

Case Reports

Three Year Retained Orbital Plant Material

Dylan G Raikar¹ and Kathryn P Winkler^{2*}

¹Rush Medical College, USA

²Department of Ophthalmology, Section of Oculoplastic Surgery, Rush University Medical Center, 940 Lee St., Suite 200, Des Plaines, IL, 60016, USA

Abstract

Retained intraorbital organic foreign bodies most often present acutely with significant inflammatory or infectious sequelae necessitating surgical removal. We present a 65-year-old woman who was evaluated for an upper lid lesion that she noticed one and a half years ago which subsequently became inflamed three-to-four weeks prior to presentation. A one cm-long green plant stem was excised from a superior orbital tract, after which the patient recovered without symptoms. Upon further discussion with the patient, she noted that she had fallen three years earlier and believed that the initial embedding of the plant material occurred during this fall. After her fall, the patient developed binocular diplopia that lasted for about two months and then resolved spontaneously. This is the first known case of retained intraorbital organic foreign body that initially presented with symptoms, resolved, and subsequently presented years later with different symptoms, leading to the discovery of the foreign body.

Keywords: Excisional surgery outcomes; Intraorbital surgery; Organic material excision; Retained organic material; Retained orbital material

Acute presentations of a retained organic foreign body typically involve purulent inflammation, abscess formation, gangrene, or tetanus. [1] Delayed or chronic presentation, while less common, may result in granulomatous tissue reaction, fistula formation, and osteomyelitis. [1] Those delayed presentations described in the literature typically present within weeks to months of the initial injury. [1-3] We present a case of retained intraorbital plant material that went undetected for approximately three years. Patient consent to publish identifiable photographs was obtained, and the collection and evaluation of

*Corresponding author: Kathryn P Winkler, Department of Ophthalmology, Section of Oculoplastic Surgery, Rush University Medical Center, 940 Lee St., Suite 200, Des Plaines, IL, 60016, USA, E-mail: kathryn.winkler@gmail.com

Citation: Raikar DG, Winkler KP (2024) Three Year Retained Orbital Plant Material. J Ophthalmic Clin Res 11: 117.

Received: March 11, 2024; **Accepted:** March 21, 2024; **Published:** March 29, 2024

Copyright: © 2024 Raikar DG, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

protected health information was compliant with the Health Insurance Portability and Accountability Act as well as the Declaration of Helsinki.

Case Presentation

A 65-year-old Caucasian female presented with a 3-4 week history of increasing inflammation of a lesion of her left upper lid just inferior to her brow (Figure 1A). She reported that the lesion had been present for about 1.5 years but only recently had become tender and erythematous. The lesion was not readily apparent until the left brow was raised after which there appeared a 1.5 cm x 1.0 cm mobile, non-tender lesion with mild purulent discharge (Figure 1B). She was started on oral clindamycin with plans for excision once the purulent discharge improved. The patient returned several days later with increased inflammation of the lesion. The lesion was presumed to be an infected or inflamed sebaceous cyst based on appearance. An office excision was planned for the same day.

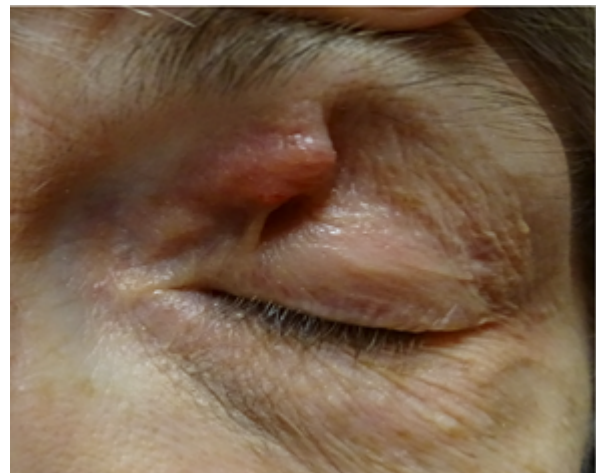


Figure 1: Clinical appearance at presentation. **A)** The lesion was not readily evident when looking at the patient straight on. **B)** When the left brow was raised, however, a 1.5cm x 1cm mobile, nontender lesion with mild purulent drainage was appreciated.

Once the skin was incised, the underlying tissue of the lesion appeared significantly abnormal and was noted to be extending into the anterior superior orbit (Figure 2). Careful dissection was continued around the area of abnormal tissue and during dissection a 1.0 cm length green plant stem emerged from what appeared to be a tract in the superior orbit. The tract was only partially removed as the remaining tract was invested near the trochlea (Figure 2). The pathology report eventually confirmed foreign plant material and granulation tissue with acute and chronic inflammation.



Figure 2: Clinical appearance after excision of the plant material and the superior orbital tract.

The patient was initially quite surprised by the appearance of plant material and denied any recent gardening accident or trauma. She did note that 3 years earlier she had fallen on her face, hitting the left superior orbital rim, while getting out of a car. Immediately following the injury she noted a small abrasion just superior to her left brow which healed without intervention. A small scar just superior to the patient's left brow was still present. She developed binocular diplopia that lasted for about 2 months following the injury that resolved on its own but she denied any cellulitis or infection at the time of the initial injury. Following the injury, she had presented to another provider and an MRI at that time demonstrated an extraconal soft tissue lesion in the superomedial quadrant of the left orbit between the superior oblique and the superior rectus that was isointense to T1 and hypointense to T2 (Figure 3). It was thought to be a hematoma. Because her symptoms resolved, no further imaging or intervention was initiated at that time. Interestingly, the plant remained green for those three years while embedded in the anterior orbit, indicating that it was still getting enough light to continue to photosynthesize.

After removal of the plant, the patient did well and did not develop any further symptoms (Figure 4). Follow up imaging immediately after excision and six months following her surgery demonstrated inflammatory material surrounding the trochlea and superior oblique without progression (Figure 5).

Discussion

While inert foreign bodies, such as glass or metallic fragments, may cause little inflammation, organic intraorbital foreign bodies most commonly present acutely with significant inflammatory or infectious sequelae.¹ Intraorbital foreign bodies are particularly dangerous, potentially leading to globe rupture, optic neuropathy, brain abscess, and cerebral abscess. [2] Delayed or chronic presentation, while less common, usually present weeks to months after the initial

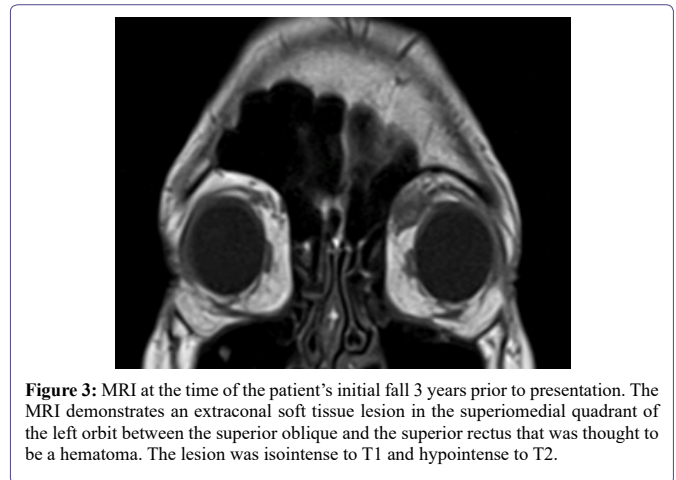


Figure 3: MRI at the time of the patient's initial fall 3 years prior to presentation. The MRI demonstrates an extraconal soft tissue lesion in the superomedial quadrant of the left orbit between the superior oblique and the superior rectus that was thought to be a hematoma. The lesion was isointense to T1 and hypointense to T2.

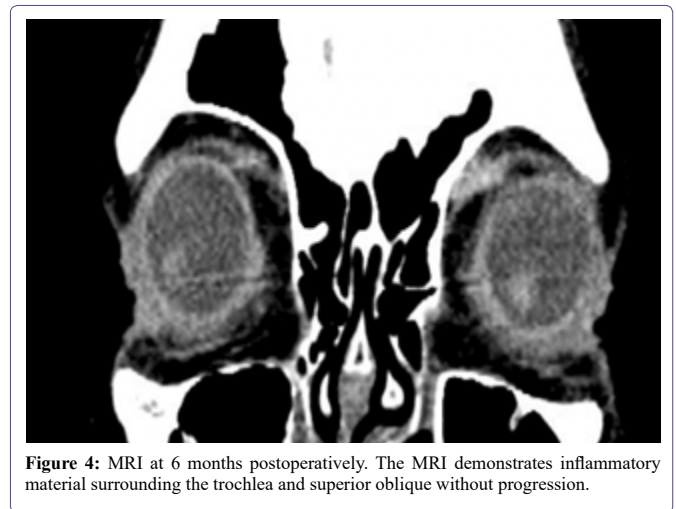


Figure 4: MRI at 6 months postoperatively. The MRI demonstrates inflammatory material surrounding the trochlea and superior oblique without progression.



Figure 5: Clinical appearance postoperatively. Well healed without complication.

injury and may result in granulomatous tissue reaction, fistula formation, and osteomyelitis. [1-3].

The diagnosis of retained intraorbital organic foreign body can pose significant challenges without corroboration from a patient history. Because plant material has a similar density to fat and air, organic foreign bodies can be difficult to differentiate from soft tissue on CT imaging. [4] MRI, while more sensitive to detecting organic

foreign bodies, can still be misinterpreted without a high degree of suspicion. [5,6] Clinicians, therefore, should consider the possibility of retained foreign body when presented with a symptomatic lesion that does not improve on an antibiotic regimen.

The scar noted on the patient's left superior orbital rim suggests that the plant material may have embedded above the patient's brow and coursed through the soft tissue of the patient's brow to eventually cause inflammatory symptoms in her left upper eyelid. This course is supported by Hansen et al, who posited that the horizontal pyramidal shape of the orbit tends to direct foreign bodies towards the apex where they can settle in the superior orbital fissure. [6].

This is the first known case of retained intraorbital organic foreign body that initially presented with symptoms, resolved, and subsequently presented years later with different symptoms, leading to the discovery of the foreign body.

References

1. Nasr AM, Haik BG, Fleming JC, Al-Hussain HM, Karcioğlu ZA (1999) Penetrating orbital injury with organic foreign bodies. *Ophthalmology* 106: 523-32.
2. Fulcher TP, McNab AA, Sullivan TJ (2002) Clinical features and management of intraorbital foreign bodies. *Ophthalmology* 109: 494-500.
3. Bullock JD, Warwar RE, Bartley GB, Waller RR, Henderson JW (1999) Unusual orbital foreign bodies. *Ophthalmic Plast Reconstr Surg* 15: 44-51.
4. Green BF, Kraft SP, Carter KD, Buncic JR, Nerad JA, et al. (1990) Intra-orbital wood. Detection by magnetic resonance imaging. *Ophthalmology* 97: 608-611.
5. Smely C, Orszagh M (1999) Intracranial transorbital injury by a wooden foreign body: re-evaluation of CT and MRI findings. *Br J Neurosurg* 13: 206-211.
6. Hansen JE, Gudeman SK, Holgate RC, Saunders RA (1988) Penetrating intracranial wood wounds: clinical limitations of computerized tomography. *J Neurosurg* 68: 752-756.



- Advances In Industrial Biotechnology | ISSN: 2639-5665
- Advances In Microbiology Research | ISSN: 2689-694X
- Archives Of Surgery And Surgical Education | ISSN: 2689-3126
- Archives Of Urology
- Archives Of Zoological Studies | ISSN: 2640-7779
- Current Trends Medical And Biological Engineering
- International Journal Of Case Reports And Therapeutic Studies | ISSN: 2689-310X
- Journal Of Addiction & Addictive Disorders | ISSN: 2578-7276
- Journal Of Agronomy & Agricultural Science | ISSN: 2689-8292
- Journal Of AIDS Clinical Research & STDs | ISSN: 2572-7370
- Journal Of Alcoholism Drug Abuse & Substance Dependence | ISSN: 2572-9594
- Journal Of Allergy Disorders & Therapy | ISSN: 2470-749X
- Journal Of Alternative Complementary & Integrative Medicine | ISSN: 2470-7562
- Journal Of Alzheimers & Neurodegenerative Diseases | ISSN: 2572-9608
- Journal Of Anesthesia & Clinical Care | ISSN: 2378-8879
- Journal Of Angiology & Vascular Surgery | ISSN: 2572-7397
- Journal Of Animal Research & Veterinary Science | ISSN: 2639-3751
- Journal Of Aquaculture & Fisheries | ISSN: 2576-5523
- Journal Of Atmospheric & Earth Sciences | ISSN: 2689-8780
- Journal Of Biotech Research & Biochemistry
- Journal Of Brain & Neuroscience Research
- Journal Of Cancer Biology & Treatment | ISSN: 2470-7546
- Journal Of Cardiology Study & Research | ISSN: 2640-768X
- Journal Of Cell Biology & Cell Metabolism | ISSN: 2381-1943
- Journal Of Clinical Dermatology & Therapy | ISSN: 2378-8771
- Journal Of Clinical Immunology & Immunotherapy | ISSN: 2378-8844
- Journal Of Clinical Studies & Medical Case Reports | ISSN: 2378-8801
- Journal Of Community Medicine & Public Health Care | ISSN: 2381-1978
- Journal Of Cytology & Tissue Biology | ISSN: 2378-9107
- Journal Of Dairy Research & Technology | ISSN: 2688-9315
- Journal Of Dentistry Oral Health & Cosmesis | ISSN: 2473-6783
- Journal Of Diabetes & Metabolic Disorders | ISSN: 2381-201X
- Journal Of Emergency Medicine Trauma & Surgical Care | ISSN: 2378-8798
- Journal Of Environmental Science Current Research | ISSN: 2643-5020
- Journal Of Food Science & Nutrition | ISSN: 2470-1076
- Journal Of Forensic Legal & Investigative Sciences | ISSN: 2473-733X
- Journal Of Gastroenterology & Hepatology Research | ISSN: 2574-2566
- Journal Of Genetics & Genomic Sciences | ISSN: 2574-2485
- Journal Of Gerontology & Geriatric Medicine | ISSN: 2381-8662
- Journal Of Hematology Blood Transfusion & Disorders | ISSN: 2572-2999
- Journal Of Hospice & Palliative Medical Care
- Journal Of Human Endocrinology | ISSN: 2572-9640
- Journal Of Infectious & Non Infectious Diseases | ISSN: 2381-8654
- Journal Of Internal Medicine & Primary Healthcare | ISSN: 2574-2493
- Journal Of Light & Laser Current Trends
- Journal Of Medicine Study & Research | ISSN: 2639-5657
- Journal Of Modern Chemical Sciences
- Journal Of Nanotechnology Nanomedicine & Nanobiotechnology | ISSN: 2381-2044
- Journal Of Neonatology & Clinical Pediatrics | ISSN: 2378-878X
- Journal Of Nephrology & Renal Therapy | ISSN: 2473-7313
- Journal Of Non Invasive Vascular Investigation | ISSN: 2572-7400
- Journal Of Nuclear Medicine Radiology & Radiation Therapy | ISSN: 2572-7419
- Journal Of Obesity & Weight Loss | ISSN: 2473-7372
- Journal Of Ophthalmology & Clinical Research | ISSN: 2378-8887
- Journal Of Orthopedic Research & Physiotherapy | ISSN: 2381-2052
- Journal Of Otolaryngology Head & Neck Surgery | ISSN: 2573-010X
- Journal Of Pathology Clinical & Medical Research
- Journal Of Pharmacology Pharmaceutics & Pharmacovigilance | ISSN: 2639-5649
- Journal Of Physical Medicine Rehabilitation & Disabilities | ISSN: 2381-8670
- Journal Of Plant Science Current Research | ISSN: 2639-3743
- Journal Of Practical & Professional Nursing | ISSN: 2639-5681
- Journal Of Protein Research & Bioinformatics
- Journal Of Psychiatry Depression & Anxiety | ISSN: 2573-0150
- Journal Of Pulmonary Medicine & Respiratory Research | ISSN: 2573-0177
- Journal Of Reproductive Medicine Gynaecology & Obstetrics | ISSN: 2574-2574
- Journal Of Stem Cells Research Development & Therapy | ISSN: 2381-2060
- Journal Of Surgery Current Trends & Innovations | ISSN: 2578-7284
- Journal Of Toxicology Current Research | ISSN: 2639-3735
- Journal Of Translational Science And Research
- Journal Of Vaccines Research & Vaccination | ISSN: 2573-0193
- Journal Of Virology & Antivirals
- Sports Medicine And Injury Care Journal | ISSN: 2689-8829
- Trends In Anatomy & Physiology | ISSN: 2640-7752

Submit Your Manuscript: <https://www.heraldopenaccess.us/submit-manuscript>