

## **An Interesting Case of Cystic Pheochromocytoma Presenting with Myositis.**

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Background: Myositis is thought to manifest as a paraneoplastic condition when neoplastic cells generate myositis-specific antigens that mediate T-Cell damage to healthy muscle. We present a case of polymyositis presenting with a cystic pheochromocytoma. Case: A 42 year-old male presented to a military clinic at Yokota Air Base, Japan with uncontrollable tremor in all four extremities. He complained of confusion, word-finding difficulty, and poor coordination. He also reported several months of progressive weakness with trouble standing and difficulty gripping objects and opening doors. Exam was remarkable for reduced muscle bulk in the forearms and proximal lower extremities, reduced strength in upper and lower extremities, and hyporeflexia. An MRI brain was normal, as were labs to evaluate for stroke in the young. In the course of his neurological workup an MRI revealed multiple liver masses and an adrenal mass. Follow-up imaging determined the liver masses to be benign hemangiomas, and the adrenal mass was found to be a rim-enhancing cystic mass with a fluid level. The patient was flown to Tripler Army Medical Center in Hawaii for further evaluation and treatment. An EMG demonstrated denervation and large amplitude and duration polyphasic MUPs. Plasma normetanephrines were elevated to approximately 8x the upper limit of normal, prompting surgical excision of what was confirmed to be a cystic pheochromocytoma. At the same time, biopsies taken from rectus femoris muscle confirmed polymyositis. The patient's symptoms improved after the surgery but did not fully resolve. He was started on oral steroids and continues to recover, managed by rheumatology and neurology consultants. Conclusion: Dermatomyositis or polymyositis can serve as useful prompts to screen for neoplasm. Patients with episodes of weakness or confusion comorbid with neuromuscular symptoms concerning for paraneoplastic syndrome should be evaluated for pheochromocytoma. Detection and removal of this tumor may prevent dangerous complications.