


Counteracting The Consequences of **PHANTOM EYE SYNDROME (PES)** Following Eye Removal

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Why this topic??!!!!
Do you mean like
phantom limb??!!!!

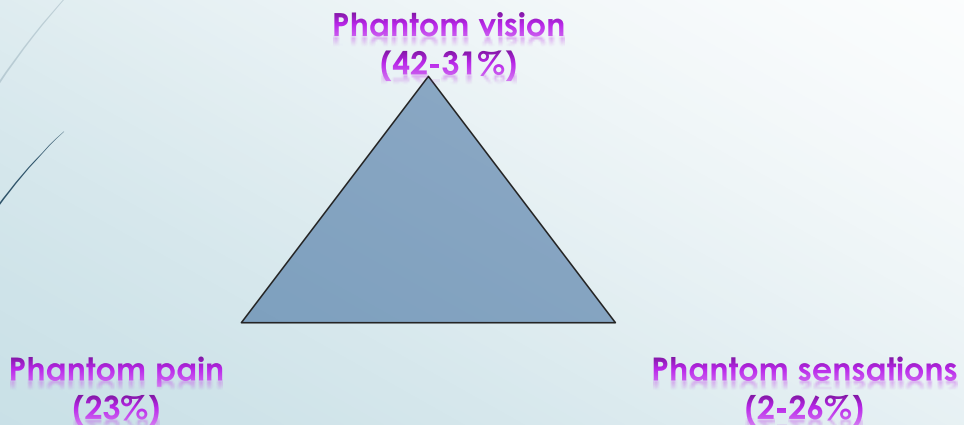
Phantom eye syndrome??!

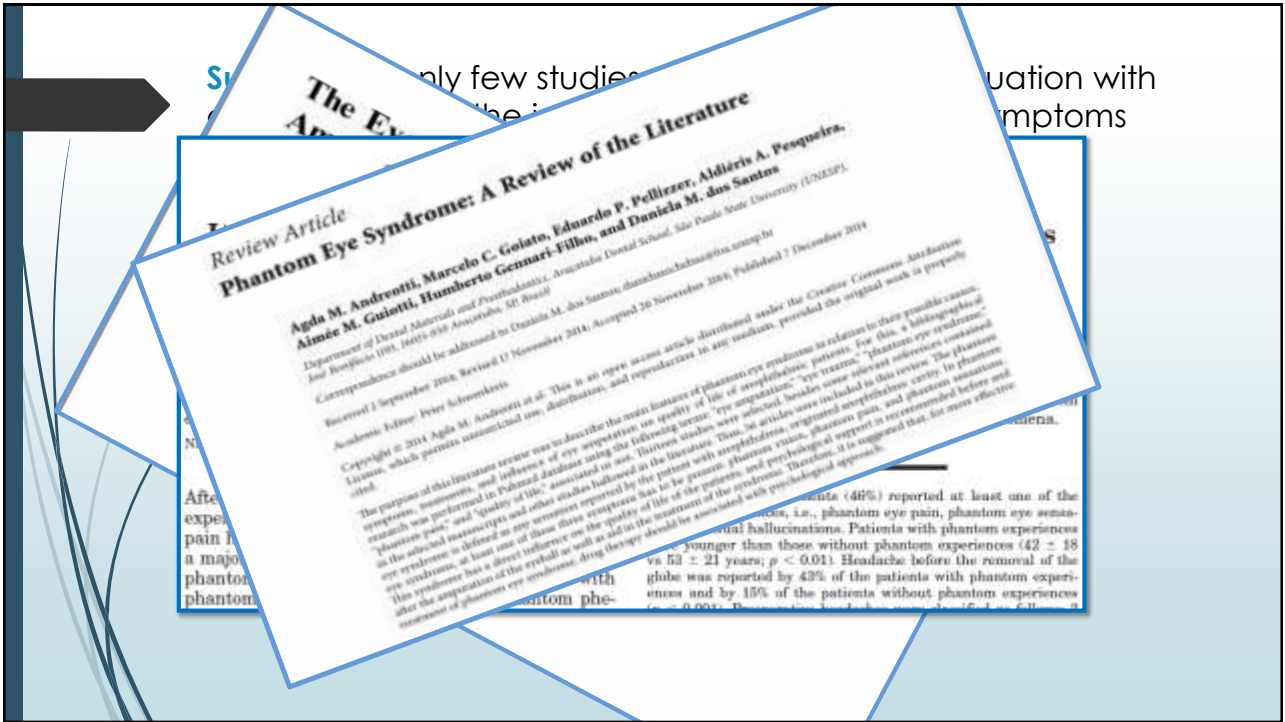
Eye removal is a psychologically traumatic surgery as any other limb amputation

But

Is it only a psychological problem??!

What is Phantom eye syndrome?





Types of eye removal surgeries??!

Three types of surgeries are applied evisceration, enucleation and exenteration.

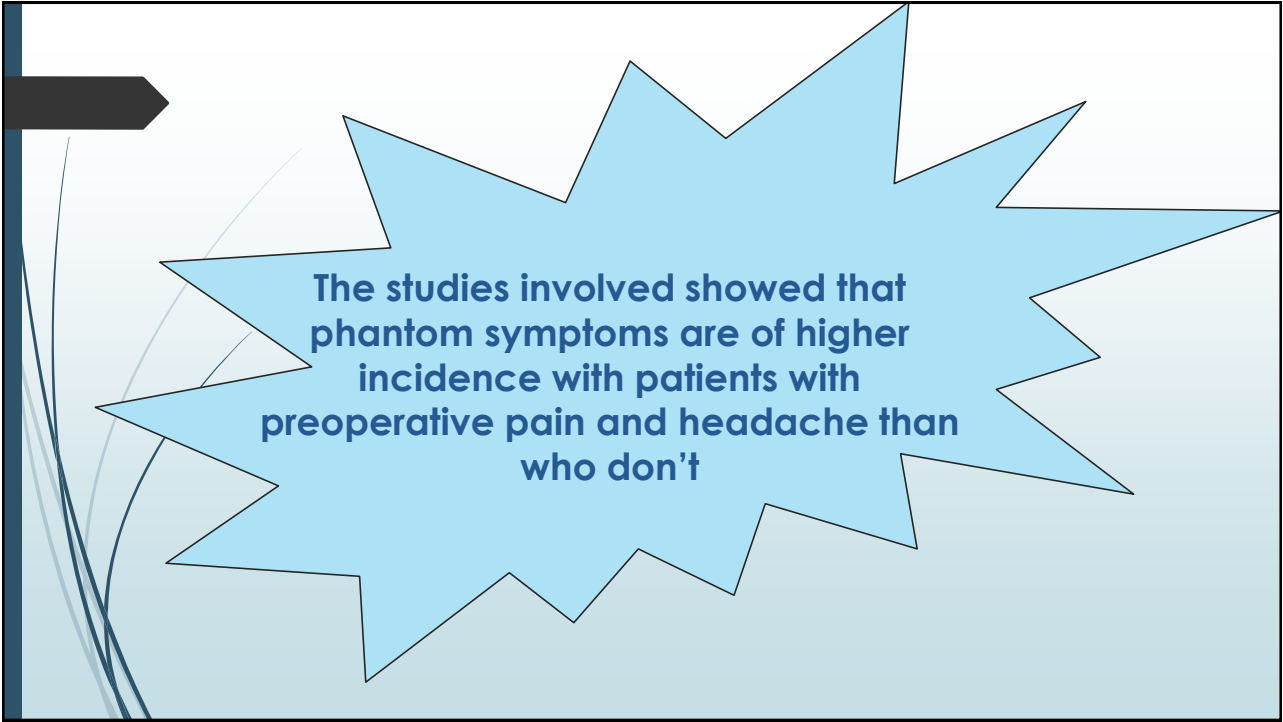
- **Evisceration** describes the removal of the intraocular content leaving the sclera with all the muscles intact in the orbit.
- **Enucleation** refers to the surgical removal of the entire globe including the sclera
- **Exenteration** of the orbit refers to the surgical removal of the eye and the affected orbital contents with or without the eyelids



Why do we remove the eye??

A study in Denmark between 1996- 2003 over 345 patient showing indications of eye removal

Causative diagnosis	Indication for amputation of the eye							Total
	Painful blind eye	Neoplasm	Infection	Disfiguring blind eye	Recent injury	Prevention of sympathetic ophthalmia	Other reasons	
Neoplasm	8	119	0	0	0	0	0	127
Traumatic lesions	28	0	3	15	25	2	0	73
Complications after operations	38	0	9	2	0	1	1	51
Infections and inflammations	15	0	20	3	0	2	0	40
Glaucoma	29	0	9	0	0	0	0	38
Perinatal diseases	7	0	0	3	0	0	0	10
Other reasons	0	0	0	0	0	0	1	1
Unknown	2	0	1	2	0	0	0	5
Total	137	119	42	25	25	5	2	345



The studies involved showed that phantom symptoms are of higher incidence with patients with preoperative pain and headache than who don't

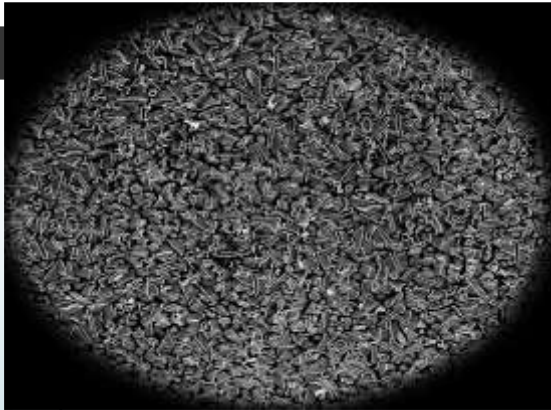


Let's get a bit oriented with phantom symptoms

Phantom vision (Visual hallucinations)

- ▶ **Triggers:** darkness, closing of the eyes, fatigue and psychological stress and sometimes without triggers at all
- ▶ **Frequency:** everyday, every week or infrequent
- ▶ 40% only had **feelings** towards it, and minority of them interfered with their daily life
- ▶ Patients are afraid to mention it, not to be considered a **mental diseased** patient
- ▶ elementary visual hallucinations, with white or colored light as a continuous sharp light or as moving dots, few patient described pictures
- ▶ **Stops** within 3-6 months.

- ▶ Patients with preoperative eye pain were more likely to develop visual hallucinations (54%) than patients without preoperative eye pain (46%), but this was not statistically significant
- ▶ However, because of the retrospective nature of our study, some patients may have forgotten about their preoperative pain at the interview.



Elementary form as described by some patients



Picture on top of the elementary phantom vision

How to avoid it??!

Preoperative: patient must be oriented about it to avoid more mental stress and psychological disturbance postoperatively

Postoperative:

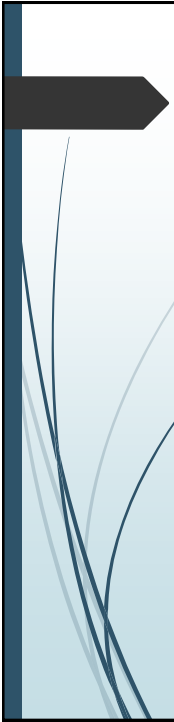
Mild form: Reassurance

Severe form(emotional stress): Pharmacological treatment

Phantom Pain

- ▶ **Phantom pain:** Painful sensations referred to the absent body part (neuropathic pain).
- ▶ **Incidence:** with all categories of diagnoses but more with Blind painful eye (36%)
- ▶ **Frequency:** 31% experienced pain every day (most intense pain), 15% had pain several times a week, 18% had pain once a week, and 36% had pain less often than every week. It lasts from seconds to hours

- ▶ **Type:** cutting, penetrating, shooting pain, superficial burning or stinging pain or mixture of the different pain qualities.
- ▶ **Triggers:** chilliness and windy weather as the most frequent triggers. One hypothesis is that the chilliness is painful for the patients because the blood flow markedly reduced in the orbit due to the lost tissue. The patients are not able to maintain a normal temperature of their eyelid and conjunctiva, and thus feel pain. Some patients reported that cold weather made the conjunctival secretions freeze, which was painful. (Denmark)
- ▶ **Relief:** rest, heat, firm pressure and distraction can reduce the severity of pain

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- ▶ The nature of the types of pain after surgery can either be phantom pain, dysfunctional socket pain or both types together in combination
 - ▶ It fades out after weeks, months or less frequently years
 - ▶ Pharmacological treatment is needed depending on the severity of pain



Phantom sensations

- ▶ Itching around the eye, feeling of nonexistent eyelids, and a feeling of opening and seeing with both eyes
- ▶ These patients had the complete spectrum of symptoms of phantom eye syndrome (visual hallucination, phantom pain, and phantom sensations).
- ▶ Incidence is lesser than in phantom limb, so not the patient's main complain
- ▶ Reassurance

Management of Phantom Phenomenon

- ▶ **Reassurance:** pre and post operative (psychological advice)
- ▶ **Pharmacological treatment:**
In severe form interfering with daily life:
antidepressants, anticonvulsants, NMDA antagonist, neuroleptics... these drugs some success in treating phantom phenomenon

Pharmacological class	Drugs
Antidepressants	Amitriptyline ^x
	Tricyclics ^x
	Duloxetine Milnacipran
Anticonvulsants	Gabapentin ^x
	Pregabalin ^x
	Carbamazepine ^x Oxcarbazepine ^x
Sodium channel blockers	Bupivacaine ^x
	Lidocaine Mexiletine
N-Methyl-D-aspartate receptor antagonists	Ketamine ^x
	Memantine ^x
Opioids	Morphine ^x
	Methadone
	Buprenorphine ^x Tramadol ^x
Others	Calcitonin ^x
	Benzodiazepine
	Acetaminophen ^x
	Nonsteroidal anti-inflammatory ^x
	Beta blockers ^x
	Muscle relaxants ^x
	Corticosteroids ^x
	Neuroleptics ^x
	Barbiturics ^x

Take home message

- ▶ Phantom eye syndrome should be considered in the decision of surgery
- ▶ The patient should be oriented with it before surgery
- ▶ Reassurance after surgery is the main key for management
- ▶ Pharmacological treatments are not always effective
- ▶ More research should be directed to this syndrome to understand it better and find effective methods for management

