

RARE CASE OF OVERLAP OF MYOSITIS AND MYASTHENIA GRAVIS

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BACKGROUND

Myositis and myasthenia gravis (MG) are both autoimmune disorders presenting with muscle weakness. So far only less than 50 cases of co-existence of myositis and myasthenia gravis are reported in literature either as isolated cases or in case series. [1,2]
We report a **rare** case of overlap syndrome of myositis with myasthenia gravis.

CASE PRESENTATION

- 67 years old
- Past Medical History : breast cancer, thymectomy
- Referred to rheumatology with pain in thighs and biceps after being started on aromatase inhibitor therapy which continued even on stopping this therapy
- O/E – no proximal muscle weakness or tenderness

INVESTIGATIONS

Bloods	Elevated CK ANA Positive TIF-Gamma Antibody Positive
Imaging	CT scan – ruled out any active cancer. MRI scan - pelvic girdle and thigh muscle myositis.
Electromyography	No evidence of neuropathy
Muscle Biopsy	Consistent with necrotizing myopathy

CASE TRAJECTORY

Conservative expectant approach suggested



3 YEARS LATER

- Rapid deterioration over one month.
- Developed proximal muscle weakness - unable to walk without support .
- Bilateral ptosis,
- Difficulty in swallowing towards the end of her meals.
- Myositis flare up OR Myasthenia Gravis ??
- Acetylcholine Receptor Antibody was sent



24 HOURS LATER

- Rapid deterioration in 24 hours
- Hospital admission
- Developed bilateral ptosis, breathing difficulty and profound weakness of neck and proximal muscles
- Treated with IVIG, pyridostigmine and a high dose of steroids.
- Acetylcholine Receptor Antibody was reported high 7 days later.



1 WEEK LATER

Patient rapidly improved in 7 days. Her dyspnoea and muscle weakness started resolving

OUTCOME

- Discharged with a plan to continue escalating steroids until she makes full recovery OR hits 90 mg(1.5mg/kg) on alternate days.
- To stay on high dose steroids for 2 weeks and then start dose reduction.
- Reduce at the rate of 5mg per 5th dose until symptoms recur where revert back to last dose OR reduce until hits on 15mg on alternate day.

CONCLUSION

This case illustrates need to consider myasthenia when patient with inflammatory myositis deteriorates despite being on steroids.

REFERENCES

- 1) Muscle involvement in myasthenia gravis: Expanding the clinical spectrum of Myasthenia-Myositis association from a large cohort of patients. Matteo Garibaldi et al. Autoimmun Rev . 2020 Apr;19(4):102498. doi: 10.1016/j.autrev.2020.102498. Epub 2020 Feb14.
- 2) Concurrent inflammatory myopathy and myasthenia gravis with or without thymic pathology: A case series and literature review. Kun Huang et.al. Semin Arthritis Rheum. 2019 Feb;48(4):745-751. doi: 10.1016/j.semarthrit.2018.05.004. Epub 2018 Jun 28.