[redacted]

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Diagnoses:

1. Bilateral arthropathy of shoulders and hips since 2021.
   1.1. Multiple imaging including x-rays, MRI, CTs and SPECT CT.
   1.2. Most prominent joint has been the right shoulder, with large region of bone erosion involving proximal humerus and metaphyseal region. Infilling with fat and mildly enhancing soft tissue.
2. 1.3 MRI L) shoulder - large region of bone leoss, fat infiltration and small amount of enhancing soft tissue without discrete soft tissue mass. MRI hips - large region of femoral head and neck erosion, no joint effusion.
3. Ct abdo/pelvis: Symmetrical para-articular erosions in hip joints and upper aspect of SIJ. No hepatosplenomegaly.
4. Underwent a surgical procedure 29/11/2022 with curettage of right humeral head cystic lesion, grafting and internal fixation. Histopathology shows nonspecific reactive new bone formation. No significant inflammation and no crystal or amyloid deposition. No evidence of a neoplasm.
5. RF, ACCP negative
6. Right shoulder proximal humerus lesion curettage, grafting and internal fixation 29/11/2022
7. PCOS, on metformin

Medications:

1. Metformin
2. Evelyne - OCP
3. Amitriptyline 10 mg nocte, commenced today.

Thank you for referring [redacted] to the Rheumatology Clinic. She is a 37-year-old lady, who has had joint issues since 2021. She initially describes onset of relatively rapid right shoulder pain initially, which then moved to involve the left shoulder. Pain is fairly constant and she has not noticed any particular diurnal predominance. It is sometimes worse in the morning but it does not improve with activity and actually worsens with activity and mobility. She also describes having hip pain but when she clarifies where this is, it seems to be at the pubic symphysis and then radiates down the back of her legs, so not particularly around the femoro-acetabular joints themselves.

[redacted]

She has been sent to the orthopaedic surgeons, and had a procedure to her right shoulder on 29/11, as above. She has had multiple scans including x-rays, CTs, MRIs and a SPECT CT as well of the shoulder. This has essentially shown intense bone tracer uptake involving erosive process in the medial metaphysis of the right proximal humerus, with intense bone tracer activity also in relation to an erosive process in the left proximal humerus, both of which appear to be associated with increased blood pool activity. Overall, appearance is nonspecific and could relate to underlying erosive arthropathy, although benign or malignant causes cannot be excluded. MRI of her right shoulder has shown unusual longstanding erosive process involving the medial metaphysis of the proximal humerus and possibly also anterior inferior glenoid. At the base of the erosive process there is mature appearing fat signal intensity reflective of a healing response. No discrete soft tissue mass evident. The right shoulder is the worst but similar erosive features have been seen at the left shoulder as well as both hip joints.

[redacted] denies any history of rashes, psoriasis, fevers, weight loss, night sweats, mouth and nose ulcers, Raynaud's or other CTD symptoms, inflammatory eye or bowel symptoms, dry eyes or dry mouth. She has PCOS, she is on metformin for this. She has no known allergies. She has tried a range of medications including anti-inflammatories, meloxicam, pregabalin, Panadol Osteo and various other medications she is unsure of at present, but nothing has helped her pain.

She has previously worked in before and after hours school care but she has not been able to do this the last year or two, given her joint pain. She lives at home with her husband and two children, aged 4 and 9.

No blood test results were sent with any of her referrals, but I have managed to track down some with [redacted] help, that she had done at Australian Clinical Labs in 2022, which has shown a negative rheumatoid factor and anti-CCP. She is also ANA negative and ESR and CRP have been normal. She has previously had a low vitamin D - I am not sure if you have treated and rechecked this.

On examination, [redacted] appeared well. She had no synovitis evident in her joints. No rashes evident, left shoulder and hips were nontender to palpate. She had no irritation on bilateral hip flexion and extension, or internal and external rotation. She had reduced range of movement of the right shoulder with scar evident from her recent surgery and she tells me this ROM has only occurred after she has had her surgery. Previously, she had better range of movement, although she did have pain previously. She has evidence of joint hypermobility with a Beighton score of 7 today. She could not touch the ground with both hands. Spine was nontender to palpate. She had some tightness down the back of the thighs on straight leg raise but no paraesthesias or shooting pain and power was intact.

As noted above [redacted] has been seeing Orthopaedics and she has recently had surgery on the right shoulder, with histopathology not being particularly revealing of any inflammatory process in the shoulder joint, but there was some reactive new bone formation.

Impressions and Recommendations:
[redacted] presentation is unusual/atypical, and differentials inlcude a bilateral symmetrical

inflammatory serongative erosive arthropathy involving mainly the large joints of the shoulders and hips, though unusual to have this extent with seronegative disease. It is possible this is a deposition disease. I think it is unlikely that an infection has caused this, given the amount of joints involved and lack of current activity. There is no active inflammation evident and I have discussed with [redacted] that I think most of her ongoing pain is due to the secondary degenerative changes that have been incurred.

I am completing a screen with HLA-B27, serum ACE level, immunoglobulins, repeat inflammation markers, we will recheck rheumatoid factor and anti-CCP, she will have a fasting bone metabolic study and a uric acid. We may check serum electrophoresis and serum free light chains as well down the track, although there is no clear evidence of any malignant process to now.

In the interim, I have discussed trialling amitriptyline 10 mg at night, to see if this will help her pain and we will also discuss her case and imaging at the Fiona Stanley Hospital combined radiology/rheumatology meeting on 17 March 2023. Review is planned in six weeks. There is no current indication for disease modifying treatment, there is no active inflammation, so we do have a bit of time up our sleeves.

We thank you for your ongoing care.

*NB. Case discussed 17/3 at FSH rheumatology/radiology MDT - consensus that this is unusual for an erosive inflammatory arthropathy and appearances seem to be more in keeping with a deposition disease with possibility of a lysosomal storage disorder raised. No other clinical or serological features, to consider genetic testing. Have rediscussed histopath with the anatomical pathologist, no evidence of LSD on sample however was a very benign sample with not many histiocytes, and would need more extensive sampling with for example synovium and sent for electron microscopy if wanting to further investigate tissue.

* Hep C/Hep B neg, ESR 8, CRP, RF >10, ACCP <1, IgA/G/M negative, **ALP 159**/CTx 351, **PTH 15, Vitamin D 28 - advise for vitamin D replacement with cholecalciferol 75mcg daily for next 6 weeks, then 50mcg to continue and recheck. GP to please organise. Secondary hyperparathyroidism likely in context of low vitamin D. We will consider DEXA/bone scan given raised ALP suggesting possibility of active bone turnover.**

Yours sincerely

[redacted]

[redacted]

[redacted]