

An Eclectic Set of Perplexing Swellings:

a broad differential including conditions you may never have heard of.

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Financial Relationships Disclosures

I have nothing to Disclose

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22 y/o F, NZ European

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- GP referral with polyarthralgia and muscle pain Nov 2022
 - Symptoms preceded by a few days of diarrhoea and vomiting associated with subjective fevers
 - Polyarthralgia involving wrists, elbows, knees and ankles
 - Had bilateral ankle swelling in the first few weeks
 - Subsequently, developed pain affecting various muscle groups with intermittent swelling and bulges and restriction of movement
 - No associated skin rash, history of dactylitis or uveitis
 - Rx:
 - Paracetamol and Ibuprofen MR 800mg BD
 - Herbal supplements prescribed by acupuncturist

Examination Findings 22/12/2022

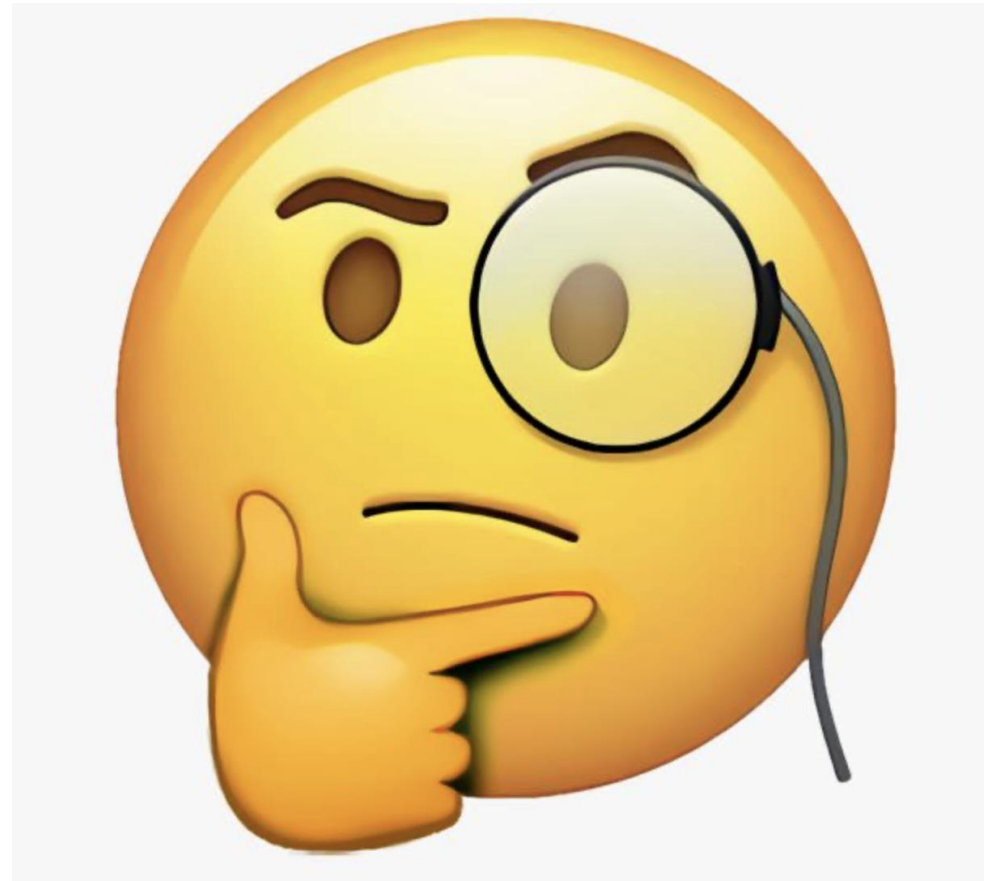
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- Afebrile. Clinically does not appear septic
 - Slow cautious antalgic gait
 - No clinical synovitis. Negative MCPJ and MTPJ squeeze test
 - Diffuse swelling over the left upper arm with pain on elbow extension
 - Left calf tense and tender on palpation (35cm L, 34cm R)
 - Reduced power of ankle dorsiflexion bilaterally
 - Intact reflexes and sensation throughout both upper and lower limbs
 - No skin rash
 - CVS, respiratory examinations unremarkable

Initial investigations requested by GP

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- FBC – Hb 127g/l, Wcc 14.4, neutrophils 11.6; eosinophils 0.2-0.3
 - Creatinine 64umol/l, eGFR > 90ml/min/1.73m²
 - CRP 106 → 204 → 84 (November)
 - Ferritin 248
 - Hepatitis B & C serology – negative
 - Rheumatoid factor <9; anti-CCP antibody <8
 - ANA 160; dense fine speckled. ENA negative. dsDNA <1
 - HLA-B27 negative
 - MSU – bland urine
 - Stool sample – negative for bacterial pathogens and parasites

What is
going on ?

What
more info
would you
like?



- Feel free to consult Dr Google ,
- we did

This is weird, do you have photos or videos??



Employment Social Family and Travel History



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- She majored in biology and ecology and previously worked as a zookeeper until end of October 2022
 - Recent incident where she was bitten by an Eclectus parrot
 - Current position
 - Park ranger in native bush reserve
 - Visited Australia June 2022
 - Metropolitan Brisbane
 - Did not consume “bush tucker”
 - Non-smoker
 - No family history of inflammatory arthritis or connective tissue disease.
 - No personal or family history of psoriasis



Additional tests 22/12/22

- CRP 79
- CK 211
- HIV negative
- ANCA negative
- CMV, EBV serology – no recent infection
- Repeat MSU – bland urine with normal uPCR
- Myositis antibody screen –weak positive for HMG-CoA reductase
- CXR – Lungs and pleural spaces clear. No mediastinal lymphadenopathy
- MRI of the left upper arm/ affected limb ordered
- Biopsy requested to be guided by MRI

Some possible diagnoses (choose one or more)



- A. Infective process
 - zoonosis/ parasitic (bitten by ecletus parrot)
- B. Lyme disease
 - Works in forest, migratory symptoms
- C. Myositis/ fasciitis
 - location of swellings
- D. An auto inflammatory syndrome
 - an inflammatory syndrome without antibodies
- E. Reactive arthritis
 - Preceding diarrhoea
- F. Lofgrens syndrome
 - Subcut swelling with tendency to resolution
- G. Something else

Progress

- 30/12/2022 – outpatient MRI to guide biopsy
 - Left arm and calf swelling and pain have improved significantly
 - Proceeded with imaging of the left femur as she is most symptomatic over the posterior distal thigh
- 10/1/23 – proceeded for muscle biopsy
 - Thigh swelling had settled. Left calf had some swelling so it was biopsied instead

What is
going on ?

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- Feel free to consult Dr Google ,
- we did, again!



MRI left femur

30/12/23

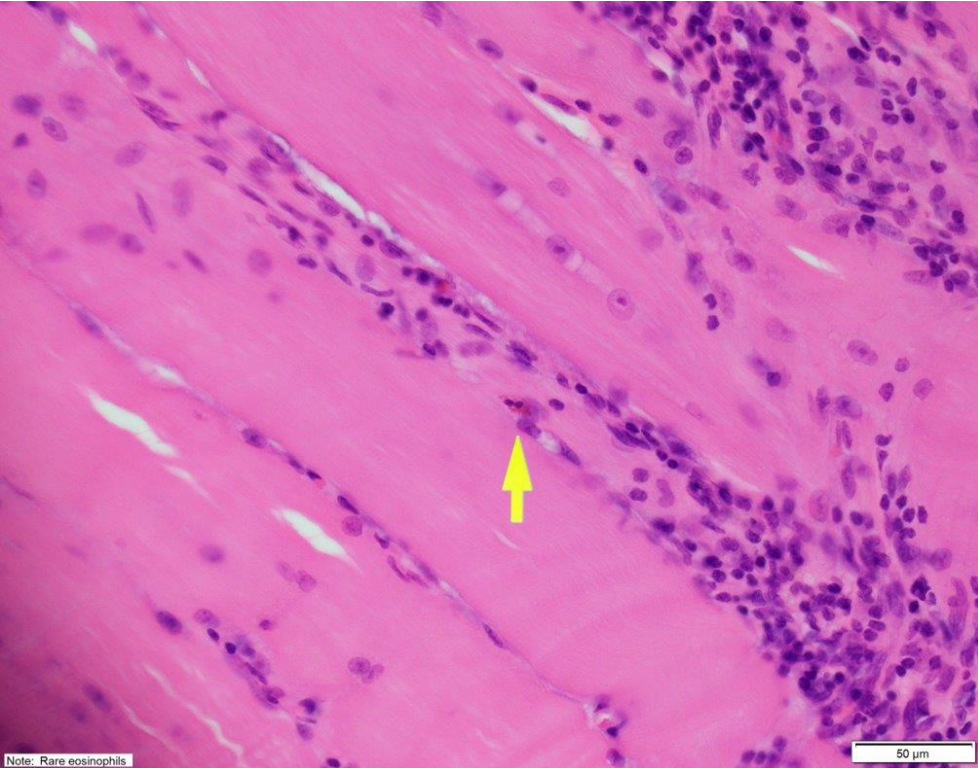
Diffuse STIR signal abnormality involving multiple muscles involving the left lower limb.

In particular there is **prominent involvement of the short head of bicep femoris which is enlarged**. Further patchy signal is seen across the posterior aspects of vastus lateralis and vastus medialis of the thigh and anterolateral compartment of the lower leg.

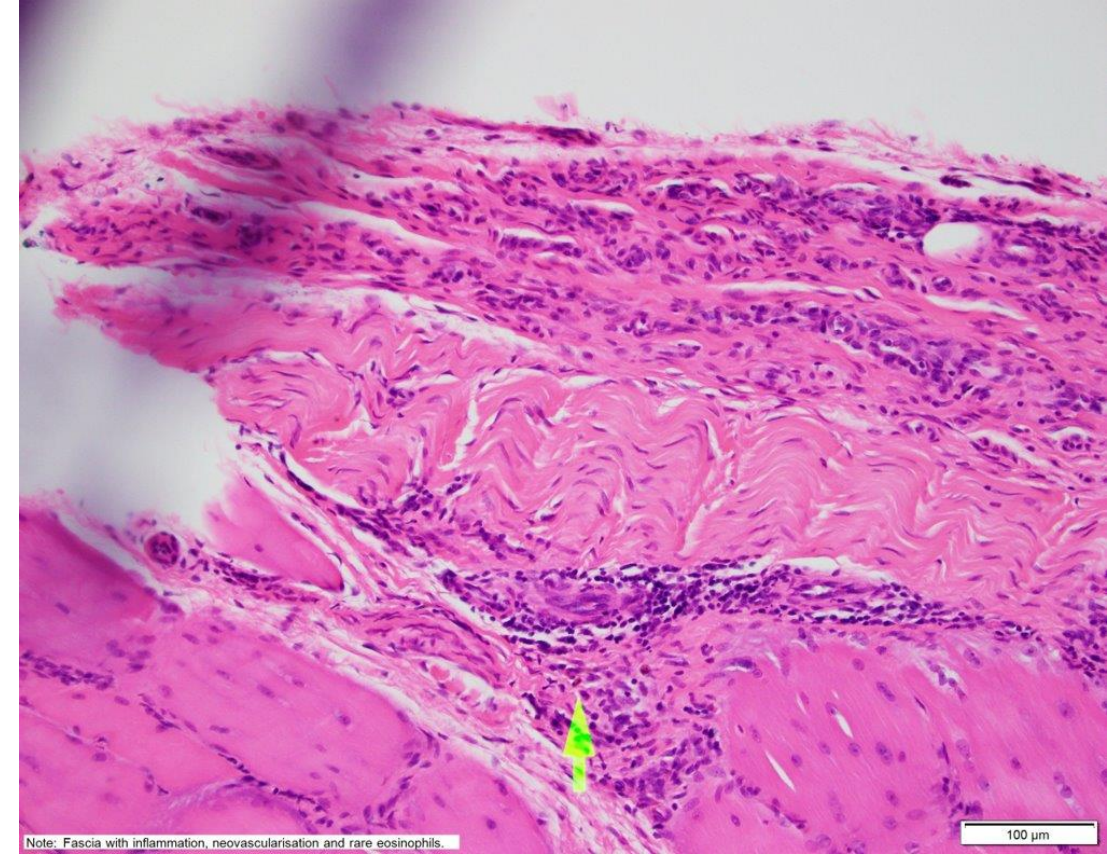
There is associated stranding of the intermuscular planes across the involved sites which obscures the intramuscular fascia, **without discrete fascial thickening**

Subcutaneous oedema is also noted across the posteromedial thigh

Histology

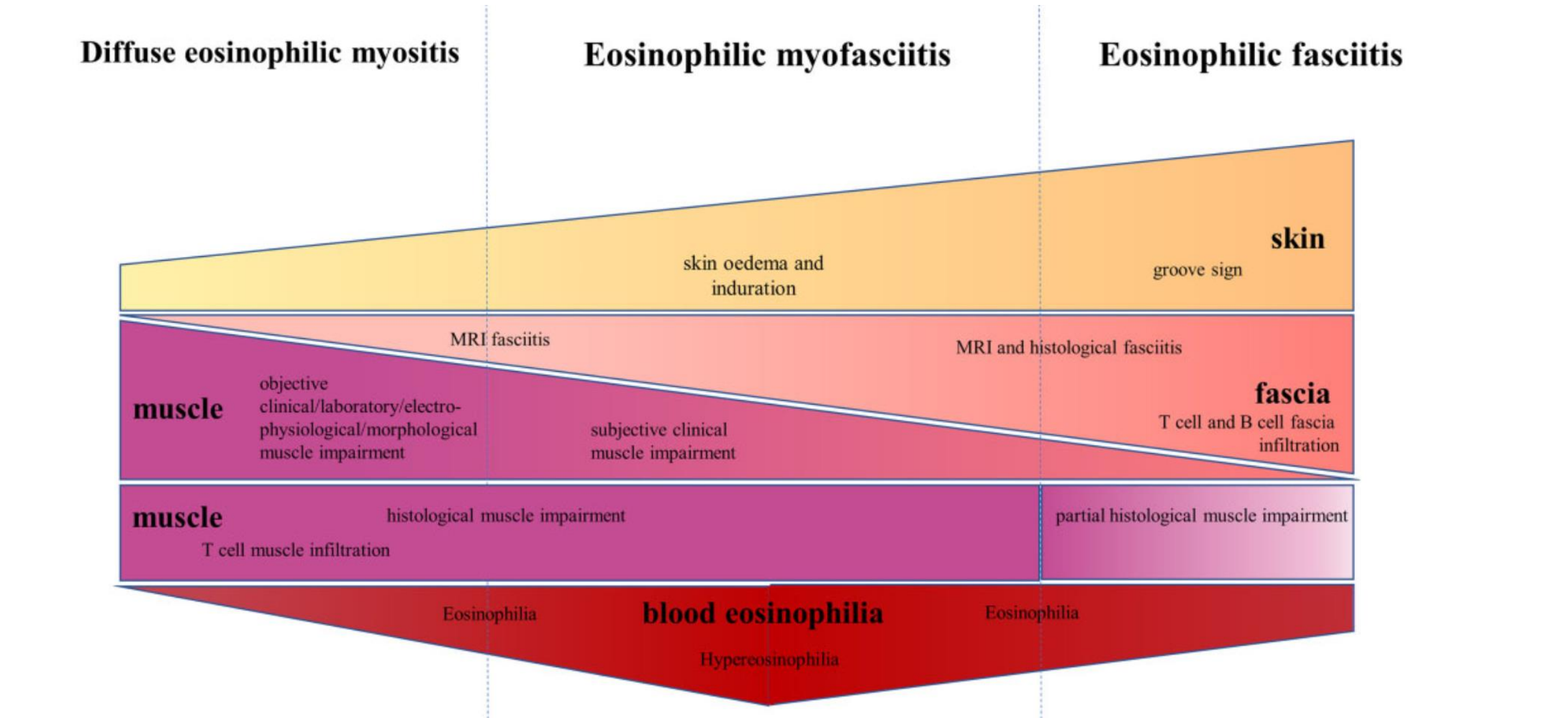


- Patchy lymphocytic infiltrate is seen within the **endomysium** muscle. Eosinophils are relatively easy to identify in association with the endomysial infiltrate
- Focal fibre necrosis.
- No parasites are seen



- Diffuse mild to moderate infiltrate of macrophages within the fascia. A patchy, predominantly perivascular, lymphocytic infiltrate is also seen within the fascia with an occasional eosinophil seen

Revisiting idiopathic eosinophilic myositis:
towards a clinical-pathological continuum from the muscle to the fascia and skin
Cécile Fermonet al Rheumatology, 62, Issue 6, June 2023, p 2220–2229 published Oct 2022

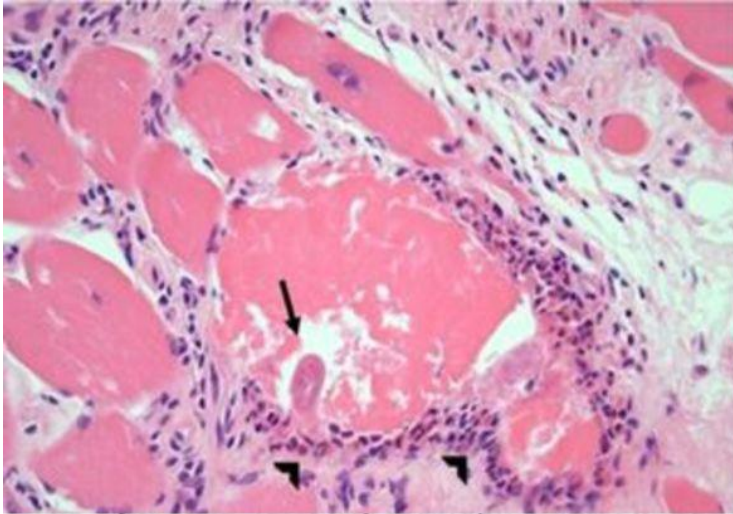


For those of you misled by the title

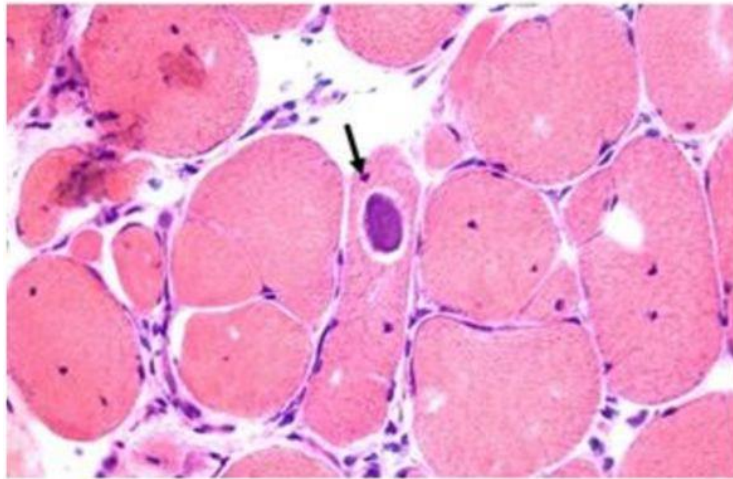


- Eclectus parrot
 - Oceanic parrot
 - esp New Guinea and Australia
- Known infections
 - Psittacosis
- Haycocknema perplexum
 - Haycocknema perplexum is an exceedingly rare cause of parasitic myositis endemic to Australia, more specifically, Tasmania and North Queensland.
 - a bit like trichinella a disease never report in NZ or Australia
- A nematode
- Natural host unknown
- Mode of transmission unknown

Haycocknema perplexum



Intrasarcoplasmic parasites with interstitial eosinophilic infiltration evidenced on H&E staining (left; parasite depicted with arrows and eosinophils with arrowheads)



Kayla Ward et al. BMJ Neurol Open 2022;4:e000290

Considerations
in Medicine

Progress on absolutely no treatment after initial visit

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- 9/2/23
 - well
 - no swelling
 - CRP <3
 - CK 156
 - 8/12/23
 - Still well, no swelling , CRP normal even during intercurrent episode of loose bowels

Learning points



- Importance of history and clinical examination
- Eosinophilic myofasciitis
 - Poorly understood
 - Part of a spectrum
 - Probably more common than in the literature including Dr Google
- Usefulness of timely scan and biopsy muscle biopsy
- Even weird inflammatory disease get better without steroids sometime