9. **HYPOMYOPATHIC DERMATOMYOSITIS COMPLICATED BY MANNOSE-BINDING LECTIN DEFICIENCY**

Mariam Al-Attar¹, and Rachel Gorodkin²

¹Rheumatology, Manchester Royal Infirmary, Manchester, United Kingdom, and ²Keiglen Centre, Manchester Royal Infirmary, Manchester, United Kingdom

**Introduction:** Connective tissue diseases can present a diagnostic odyssey both for the patient and the practitioner. Here, the clinical journey of a patient with hypomypathic dermatomyositis and mannose-binding lectin deficiency is described, demonstrating the interaction between complex co-morbidities and highlighting the importance of recognising different phenotypes of dermatomyositis. The case addresses the therapeutic challenges of conflicting immunological requirements, the importance of monitoring for infective complications, and is also a rare example of long-term IV immunoglobulin therapy.

**Case description:** A 47-year-old female with no significant medical history presented with an insect bite on her breast which subsequently began to discharge and ulcerate, unresponsive to oral antibiotics. Shortly after, she developed painful swelling of fingers, knees, ankles and shoulders, followed by widespread itching and a blistering rash on her arms, upper torso and face. Examination was remarkable for peri-orbital oedema, retinal cotton wool spots and alopecia. Her investigations at this time revealed positive ANA, anti-Ro and raised CK. Skin biopsy was suggestive of dermatomyositis, but MRI of thighs, EMG and nerve conduction studies were normal. Other results included raised ESR, low lymphocytes and normal CRP.

An initial diagnosis of SLE/dermatomyositis overlap was made; she was treated with IV methylprednisolone and discharged on hydroxychloroquine and prednisolone. Following this, she developed new areas of extensive and dramatic vasculitic skin ulceration on her face, fingers and elbows. Immunosuppressive therapy was escalated with increased dose of hydroxychloroquine and commencement of azathioprine. However, she then developed recurrent infections at the site of the ulcers as well as two episodes of infective tenosynovitis. Despite reduction of immunosuppression, she required multiple admissions to hospitals for intravenous antibiotics.

Eventually, investigation into her recurrent infections revealed a complete, homozygous mannose-binding lectin (MBL) deficiency. In light of her severe symptoms and obvious risk for ongoing immunosuppression, it was decided that she would be a candidate for IV immunoglobulin (IVIG) therapy.

Monitoring the evolution of the clincial picture over time led to a diagnosis of hypomypathic dermatomyositis, positive for MDA-5 autoantibody. She has responded well to the IVIG with improvement of skin manifestations and no further infections. She has developed pulmonary fibrosis, but this has been extremely well controlled. However, her disease has been further complicated by the development of a peripheral neuropathy, which is still currently under investigation.

**Discussion:** This is a fascinating case of a rare subset of dermatomyositis, the treatment of which was complicated by concurrent MBL deficiency. It is interesting to note that MBL deficiency is actually implicated in the development of autoimmune conditions, in particular dermatomyositis. Other immunodeficiency conditions linked to dermatomyositis include X-linked agammaglobulinaemia and hemophagocytic lymphohistiocytosis.

As specialists who regularly use immunosuppressive agents, it is important for rheumatologists to be vigilant about the potential for infective complications, and to consider investigating for another underlying diagnosis if infections become more recurrent or severe than expected. Indeed, in the case of MBL deficiency, there would likely never be any clinical manifestation without precipitation by additional immunosuppressive therapy. This diagnosis prompted the decision to use regular IVIG therapy which has been successful in controlling the disease.

It is interesting to note that the patient is anti-MDA-5 antibody positive, which characteristically produces an amyopathic phenotype with rapidly progressive interstitial lung disease. In fact, her lung disease has been extremely stable and mostly asymptomatic. Whether this is due to the IVIG is unclear. A 2018 case report described an MDA-5 positive dermatomyositis/scleroderma overlap without ILD and with sensory neuropathy. This also raises the question of whether her neurological manifestations could be linked to dermatomyositis. Initially, she presented with bilateral sensory neuropathy in both feet, and it was thought to be a potential feature of her condition. However, she subsequently developed sudden loss of power in her leg, and further investigations have concluded that she most likely has multiple sclerosis (MS). This is certainly plausible due to her underlying MBL deficiency which predisposes her to development of autoimmune conditions, but it would be interesting to discuss whether this could potentially still be a part of the dermatomyositis.
Patients presenting on statins with proximal symmetrical muscle weakness and a raised CK should have HMGCOA antibodies checked as part of a myositis screen. Though statins should always be stopped, withdrawal of the drug is often insufficient to prevent further deterioration. We highlight a more serious and potentially lethal complication: statin-induced autoimmune necrotising myositis (SIANM). Recently SIANM has been differentiated from inflammatory myositis (IM). Here we describe our experience of treating three cases of SIANM.

**Case description:**

A 63-year-old Pakistani male presented with weight loss, anorexia, odynophagia, and a rash over his scalp, chest, face and neck. Subsequent cultures were negative. Hyperpigmentation was noted in addition to the development of facial, lip and oropharyngeal rashes. An endoscopy revealed severe gastritis. Oropharyngeal examination revealed a soft tissue mass suggestive of necrosis, with multiple ill-defined nodes palpable in the neck. Imaging demonstrated a large anterior mediastinum mass with FDG uptake and a PET-CT scan confirmed the involvement of the tongue, masticators and posterior neck. There was also extensive FDG uptake in the right hip. A CT chest revealed an anterior mediastinum mass measuring 500 iu/ml, with a raised creatinine kinase (8413). Anti-SAE antibodies were also confirmed.

**Key learning points:** The first learning point from this case is to take a systematic approach to the diagnosis of connective tissue diseases. With so many overlapping symptoms and signs, and indeed, so many overlapping diagnoses, it is imperative that one takes a thorough and comprehensive multi-system history and examination. We have also gained an awareness of hypo- or amyopathic myositis as rare phenotypes of dermatomyositis, which will allow us to improve diagnostic acumen if faced with patients with the characteristic rashes and little or no muscle weakness.

This case has also prompted us to actively consider whether new symptoms in patients with dermatomyositis can be explained by the diagnosis or whether they necessitate a search for further explanation. This is an important consideration when dealing with any patients with a multi-system disease. Without an open mind and appropriate investigation, underlying or secondary diagnoses can easily be missed. The recurrent infections could have been attributed to the immunosuppressive therapy alone, or else considered to be an expected complication of severe and widespread of skin breakdown, but fortunately was recognised and investigated appropriately.

**Conflicts of interest:** The authors have declared no conflicts of interest.