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Research Article

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Trauma-Induced Necrotizing Scleritis: A Case of Successful Conservative Management

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Abstract

This report describes necrotizing scleritis as a complication of direct ocular trauma and reviews its treatment in the context of the literature. The profound catastrophic version of scleritis is necrotizing scleritis, which raises the prospect of cataract and secondary glaucoma and triggers significant vision repercussions. A 45-year-old male from Odisha, presented to the eye clinic with a three-day history of redness, pain, mild swelling, photophobia and irritation in the right eye, followed by a bamboo stick injury. The initial ophthalmic examination, a preliminary identification of trauma-induced necrotizing scleritis was established disregard of the absence of infectious evidences. Treatment was commenced with topical antibiotic and steroid, topical carboxymethylcellulose, and oral aceclofenac-serratiopeptidase. The clinical insights include prompt evaluation of scleral integrity after trauma is critical, and early differentiation of infectious, autoimmune, and trauma-induced scleritis guides appropriate treatment. Contrary to autoimmune types, this detection has valuable clinical implications, advocating that assertive immunosuppressive regimens perhaps not be necessitate altogether, precisely in individuals despite any indication of systemic conditions and having a stipulated history of trauma to the eyes. The effective result in the present case—full recovery along with improved visual acuity—requires follow-up in order to ensure no subsequent complications like scleral thinning transpire.

Keywords: Catastrophic version of scleritis, Autoimmune types, ocular trauma, Ophthalmic examination

1. Introduction

An extremely scarce source of an advanced scleral inflammatory ailment became evident when the first reported case of necrotizing scleritis subsequent to ocular trauma was identified by Hormographiella aspergillata [1]. The profound catastrophic version of scleritis is necrotizing scleritis, which raises the prospect of cataract and secondary glaucoma and triggers significant vision repercussions. Rheumatoid arthritis, systemic lupus erythematosus, and granulomatosis with polyangiitis are frequently associated systemic aetiologies to obtain necrotizing scleritis alongside systemic autoimmune disorders, systemic vasculitis, and microbiological pathogens [2, 3]. Attentive post-operative observation appears to be suggested as the recent instances of surgically induced necrotizing scleritis, requiring prompt concern to avert the pathology, that can be aggravated by opportunistic pathogens such as Nocardia and caused by scleral injury following surgical intervention [4-7]. This case report describes necrotizing scleritis as a complication of direct ocular trauma and reviews its treatment in the context of the literature.

2. Case Presentation

A 45-year-old male from Barpali, Odisha, presented to the eye clinic with a three-day history of redness, pain, and mild swelling in the right eye. There was photophobia and irritation, which had occurred after a bamboo stick injury a few days earlier. There was no relevant history of ocular disease and/or systemic autoimmune conditions. The initial ophthalmic examination revealed a best-corrected visual acuity (BCVA) of 6/9 in the right eye, which improved to 6/6 with pinhole, and 6/6 in the left eye. Slit-lamp biomicroscopy implied a ruptured palpebral

conjunctiva, an intact cornea and lens, and a focal scleral rupture with apparent inflammation. A preliminary identification of trauma-induced necrotizing scleritis was established disregard of the absence of infectious evidences. Treatment was commenced with moxifloxacin-dexamethasone eye drops four times daily, carboxymethylcellulose four times daily, and oral aceclofenac-serratiopeptidase at bed time for seven days. On follow-up, the patient acknowledged significant symptomatic betterment, with a BCVA 6/6 in the right eye and no evidence of additional scleral thinning and/or inflammation. A final follow-up showed entirely resolved scleritis, conserving a BCVA of 6/6. The patient sustained a stable ocular condition for the span of six-month follow-up.

3. Discussion

In accordance to the investigation, scleritis can be spurred by an abrasion, as an initiating factor, foremost for individuals having prior inflammatory illness [8]. Albeit systemic corticosteroids and immuno-suppressants endure the principal treatment regimen for autoimmune necrotizing scleritis, and rituximab is efficacious for refractory occurrence, this study exhibits that topical and oral medications can attain adequate regulation in necrotizing scleritis patients [9]. This case epitomizes that direct ocular trauma can lead to necrotizing scleritis, which need to be recognized early and treated conservatively. The clinical insights from the current instances include prompt evaluation of scleral integrity after trauma is critical, and early differentiation of infectious, autoimmune, and trauma-induced scleritis guides appropriate treatment. Contrary to autoimmune types, this instance indicates that trauma-induced circumstances might not require systemic immunosuppression. Differentiating between infectious and sterile scleral inflammation is crucial; empirical immunosuppression in infectious cases can exacerbate the condition. Systemic diseases can also exacerbate a trauma induced scleritis, so keeping a watchfull eye for those symptoms is needed. Limitations of this report include that it is a single case report, and does not provide long term follow up data.

4. Conclusion

This case accents the censorious significance of acknowledging trauma as a prospective determinant in necrotizing scleritis. While systemic autoimmune illnesss and infections persist as protuberant sources, the lucrative administration of this patient with conservative therapy emphasizes that trauma-induced necrotizing scleritis correspond favorably to topical and oral drug regimens. This detection has valuable clinical implications, advocating that assertive immunosuppressive regimens perhaps not be necessitate altogether, precisely in individuals despite any indication of systemic conditions and having a stipulated history of trauma to the eyes. To instruct an effective therapeutic intervention and to prevent conceivably vision threatening complications, it is extremely important to efficiently and accurately differentiation between infectious, autoimmune, and trauma induced scleritis. This case offers a reassurance to health care provider to preserve an intense index of skepticism for trauma provoked scleritis, specifically in cases where individuals exhibited scleral inflammation subsequent to ocular trauma. To be able to determine any latent systemic illnesses that would make the scleritis more severe, it additionally points out the need of a detailed clinical investigation. The effective result in the present case—full recovery along with improved visual acuity—confirms the prudent efficacy. Extended follow-up is recommended, yet, in order to ensure no subsequent complications like scleral thinning transpire. To establish prognostic guidelines to assess successful conservative interventions of trauma induced necrotizing scleritis, additional research and more substantial series of cases must be conducted. Eventually, by resolving the distinctive diagnosis and medical manifestation of scleritis, the current instance contributes to the expanding quantity of research that validates a nuanced strategy towards controlling the disease preserving ophthalmic perception.

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