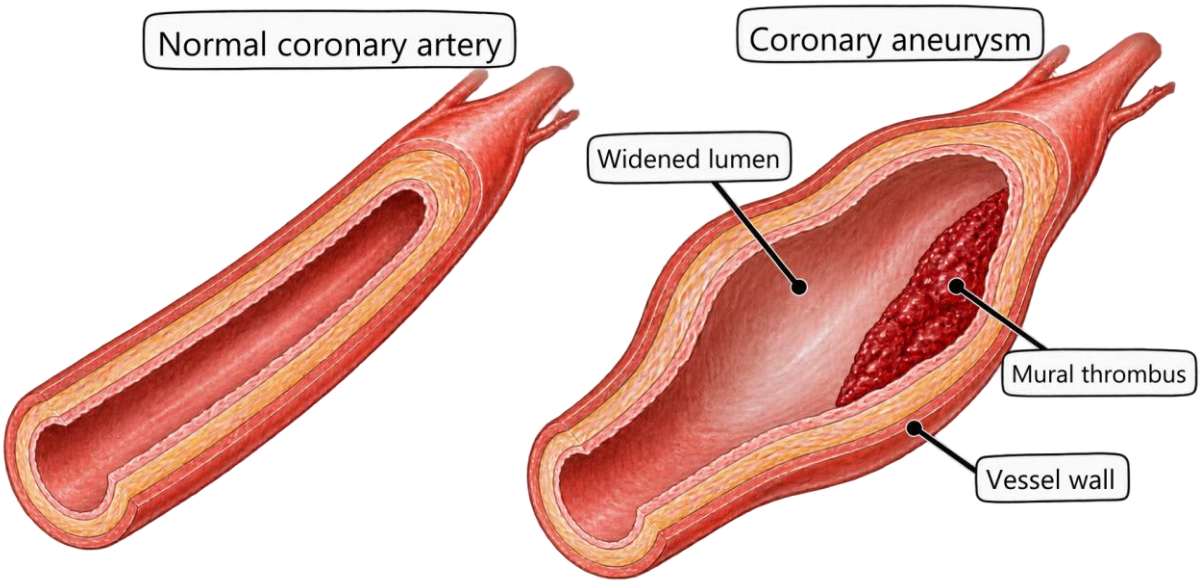
- For otherwise mild disease, check blood pressure and preferably an early-morning urine sample weekly during the first four weeks.
- Continue checks every two weeks during weeks five to twelve, with further reviews at six and twelve months.
- Recurrence or new urine abnormalities require additional assessment rather than waiting for the next routine appointment.
- Give the family clear advice to return for severe pain, blood in stool or urine, reduced urine output or sudden deterioration.
- When symptoms have not recurred and urine remains normal at twelve months, routine follow-up can usually stop.

Kawasaki Disease

- Kawasaki disease is an acute inflammatory illness affecting medium-sized arteries, especially the coronary arteries.
- It most often affects children younger than five years, but older children and infants can also be affected.

Pathogenesis

- An abnormal immune response in a susceptible child is thought to contribute, but the exact cause remains uncertain.
- Coronary inflammation can produce dilatation or aneurysms, creating a risk of thrombosis and later narrowing.



A coronary aneurysm widens the arterial lumen and may develop an attached thrombus

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