Foreign Body Induced Neuropathy After Magnetic Sphincter Augmentation Implantation:
A Case Report and Review of Literature

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Introduction

- Implanted Magnetic Sphincter Augmentation (MSA) devices have increased in popularity as a minimally invasive treatment of medically refractory gastroesophageal reflux disease
- MSA devices are surgically implanted around the lower esophageal sphincter (LES) and through a series of interconnected magnets, prevent reflux of gastric contents into the esophagus while still allowing for LES opening during a normal swallow
- Studies have demonstrated that MSA devices provide symptom improvement comparable to fundoplication in select patient groups
- The literature lacks robust data on frequency and type of complications associated with MSA device implantation
- This case report describes a case of peripheral neuropathy as an uncommon reaction to an implanted MSA device

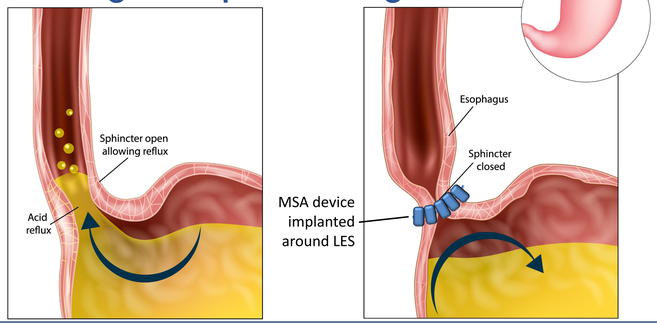
Review of Literature

- Asti *et al*, found that in 164 patients undergoing MSA implantation, only 11 of those patients underwent device removal
- Ganz *et al*, in a prospective study of 100 patients undergoing MSA implantation, seven patients had the device explanted (7%)
- The most common reasons for device removal included:
    - Recurrence of symptoms/reflux
    - Dysphagia
    - Device erosion
    - Chest pain
- No prior published data demonstrating an immune foreign body reaction to an MSA device

Case Details

- A 50-year-old female underwent implantation of MSA device for gastroesophageal reflux disease that had failed medical management.
- Post-operatively, patient had immediate improvement in reflux symptoms
- Over the next few months, patient developed esophageal spasm and life-limiting peripheral neuropathy
- Underwent EGD with dilation twice with improvement in esophageal spasms but continued to experience paresthesias involving her hands and feet
- After ruling out other causes of peripheral neuropathy, decision was made to remove the MSA device for concern of a foreign body induced immune reaction
- Following successful removal, patient had complete resolution of her peripheral neuropathy symptoms

Magnetic Sphincter Augmentation



Conclusions

- Surgeons should maintain a high index of suspicion for foreign body immune reactions in implanted medical devices, such as MSA devices
- Patients should be evaluated for device removal if patient's have persistence of symptoms, even non-specific or vague, if all other causes have been ruled out
- Further studies are needed to quantify and clarify complications related to implanted MSA devices and reasons for their removal to better counsel patients considering options for management of GERD

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