

Differential diagnoses – other spinal conditions

> Spinal tumour/neoplasia > Infection > Inflammatory arthritis > Scheuermann's kyphosis > Paget's disease of bone

Clinical condition	Symptoms	Investigations	Management	Referral
<p>Spinal tumour/neoplasia May include:</p> <ul style="list-style-type: none"> > multiple myeloma > metastatic carcinoma > lymphoma > leukaemia > spinal cord tumours > primary vertebral tumours. 	<p>Subjective assessment</p> <ul style="list-style-type: none"> > Unrelenting night pain; axial or radiating > Neurologic dysfunction eg sensory dysaesthesia, muscular weakness – may begin unilaterally, progress to bilateral > Progressive difficulty in ambulation or gait ataxia > Bladder and /or bowel dysfunction <p>Objective examination</p> <ul style="list-style-type: none"> > Spinal movements variably limited. > Careful neurological assessment is indicated 	<ul style="list-style-type: none"> > X-ray, CT scan or MRI (preferred modality) CT myelography useful in selected patients > WBBS > CBP 	<p>Emergency Department evaluation required.</p>	<p>Immediate referral to Emergency Department</p> <p>Or contact Spinal Fellow or Registrar via Switchboard Tel: 7074 0000.</p>
<p>Infection May include:</p> <ul style="list-style-type: none"> > osteomyelitis > septic discitis > paraspinal or epidural abscess > shingles. 	<p>Subjective assessment</p> <ul style="list-style-type: none"> > C/o spinal pain (insidious onset, gradual worsening) > Pain often worse at night (but may be relieved by bed rest) > Fever is an inconsistent finding <p>Objective examination</p> <ul style="list-style-type: none"> > Local tenderness > Reduced spinal mobility. Protective muscle spasm > Careful neurological assessment is indicated 	<ul style="list-style-type: none"> > CBE > MRI (preferred imaging technique) 	<p>Emergency Department evaluation required.</p>	<p>Immediate referral to Emergency Department</p> <p>Or contact Spinal Fellow or Registrar via Switchboard Tel: 7074 0000.</p>

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Inflammatory arthritis May include: > ankylosing spondylitis > psoriatic arthritis > Reiter's syndrome > inflammatory bowel disease.	Subjective assessment > Inflammatory back pain improves with exercise but not with rest; may experience night pain and morning stiffness >30 mins > Related musculoskeletal complaints include: oligoarthritis, sacroiliitis, enthesitis and tenosynovitis > May report ocular involvement, skin conditions, disturbance of bladder or bowel function etc (depending on condition) Objective examination > May have reduced spinal mobility and postural abnormalities > Pain/redness/swelling of involved joints/entheses/tendons > Neurological deficits uncommon unless advanced disease	> CBE > XR/MRI pelvis	> Pharmacologic therapy and exercise are the mainstays of treatment of inflammatory arthritis > Rheumatologist involvement is usually indicated for complete diagnosis and pharmacotherapy advice > Physiotherapy evaluation is suggested to develop an appropriate exercise program aimed at maintaining mobility and minimising deformities	Refer to Rheumatology in all cases of suspected inflammatory arthritis.

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Scheuermann's kyphosis	Subjective assessment > Thoracic or thoraco-lumbar pain typically occurring during early adolescence > Pain is subacute with no clear history of trauma > Aggravated by activity, worse end of day and relieved by rest Objective examination > A rigid kyphosis with sharp angulation on forward bending may be observed. The curvature does not flatten with extension or lying supine > Variable ROM deficits depending on disease severity. Neurological deficits are uncommon	> Diagnosis made by standing lateral XR (anterior wedging of $\geq 5^\circ$ in at least 3 adjacent vertebral bodies)	> Strengthening, stretching, analgesics and activity pacing > Bracing or surgical interventions may be indicated if pain is persistent or kyphosis exceeds a Cobb angle of 60° .	For specialist opinion please refer children under the age of 18 years to the Spinal Clinic, Women's and Children's Hospital, North Adelaide. Tel: 8161 7000. For adults, please refer to the Orthopedic Spine Service with updated imaging. Tel: 7074 0000 Fax: (08) 7074 6247 Email: HealthRAHOPDReferrals@sa.gov.au

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Paget's disease of bone	<p>Subjective assessment</p> <ul style="list-style-type: none"> > Most commonly affects the pelvis, spine, skull and long bones > Manifests as pain and deformity in the affected areas > Pain is often worse with weight bearing and may increase at night > Neurologic complications caused by nerve compression are associated with enlargement or deformity of adjacent bone <p>Objective examination</p> <ul style="list-style-type: none"> > Careful physical examination of the involved region is required > Neurological assessment may be indicated 	<ul style="list-style-type: none"> > CBE (elevated serum alkaline phosphatase and calcium concentration) > WBBS 	<ul style="list-style-type: none"> > Pharmacologic treatment is aimed at easing pain and reducing the rate of bone remodelling (towards normal) > Individuals may also require Physiotherapy assessment, walking aids and attention to psychosocial issues 	Referral to the Orthopaedic Department