

病毒感染后葡萄膜炎一例

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收稿日期: 2025年3月12日; 录用日期: 2025年4月12日; 发布日期: 2025年4月21日

摘要

目的: 本文旨在分析病毒感染后引起的葡萄膜炎患者的临床特点及治疗方案。方法: 收治1例经房水病原微生物宏基因组检测出病毒的葡萄膜炎患者, 结合该患者情况及相关文献进行讨论与治疗。结果: 患者经人免疫球蛋白及静脉激素冲击治疗后葡萄膜炎的症状迅速缓解, 病情好转后出院。随访2个月, 病情稳定, 视力恢复良好。结论: 葡萄膜炎是眼科常见的致盲性眼病, 病毒感染是其重要原因。对于其引起的葡萄膜炎病人要做到早期明确诊断、个性化治疗以提升患者视力, 改善疾病预后。

关键词

病毒, 人免疫球蛋白, 葡萄膜炎, 病例报告

A Case of Uveitis after Viral Infection

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Received: Mar. 12th, 2025; accepted: Apr. 12th, 2025; published: Apr. 21st, 2025

Abstract

Objective: This paper aims to analyze the clinical characteristics and treatment plans of patients with uveitis caused by viral infection. **Methods:** One patient with uveitis, in whom viruses were detected by metagenomic testing of the aqueous humor for pathogenic microorganisms, was admitted and treated. The patient's condition was discussed in combination with relevant literature. **Results:** After treatment with human immunoglobulin and intravenous corticosteroid pulse therapy, the symptoms of uveitis in the patient rapidly relieved, and the patient was discharged after the condition improved. After 2 months of follow-up, the condition was stable, and the visual acuity recovered well. **Conclusion:** Uveitis is a common blinding eye disease in ophthalmology, and viral infection is

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文章引用: 万相宏, 米雪松. 病毒感染后葡萄膜炎一例[J]. 亚洲急诊医学病例研究, 2025, 13(2): 140-145.
DOI: 10.12677/acrem.2025.132022

an important cause of it. For patients with uveitis caused by viral infection, early and definite diagnosis and personalized treatment should be carried out to improve the visual function of patients and the prognosis of the disease.

Keywords

Viruses, Human Immunoglobulin, Uveitis, Case Report

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1. 研究背景

葡萄膜炎是眼科常见疾病,是主要的致盲原因之一,全球约有 10%~25%的盲人由其导致[1]。我国葡萄膜炎患者超过 300 万,发病率呈上升趋势[2]。其发病机制复杂,涉及感染、免疫失衡及遗传易感性等多因素交互作用。根据病因分类,感染性葡萄膜炎占比约为 30%,其中单纯疱疹病毒(HSV)和水痘-带状疱疹病毒(VZV)是最常见的病原体[3],除此之外还有许多由于病毒感染引起的葡萄膜炎。新型冠状病毒感染常引起呼吸道症状[4],但有研究表明其也能引起一系列眼部疾病,在临床表现中眼前段的症状如结膜炎是较为常见的症状[5],而与其相关的后段病变的报道较为稀少,但眼后段病变对患者的视力影响更显著,治疗方案也更为复杂,临床意义不容忽视。

2. 临床资料

患者,男,26岁,因“左眼视力下降1月余”入我院。患者1月前感染“新冠病毒”。1、眼科专科检查:右眼裸眼视力0.5,非接触眼压12.3 mmHg,结膜充血(++),角膜透明,KP(-),前房中深,房水清,房闪(-),虹膜纹理清,瞳孔缘可见散在灰白色半透明结节,瞳孔欠圆,直径约3.0 mm,对光反射存在,晶状体透明,玻璃体混浊(++),视盘边界清,色可,盘周可见近视萎缩弧,C/D $\approx$ 0.3,A:V $\approx$ 2:3血管走行可,视网膜平伏,豹纹状眼底改变,黄斑中心凹反光清,未见明显出血或渗出灶;左眼裸眼视力0.25,非接触眼压23.4 mmHg,结膜充血(++),角膜透明,KP(-),前房中深,房水清,房闪(-),虹膜纹理清,瞳孔缘可见散在灰白色半透明结节,6点及8点方向瞳孔粘连,直径约3.0 mm,对光反射存在,晶状体表面可见色素粘连,晶状体透明,玻璃体混浊(++++) ,眼底窥不清(见图1)。2、辅助检查:眼部B超:双眼玻璃体明显混浊(见图2)。眼底荧光血管造影:左眼屈光间质混浊,网膜成像模糊,仅隐约见视盘轮廓及大血管纹理,随造影时间延长隐约见管壁荧光着染,晚期网膜呈弥散性强荧光。右网膜血管荧光充盈时间大致正常,黄斑毛细血管拱环成像不清,随造影时间延长网膜小血管管壁荧光渗漏、着染,以中周至周边网膜较显著。右颞侧周边网膜见斑片状低荧光灶(色素沉着),环以强荧光条带,至晚期形态、范围未见明显改变(见图3)。3、入院诊断:双眼全葡萄膜炎。4、入院后完善相关检查:实验室检查示:红细胞沉降率(ESR)77 mm/h;免疫球蛋白+补体7项:免疫球蛋白IgA 4.35g/L,免疫球蛋白IgG 24.01 g/L, κ -免疫球蛋白轻链 7.04 g/L, λ -免疫球蛋白轻链 3.82 g/L;余未见明显异常。排除感染因素后进一步抽取房水,房水病原微生物宏基因组检测示:新型冠状病毒(+).排除激素使用相关禁忌症,予以20 g人免疫球蛋白(PH4)联合500 mg甲泼尼龙静脉冲击治疗,常规局部滴眼降眼压、散瞳、抗炎等治疗,并予以补钾、补钙、护胃等防治激素的不良反应,加用口服抗病毒药物帕罗韦德。经治疗患者眼部情况前明显好转,眼压正常,用药同前,激素减量至60 mg

的醋酸泼尼松片口服，并办理出院。出院后患者门诊复诊，右眼裸眼视力 0.8，左眼裸眼视力 0.6；非接触眼压右眼 15.4 mmHg，左眼 18.6 mmHg；角膜透明，KP(-)，左眼陈旧性瞳孔粘连，虹膜结节(-)，对光反射灵敏，晶体透明(见图 4)。眼部 B 超：双眼玻璃体轻度混浊(见图 5)。FFA：左眼屈光间质混浊已较前明显改善，右颞下、下方周边网膜见散在斑片状强荧光，右颞侧周边网膜见斑片状低荧光灶(色素沉着)，环以强荧光条带，形态、范围均与之前检查相同，末梢血管至晚期荧光渗漏较前显著消退。左黄斑颞侧中周部网膜见片状低荧光灶，双脉络膜血管纹理尚清晰，涡静脉壶腹部显影正常，余网膜未见明显异常荧光像(见图 6)。

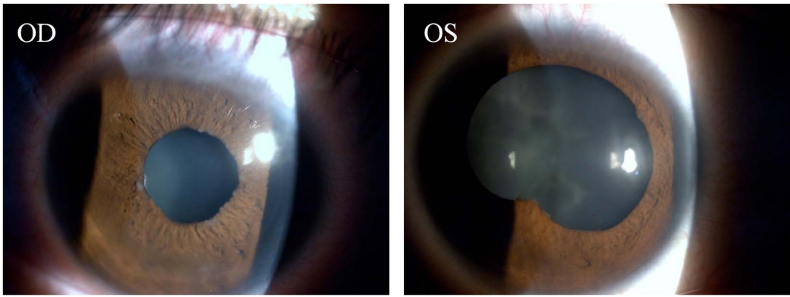


Figure 1. Photograph of the anterior segment of both eyes (Before treatment)
图 1. 双眼前节照片(治疗前)

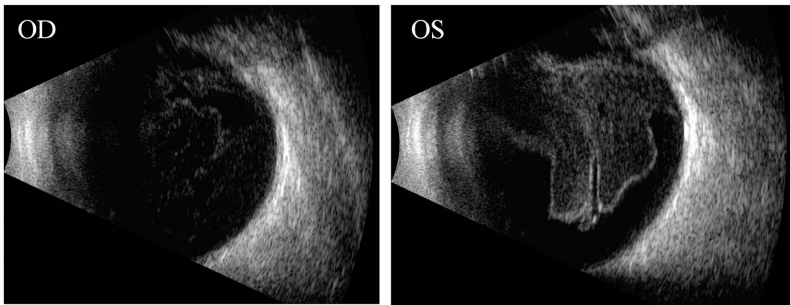


Figure 2. B-scan image of both eyes (Before treatment)
图 2. 双眼 b 超(治疗前)

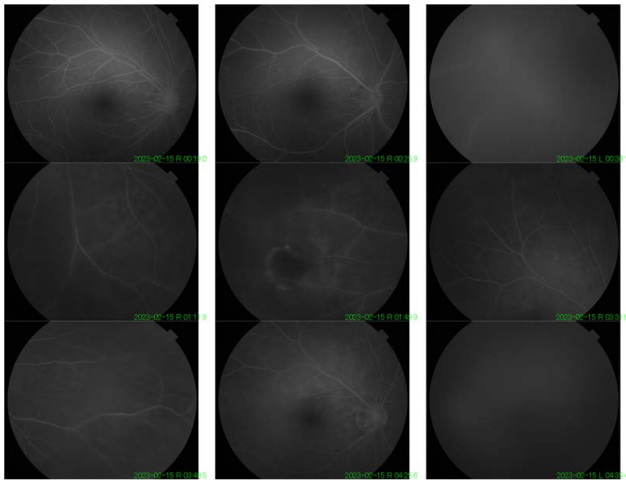


Figure 3. Fundus fluorescein angiography in both eyes (Before treatment)
图 3. 双眼荧光素眼底血管造影(治疗前)



Figure 4. Photograph of the anterior segment of both eyes (After treatment)

图 4. 双眼前节照片(治疗后)

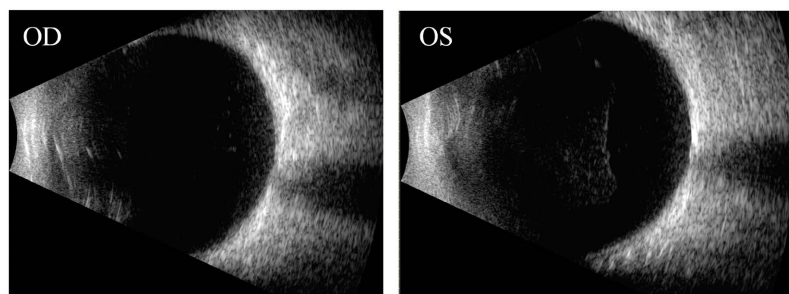


Figure 5. B-scan image of both eyes (After treatment)

图 5. 双眼 b 超(治疗后)

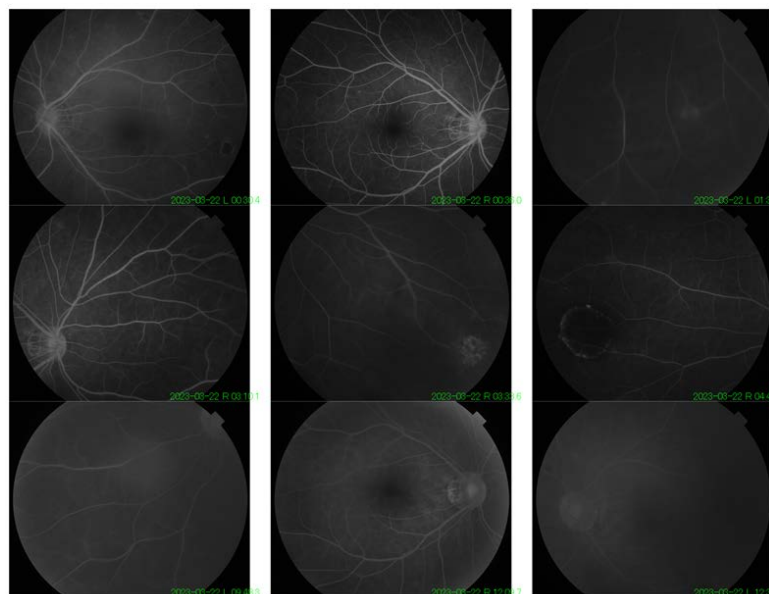


Figure 6. Fundus fluorescein angiography in both eyes (After treatment)

图 6. 双眼眼底荧光素钠造影(治疗后)

3. 讨论

由病毒感染引起的眼部疾病可包含从前段到后段的诸多疾病,例如结膜炎、巩膜炎、葡萄膜炎、内源性眼内炎等[5]。另外,角膜移植排斥、视网膜动脉和静脉闭塞、非动脉炎性缺血性视神经病变、青光眼、神经和眼眶后遗症等疾病也有报道[6][7],临床表现更是复杂多样,这给眼科相关疾病的诊断与鉴别

诊断带来了一定的挑战。因此,在有上呼吸道感染病史的每一位新发现的葡萄膜炎病人都有新冠病毒感染的可能性,对此应进行全面的病史询问和辅助检查以明确具体病因。

目前,病毒感染与葡萄膜炎的关系尚未完全阐明。据报道,在1个月至两年的多个时间段内,患有COVID-19的患者出现新诊断葡萄膜炎的风险更高(风险比1.18, 95% CI 1.03~1.34) [8]。其可能通过多种机制引发葡萄膜炎,在感染后可能出现“高炎症期”,特征是过度的免疫反应,即细胞因子风暴,进而表现为免疫系统的异常激活,这种不受控制免疫反应可能导致葡萄膜炎,尤其是全身免疫被激活的患者[9]-[11]。除此之外,病毒也可以直接通过血管紧张素转换酶-2 (ACE-2)和跨膜丝氨酸蛋白酶 2 (TMPRSS2)受体感染细胞,该受体也存在于角膜上皮和结膜上皮细胞中[12]。因此眼前段表现可以是直接感染而引起。在葡萄膜炎中,前葡萄膜炎较为常见,通常病情较轻,易于控制与治疗;而中后段的葡萄膜炎病程更复杂,需要更久的治疗时间与更复杂的治疗方案。此外,也有研究表明病毒感染会让静止期的葡萄膜炎复发[13]。

在本病例中,结合患者病史,初步排除感染性葡萄膜炎后第一时间从患者眼内容物检测出新冠病毒,及时明确诊断。在排除大剂量激素冲击禁忌症后静脉使用激素治疗,并在治疗早期根据患者情况加用人免疫球蛋白(PH4)治疗,患者视力恢复良好,并且能够减少激素用量减轻副作用,取得了良好的治疗效果。因而暂未采用免疫抑制剂治疗。当传统治疗方案(睫状肌麻痹剂、糖皮质激素、非甾体抗炎药)治疗效果不尽人意,患者症状仍反复发作时可加用免疫抑制剂环磷酰胺、环孢素、甲氨蝶呤、吗替麦考酚酯(MMF)等[14]。手术治疗主要针对葡萄膜炎的并发症包括并发性白内障、视网膜脱离、药物难以控制的青光眼等[15]。此外抗病毒药物需穿透血-眼屏障,而糖皮质激素的使用虽能抑制炎症,却可能加剧DNA病毒复制,形成治疗矛盾。对于COVID-19相关葡萄膜炎,还需警惕合并高凝状态引发的视网膜血管阻塞等并发症[16]。葡萄膜炎活动期的患者应注意休息,防止二次感染。在对病人进行治疗时应让其充分了解治疗的长期性与复杂性,充分考虑药物的不良反应,根据药物效果反馈及时调整用法用量,定制更加个性化的治疗方案。

临床特征方面,不同病毒感染呈现异质性表现:HSV-1常导致急性视网膜坏死综合征(ARN),以视网膜动脉炎、玻璃体混浊为特征;VZV感染多引发肉芽肿性前葡萄膜炎;而COVID-19相关葡萄膜炎则以非肉芽肿性前葡萄膜炎或全葡萄膜炎为主,可伴发视盘水肿及视网膜血管渗漏,且发病时间多集中于感染后1~4周[17][18],但目前主要还是依靠眼内容物的微生物学检测明确具体病毒感染类型。对于眼科首诊的感染新冠后出现视力下降的患者,需警惕病毒感染引起的葡萄膜炎可能,须尽早结合眼内容物检测、影像学检查及血液检测等手段做到诊断明确。其次在临床中应做到“早诊断、早治疗”的原则并且根据患者具体情况制定个性化治疗方案,尤其是对症状严重,视力显著下降的患者,需尽早治疗避免出现并发症及永久性视力损伤。

4. 结论

病毒感染是引起葡萄膜炎的常见病因,其致病机制复杂且具有异质性。COVID-19等病毒的出现进一步增加了临床挑战。病毒性葡萄膜炎的诊疗需结合影像学、病原学、免疫学等多种学科明确诊断,强调个体化制定治疗方案以降低致盲风险改善预后。

基金项目

广东省自然科学基金项目(2021A1515012473)。

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