

# 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

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