

儿童隐匿性外伤性白内障1例合并文献复习

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摘 要

目的: 探讨儿童隐匿性外伤性白内障(指外伤史不明显、早期症状不典型且容易被忽视的外伤性白内障)的临床特点、诊断及治疗策略。方法: 报告1例9岁男童因“右眼视力下降1月”就诊, 经检查确诊为“外伤性白内障右眼”, 行“右眼白内障摘除 + 人工晶体(IOL)植入术”, 术后随访6个月, 并结合文献复习分析其诊疗要点。结果: 术后患儿右眼视力由手动/5 cm提升至0.8, 未发生严重并发症。结论: 对不明原因视力下降的儿童, 需警惕隐匿性外伤性白内障, 本病例的成功治疗凸显了对不明原因视力下降儿童进行早期、彻底检查和干预的临床重要性, 是预防严重弱视的有效途径。

关键词

儿童, 隐匿性, 外伤性白内障, 人工晶体

A Case of Occult Traumatic Cataract in a Child Combined with Literature Review

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Abstract

Objective: To investigate the clinical features, diagnosis, and treatment strategies of occult traumatic cataract in children (referring to traumatic cataracts with an inconspicuous trauma history, atypical

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early symptoms, and a tendency to be overlooked). **Methods:** A case of a 9-year-old boy who presented with “decreased vision in the right eye for one month” was reported. After examination, he was diagnosed with “traumatic cataract in the right eye” and underwent “cataract extraction with intraocular lens (IOL) implantation in the right eye.” The patient was followed up for 6 months postoperatively, and key diagnostic and treatment points were analyzed alongside a literature review. **Results:** Postoperatively, the visual acuity of the right eye improved from hand motion at 5 cm to 0.8, with no serious complications. **Conclusion:** For children with unexplained vision loss, occult traumatic cataract should be considered. The successful treatment of this case highlights the clinical importance of early and thorough examination and intervention in children with unexplained vision loss, serving as an effective approach to preventing severe amblyopia.

Keywords

Pediatric, Occult, Traumatic Cataract, Intraocular Lens (IOL)

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1. 背景

外伤性白内障是由于机械性或非机械性损伤作用于晶状体,使晶状体发生混浊,从而影响视力。是儿童获得性视力障碍的重要原因之一,儿童的外伤性白内障比起成人往往更加严重,而且由于视力发育尚未完善,其术后效果往往会更差[1]。与成人不同,儿童眼外伤病史常不明确,尤其是轻微外伤后症状隐匿,易被患儿及家长忽视,导致延迟就诊,临床上易漏诊或误诊为先天性白内障或其他眼病。此外,儿童晶状体代谢活跃,外伤后白内障进展迅速,若未及时干预,可能引发形觉剥夺性弱视,甚至永久性视力损害。本文报道1例9岁隐匿性外伤性白内障患儿,经详细问诊及检查确诊后行手术治疗,并结合文献分析其临床特点及管理要点,旨在提高临床医师对该病的认识,减少漏诊,优化治疗时机。

2. 病例资料

患儿,男,9岁,因“右眼视力下降1月”就诊。家长否认明确外伤史,但患儿回忆5月前在家中做雾化治疗时,不慎被注射器针头扎伤右眼,当时未觉不适,未就医。眼科查体:右眼视力手动/5 cm,矫正不提高,左眼视力0.5,矫正视力: $-2.25DS/-0.50DC \times 7^\circ = 1.0$,右眼眼压15 mmHg,左眼眼压16 mmHg。裂隙灯检查:右眼颞上方角膜可见全层斑翳,似伤道,颞上方前房稍浅,瞳孔圆,直径约3 mm,虹膜可见穿通孔,晶状体皮质全白色混浊,散瞳后见晶体前囊膜破裂,皮质膨胀外溢(图1),眼后节窥不清。左眼角膜透明,前房清,深度可,瞳孔圆,直径约3 mm,对光反射灵敏,晶体透明,玻璃体透明,眼底视盘边界清晰,色红润, C/D=0.3,动静脉比例正常,黄斑中心凹反射存在,视网膜在位。眼科B超检查:双眼玻璃体未见明显异常,无视网膜脱离。扫描激光眼底检查(SLO):右眼底窥不清,左眼未见明显异常(图2)。眼轴:右眼24.55 mm,左眼24.85 mm。诊断为“外伤性白内障右眼”。术前评估患儿右眼视力已低于0.3,影响学习,且长期形觉剥夺可能导致不可逆弱视,入院后完善血常规、血生化等未见明显异常,在全身麻醉下行“右眼白内障摘除+人工晶体植入术”。术中见晶状体前囊膜破裂,部分皮质膨胀外溢,晶体后囊膜完整,右眼植入ZMT225: +19D双焦散光人工晶体一枚,单眼包扎,安返病房。术后给予局部抗生素及糖皮质激素滴眼液,术后第一天右眼视力0.5,眼压16 mmHg,其余眼科查体同前。患儿出院后进行精细视觉训练,遮盖左眼2小时/天。术后1月复查,右眼视力0.8,矫正视力+0.25DS/-0.50DC $\times 166^\circ$

= 1.0, 眼压 15 mmHg, 角膜切口闭合好, 颞上方角膜可见全层斑翳, 前房清, 深度可, 瞳孔圆, 直径约 3 mm, 人工晶体在位居中(图 3), 眼底视盘边界清晰, 色红润, 视网膜平伏。术后 3 个月复查, 右眼视力 0.8, 矫正视力 1.0。术后 6 个月复查, 右眼视力稳定, 无后发性白内障、青光眼等并发症。

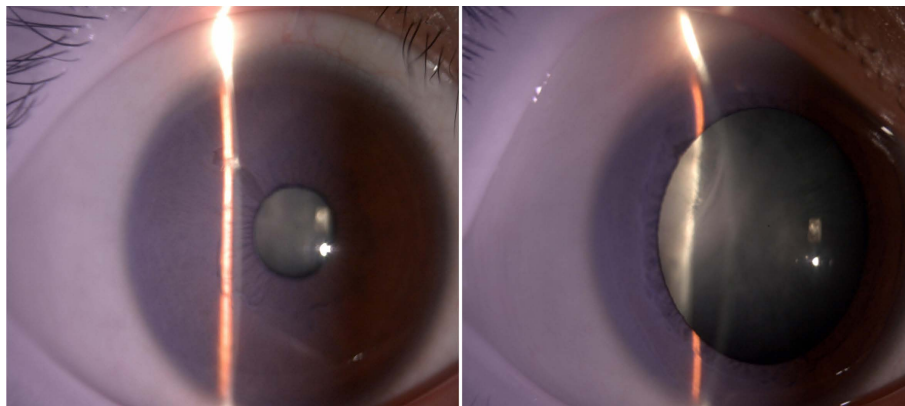


Figure 1. Anterior segment photographs of the right eye before and after pupillary dilation

图 1. 散瞳前后右眼前段照相

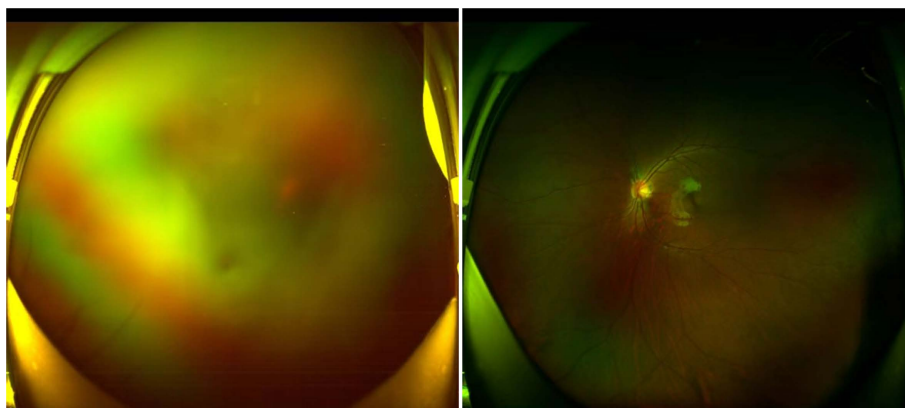


Figure 2. Scanning laser ophthalmoscopy (SLO) images of both eyes

图 2. 双眼扫描激光眼底(SLO)检查

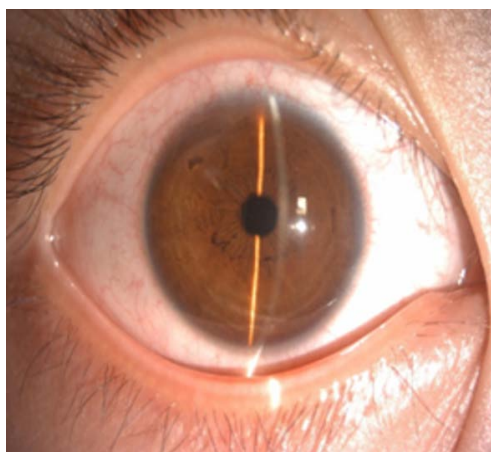


Figure 3. Anterior segment photograph of the right eye at 1 month postoperatively

图 3. 术后 1 月右眼前段照相

3. 讨论

眼外伤是剥夺性弱视、双侧低视力、非先天性单眼失明和长期获得性视力障碍的主要原因之一[2]。全世界有 1800 万人因创伤而单眼失明。受伤在儿童时期尤为常见, 儿童眼外伤每年在世界范围的人数已超过 300 万[3], 其中有 25 万儿童因眼外伤致盲[4]。儿童具有好动活泼、好奇心强、缺乏自我保护意识、身体协调能力差等特点, 因此眼外伤的高发人群多为儿童。在发展中国家, 近 50% 的眼外伤患者发生外伤性白内障[5], 好发于儿童[6]。流行病学研究显示, 男女儿童外伤性白内障的比例在 1.8:1 至 5.4:1 之间[3], 是目前儿童单眼盲的主要因素[7]。儿童隐匿性外伤性白内障因其病史隐匿、早期症状不典型, 容易被家长和临床医生忽视。外伤初期晶状体混浊可能不明显, 对视力的影响较小, 患儿的日常活动未受到显著干扰, 家长难以察觉异常。部分外伤性白内障的发展具有滞后性, 外伤后并非立即出现明显的晶状体混浊, 而是经过一段时间后才逐渐显现, 这也增加了早期发现的难度。本研究结合病例特点, 重点围绕“隐匿性”和“儿童”这两个核心特征进行文献复习和分析。

儿童眼外伤病史常不明确, 尤其是轻微外伤后症状隐匿, 这与儿童群体的特殊性密切相关。学龄期儿童虽具备一定表达能力, 但仍可能因恐惧责备、记忆模糊或认知局限而无法准确描述受伤经过。本病例中, 患儿在多次问诊后才回忆起 5 月前的针扎伤史, 充分体现了这一特点。针对不同年龄段儿童, 建议采用差异化沟通策略: 对学龄前儿童通过游戏、绘画等非语言方式引导, 观察其是否回避触摸或注视特定物体。对学龄期儿童可通过模型演示、绘画等非威胁性方式引导回忆; 对青少年可直接但温和地询问, 确保隐私, 明确保密原则以减少其顾虑。同时询问家长时应关注细微行为变化, 如近期畏光、揉眼频率增加、头位异常等非特异性表现, 而非直接追问明显外伤事件。建立良好的医患信任关系是获取真实病史的关键。Kovach 等[8]一项病例报告记录了一名 3 岁男童在遭受蜂群袭击后, 右眼角膜中发现并取出两根毒刺, 随后出现了角膜上皮缺损、严重水肿、继发性细菌性角膜炎以及虹膜异色症等并发症。尽管通过手术移除毒刺并辅以局部抗生素和类固醇治疗后, 角膜水肿在 3 天内得到显著改善, 但该患儿最终仍遗留永久性中央角膜瘢痕, 并在与毒刺穿透损伤相对应的位置形成了局部创伤性前囊下白内障。与本病例类似均体现了损伤发展的隐匿特性。将本病例与文献报道的类似案例对比发现若干共同特征: 1) 致伤物多为日常用品如铅笔[9]、玩具或动物攻击[8] [10]等; 2) 伤后至就诊时间间隔较长(1~6 个月); 3) 初期症状轻微或缺如; 4) 首诊时常已形成明显白内障。然而, 本病例的独特之处在于: 患儿角膜全层斑翳和虹膜穿孔孔的位置提供了重要诊断线索, 这种微小但确切的体征在部分隐匿性外伤病例中可能缺失, 导致诊断更加困难。

儿童外伤性白内障的治疗需综合考虑年龄、眼轴长度、囊膜完整性等因素[11]-[13]。本病例成功实施囊袋内 IOL 植入, 得益于后囊膜的完整保留。对于更复杂的病例, 可能需要选择睫状沟固定或悬吊技术。有研究表明, 年龄在 1~5 岁的 51.21% 的外伤性白内障的患者, 6~10 岁 26.02% 的患者, 手术之后需要接受弱视训练[14]。对于儿童外伤性白内障, 及时恢复双眼视功能, 然后进行一定的弱视训练, 大多数患者能够获得很好的视力。所以对于年幼的孩子密切随访尤为重要。儿童视觉发育具有时效性, 3~12 岁是儿童视力发育的敏感时期, 如发生外伤性白内障没有及时进行手术, 错过关键期后弱视治疗效果会大打折扣, 对患儿的视力恢复将造成不可修复的伤害, 因此, 早期、彻底检查和干预是预防严重弱视的有效途径[15]。

基于本病例经验及文献复习, 我们提出以下针对疑似隐匿性外伤性白内障患儿的临床评估路径: 针对性沟通策略是发现隐匿病史的首要环节; 全面细致的眼部检查至关重要, 应特别关注微小体征; 对高度怀疑但无明确证据的病例, 应合理利用影像学检查并建立定期随访机制, 一旦确诊, 应及时手术干预并结合术后综合管理。

大多数研究结果表明有 55%~69% 的外伤性白内障发生在家中, 其次是户外运动以及休闲活动[4][16][17]。儿童的视觉系统尚未完全发育, 特别容易受到外伤的不利影响, 需要更多的监督[18][19]。要提高家长的防范意识, 通过健康教育, 使家长了解儿童眼部外伤的危害性, 引导家长在儿童发生眼部外伤后, 即使外在症状不明显, 也应及时带其到医院进行眼部检查, 做到早发现、早治疗。同时, 要教育儿童在玩耍时注意保护眼部, 避免剧烈打闹和危险行为。

综上所述, 儿童隐匿性外伤性白内障因其发病隐匿、早期症状不典型, 诊断存在挑战。本病例的成功治疗凸显了对不明原因视力下降儿童进行早期、彻底检查和干预的临床重要性, 是预防严重弱视的有效途径。采用针对儿童的特殊沟通技巧详细的询问病史、全面的眼部检查以及高度的警惕性是避免漏诊的关键。治疗方面, 应根据患儿具体情况制定个体化手术方案, 并重视术后长期的屈光矫正和弱视训练。同时, 加强儿童眼安全教育和预防措施也至关重要。

声 明

该病例报道已取得患者知情同意。

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