A 54-year-old female presented to rheumatology in 2014 with a two year history of recurrent episodes of sore throat, pyrexia, night sweats, polyarthralgia, headaches and bilateral episcleritis. Each episode recurred monthly and lasted three to five days before resolving. This patient’s condition did not fulfill Yamaguchi’s criteria for adult-onset Still’s disease. Investigations revealed an elevated ferritin which ranged between 500-2700, CRP greater than 300, ESR greater than 120. Extensive investigations excluded an infective or malignant cause and included virology, autoimmune and vasculitis screen, IGRA, blood cultures, transthoracic echo, ultrasound abdomen, CT chest/abdomen/pelvis and CT-PET scan. Genetic screening for hereditary autoinflammatory disorders was negative. Serum immunoglobulins (including IgD) and serum protein electrophoresis was unremarkable. The patient’s symptoms and inflammatory markers were responsive to high dose oral prednisolone, however, her symptoms recurred with steroid tapering. The patient was commenced on Methotrexate 25mg once weekly by subcutaneous injection to facilitate steroid weaning in 2015. The patient initially responded well to Methotrexate and was successfully weaned off steroids completely, she remained asymptomatic for two years. In 2017, she experienced frequent flares of her condition and continued to have active episcleritis on ophthalmological assessment. The patient required multiple courses of oral prednisolone to control her regular flares. The decision was taken to commence the patient on Anakinra 100mg once daily subcutaneous injections one year ago in combination with methotrexate. The patient’s condition has remained in remission since commencing anakinra in 2018 with resolution of her symptoms, episcleritis and serum inflammatory markers and is no longer requiring oral prednisolone.

Discussion: This patient exhibited signs and symptoms which are commonly associated with auto-inflammatory conditions. Due to the clinical phenotype and negative genetic testing, this patient did not fulfill any criteria to be diagnosed with a specific auto-inflammatory disease. She did not fulfill Yamaguchi’s criteria for adult-onset Still’s disease. It is likely that this patient represents a case of ‘atypical adult-onset Still’s disease’ or an "undifferentiated systemic autoinflammatory disorder" which is supported by her excellent response to IL-1 blockade in the form of anakinra.

Key learning points: This case highlights the importance of considering ‘undifferentiated systemic autoinflammatory disorder’ or ‘atypical adult-onset Still’s disease’ as a potential diagnosis for the subgroup of patients presenting atypically who do not fulfill any current classification or diagnostic criteria for a specific autoinflammatory disease. This case also illustrates that IL-1 blockade is potentially a viable treatment option in these patients.

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