

Periorbital Cellulitis that Developed after Alternative Medication of *Hirudo Medicinalis* Application

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Abstract

We aimed to present a case of periorbital (preseptal) cellulitis that developed after *Hirudo medicinalis* alternative medicine application for glaucoma treatment which can be rarely seen in routine ophthalmology practice. A 36 year old woman with a glaucoma was admitted to our outpatient clinic because of redness, pain and swelling around the right eye for three days and gave a history of leech application 1 week ago, that recommended by her relatives as a remedy for glaucoma. Orbital cellulitis was excluded and cure was achieved with oral ciprofloxacin and flurbiprofen treatment. Patients with chronic diseases such as glaucoma, they are abandoning the treatment over time, will seek solutions from alternative medicine. These inappropriate treatments without scientific evidence can cause various complications. Physicians should maintain proper communication with the patients inform them about their chronic diseases (e.g. glaucoma) to make them the part of the solution and treatments.

Keywords: Alternative medicine; *Hirudo medicinalis*; Complication; Leech; Cellulitis; Diagnosis

Introduction

We aimed to present the clinical features and treatment of periorbital cellulitis that developed after leech (*Hirudo medicinalis*) application which can be rarely seen in routine ophthalmology practice.

Case Report

A 36 year old woman with a known rheumatoid arthritis (RA) and glaucoma was admitted to our outpatient clinic because of redness pain and swelling around the right eye for three days. Her medical history was significant for RA and glaucoma for six years and she is treated with oral methylprednisolone 4 mg tablet 1*1, topical brimonidine tartrate droplet 2*1, brinzolamide droplet 2*1, timolol maleate+bimatoprost droplet 1*1. She also gave a history of leech application 1 week ago, that recommended by her relatives as a remedy for glaucoma (Figure 1).

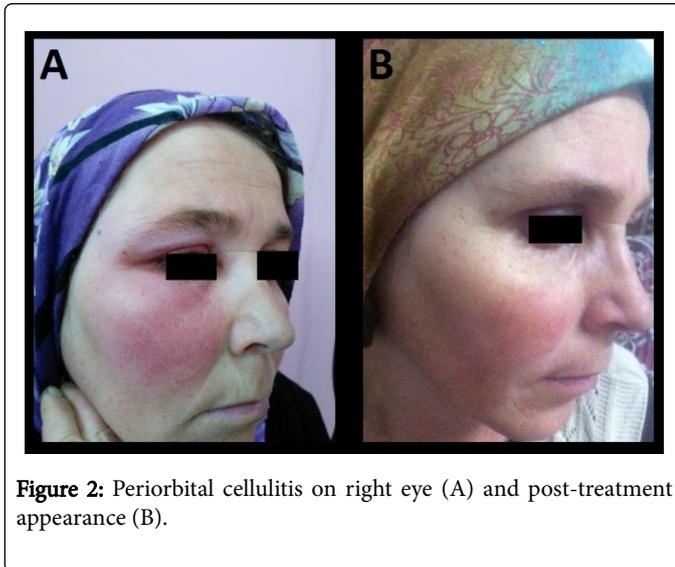
Physical examination findings were redness with raised temperature of the periocular skin and soft tissue, swelling involved the eyelids. Visual acuity was bilateral 20/20. There was no limitation of ocular motility for both eyes. Light reflexes, anterior-posterior segment, and fundus examinations were normal. Orbital cellulitis was excluded and the cure was achieved with 2-week oral ciprofloxacin 500 mg tablet 1*1 and flurbiprofene 100 mg tablet 1*1 treatments (Figure 2).



Figure 1: *Hirudo medicinalis*.

Discussion

Cellulitis is defined as inflammation of the skin and subcutaneous tissues usually from acute infection. Sign and symptoms are erythema,



[4]. Schnabl et al. recommend third generation cephalosporin's, tetracycline, fluoroquinolones or aminoglycosides for cases with established infections [9].

Conclusion

Patients with chronic diseases requiring long-term treatment and follow-up such as glaucoma, they are abandoning the treatment over time, don't come to the control visits, seek solutions from alternative medicine. These inappropriate treatments without scientific evidence can cause various complications. Therefore, physicians should maintain proper communication with the patients inform them about their diseases to make them the part of the solution.

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swelling, and warmth over the affected area, pain, and tenderness. Borders of the lesions are generally not sharp and systemic findings such as hypotension, fever chills suggest severe infection and potential complications [1].

Although the most common bacteria causing cellulitis are streptococci (especially *S. pyogenes*) and *S. aureus*, in the presence of leech (*Hirudo medicinalis*) application history; *Aeromonas* species, are a most common organism to be accused [2-4]. *Aeromonas* are found in leech gut flora. Leeches have a lack of enzymes for digestion of sucked erythrocytes but *Aeromonas* have them thus a symbiotic life form occurs [4,5].

Aeromonas are Gram-negative oxidase positive facultatively anaerobic motile rods. They are found primarily in fresh and brackish water. They can cause infections ranges from mild cellulitis to ecthyma gangrenosum and even sepsis in immunocompromised patients [6].

It was first reported by Whitlock et al. in 1983 that leech application to the body could be a risk for infection and this issue has been studied in many publications until today [7]. Nevertheless, our patient is the first report of periorbital cellulitis resulting from leech application.

Treatment for infectious complications of leech application is also discussed in reported cases [8]. Eroglu et al. show the antibiotic susceptibility of *Aeromonas* living in the bacterial flora of the leeches to ciprofloxacin, cefotaxime, ceftazidime, gentamicin and TMP/SMX