

# 先天性泪道阻塞探通治疗的临床体会

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## Clinical experience in probing therapy for congenital nasolacrimal duct obstruction

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### Abstract

• **AIM:** To observe the treatment efficacy of 1-6 months age infantile congenital nasolacrimal duct obstruction (CNLDO) and dacryocystitis by probing of lacrimal passage and the lacrimal secondary adhesion occurrence. And the children were divided into 1-3 months age group and 3-6 months age group, to compare the efficacy and the incidence of adhesion to determine the best opportunity of probing treatment.

• **METHODS:** Totally 288 cases of 1-6 months age with CNLDO and dacryocystitis were randomly selected from June 2007 to December 2011 in our hospital, including 150 male cases, 138 female cases, 230 unilateral cases and 58 bilateral cases. The age distribution was 30-180 days, an average of  $86.66 \pm 40.55$  days. The children were divided into 2 groups according to age: first group of 1-3 months age, 173 cases (observation group); second group of 3-6 months age, 115 cases (control group). Treatment methods of two groups were the same, with 1% tetracaine for topical anesthesia of the punctum, appropriate expansion of the inferior lacrimal punctum, routine operation of irrigation and probing of the lacrimal passage using round-head flushing probe with external diameter of 0.5mm or 0.6mm and measuring hole, but the probe's included angle with the horizontal line maintained in  $75^\circ - 85^\circ$  after its entering into the lacrimal sac, and the probe retained for 30-60 minutes to dilate the lacrimal duct after successful probing of the lacrimal

passage. The children took prone position for removal of the probes and the lacrimal residual secretion and cell debris were rinsed as completely as possible. The lacrimal adhesion was recorded in the process of probing of lacrimal passage. The lacrimal passage was rinsed again 4-6 days after operation to observe and consolidate the curative effect. Followed up for 3-6 months, the two groups were compared with curative effect and lacrimal secondary adhesions.

• **RESULTS:** The cure rate of first group was 98.1%, lacrimal secondary adhesion rate was 29.3%. The cure rate of second group was 82.6%, lacrimal secondary adhesion rate reached 70.3%. Through statistical analysis, the effect of two groups had significant difference, 1-3 months age group was significantly better than 3-6 months age group; the former's lacrimal secondary adhesion rate was lower than the latter's.

• **CONCLUSION:** For CNLDO and dacryocystitis, the treatment effect of probing is very good in advance to 1-3 months age. The longer condition, the more lacrimal secondary adhesion opportunity, the lower efficacy. Previous claim was lacrimal passage probing after 6 months age. Through clinical observation, the author thinks that 1-3 months age is the optimal probing time, suitable for wide popularization and application in basic level hospital.

• **KEYWORDS:** infant; congenital nasolacrimal duct obstruction; dacryocystitis; probing of lacrimal passage; lacrimal adhesion

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### 摘要

**目的:** 观察 1~6 月龄先天性泪道阻塞并泪囊炎的婴幼儿泪道探通治疗效果及泪道继发性粘连发生情况,按年龄分为 1~3 月龄组和 3~6 月龄组,对疗效及粘连发生率进行比较总结,确定最佳探通治疗时机。

**方法:** 随机选取 2007-06/2011-12 期间来我院就诊的 1~6 月龄先天性泪道阻塞并泪囊炎患儿 288 例,其中男 150 例,女 138 例,单侧 230 例,双侧 58 例,年龄 30~180(平均  $86.66 \pm 40.55$ ) 天龄。将患儿按照年龄段分为 2 组:第 1 组(观察组) 1~3 月龄,173 例;第 2 组(对照组) 3~6 月龄,115 例。两组治疗方法相同,用 10g/L 丁卡因表面麻醉泪小点,适当扩张下泪小点,用外径 0.5mm 或 0.6mm 带侧

孔的圆头冲洗式探针常规操作冲洗探通泪道,但是探针进入泪囊后与水平线夹角应保持 $75^{\circ} \sim 85^{\circ}$ ,探通泪道成功后,将探针留置在泪道30~60min扩张泪道。拔除探针时患儿采取俯卧位,尽量冲净泪道残留分泌物及细胞碎屑。探通过程中记录泪道粘连情况,术后4~6d复诊冲洗泪道,观察、巩固疗效。随诊3~6mo,对两组疗效及泪道出现继发性粘连情况进行比较。

**结果:**第1组治愈率98.1%,泪道继发性粘连率29.3%。第2组治愈率82.6%,泪道继发性粘连率高达70.3%。通过统计学分析,两组疗效具有显著性差异,1~3月龄组疗效明显好于3~6月龄组;前者泪道继发性粘连发生率也明显低于后者。

**结论:**对于先天性泪道阻塞并泪囊炎的患儿提前到1~3mo内进行探通治疗效果很好,病情时间越长,泪道继发性粘连的机会愈多,疗效降低。以往多主张6月龄后再行泪道探通,通过临床观察,我们认为在1~3月龄内为最佳探通时间,适合在基层医院推广应用。

**关键词:**婴幼儿;先天性泪道阻塞;泪囊炎;泪道探通;泪道粘连

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## 0 引言

先天性泪道阻塞(congenital nasolacrimal duct obstruction, CNLDO)一种发生在新生儿的常见眼病<sup>[1]</sup>。据国内报道,婴幼儿的发病率约为2%~4%<sup>[2]</sup>,也有报道1.75%~6%<sup>[3]</sup>。多因鼻泪管下端出口处Hasner瓣膜未开放或上皮细胞碎屑及黏稠分泌物阻塞所致<sup>[4]</sup>,极少数是因鼻泪管骨性管道发育不全所致<sup>[5]</sup>。临床上以黏脓性分泌物、溢泪、溢脓为主要表现。新生儿的Hasner瓣膜一般在出生后4~6wk左右可能会自行开放<sup>[4]</sup>,否则容易导致泪囊炎、继发性泪道粘连、结膜炎、甚至眼睑及角膜感染。现对我院曾诊治的部分先天性泪道阻塞并泪囊炎患儿进行回顾性分析,报告如下。

## 1 对象和方法

**1.1 对象** 随机选取2007-06/2011-12来我院检查并确诊的先天性泪道阻塞并泪囊炎1~6月龄患儿288例346眼。其中男150例180眼,女138例166眼,单侧230例,双侧58例,年龄30~180(平均 $86.66 \pm 40.55$ )天龄。经过按摩泪囊或冲洗泪道后有脓性分泌物从泪点溢出,排除有泪小点、泪小管阻塞及外伤造成的泪道阻塞等情况。将患儿按照年龄段分为2组:第1组(观察组)1~3月龄(30~90d)173例;第2组(对照组)3~6月龄(91~180d)115例。两组治疗方法相同,通过对患儿进行泪道冲洗、探通,联合局部点抗生素眼药水,治疗后随诊观察3~6mo。对两组疗效及泪道继发性粘连发生情况进行比较。

**1.2 方法** 术前向患儿家长说明泪道探通的风险及注意事项,并签订知情同意书。将患儿平躺在治疗床上,由2~3

名家长或助手固定患儿头部、肩部及四肢,用10g/L丁卡因眼药水表面麻醉泪点,点1~2次,用泪小点扩张器适当扩大下泪小点,采用外径0.5mm或0.6mm的圆头冲洗式泪道探针,从下泪点垂直进针1.0~1.5mm,向外下方拉直泪小管后转为水平方向沿着泪小管向内眦侧旋转进针,当探针与鼻侧骨壁接触后,轻抵探针缓慢转向上方,使探针与水平夹角约成 $75^{\circ} \sim 85^{\circ}$ <sup>[6]</sup>缓慢稍向后下旋转滑入,切勿强行插入,避免造成假道,当探针到达阻塞部位时稍回退约1~3mm,再向泪囊注入适量的稀释的抗生素溶液(5g/L庆大霉素或5g/L头孢唑啉钠),回抽被稀释的脓性分泌物后排空注射器,再次注入上述溶液,反复注吸数次,直至回抽液体变清时,即可探通泪道阻塞部,并记录粘连及阻塞部位,当探针到达鼻腔时有落空感,此时冲洗泪道通畅无阻力,患儿咽部有液体流出时会有吞咽动作,有时液体会从鼻腔流出,为了防止患儿呛咳、窒息,发现探通成功后应立即停止冲洗,留置探针30~60min,以达到扩张泪道之目的。拔除探针时患儿采取俯卧位,趴在家长的一侧或双侧大腿上,另一助手固定患儿头部,将患儿头部轻轻托起,使患儿鼻孔向下,面部略向前仰,尽可能多注入些上述冲洗液,彻底冲净泪道内炎性分泌物及细胞残屑,边冲洗边缓慢退出探针,观察鼻腔分泌物及出血情况。术后点抗生素眼水,4~6d复查,观察治疗效果,根据复诊冲洗泪道的阻力及返流情况,必要时行2次泪道探通+扩张+冲洗,3次泪道探通治疗不成功者视为未愈。视病情可将探针外径逐渐增加至0.7mm。随诊观察3~6mo,并记录治疗结果。

统计学分析:采用统计学软件SPSS 18.0。采用 $\chi^2$ 检验。 $P < 0.05$ 为差异有统计学意义。

## 2 结果

**评价标准:**治愈:治疗后无分泌物及溢泪,冲洗泪道畅通者视为治愈;未愈:治疗后仍溢泪,伴有或不伴脓性/黏性分泌物,冲洗泪道不通或部分液体返流者视为未愈。探通时除鼻泪管下端出口处Hasner瓣阻塞外,又发现泪囊或鼻泪管有1处或多处粘连者视为泪道继发性粘连并发症,粘连多为丝状、条索状、网状或膜状,泪道部分或完全粘连,以前者多见。对患儿治疗后回访3~6mo,观察治疗效果。第1组共173例208眼,治愈204眼,治愈率高达98.1%;61眼有不同程度泪道继发性粘连,粘连发生率约29.3%。2例患儿因双眼骨性鼻泪管发育异常未能探通,后转外院治疗,结果不明。第2组患儿共115例138眼,治愈114眼,治愈率达82.6%;97眼泪道有不同程度粘连,粘连发生率约70.3%。其中也有1例患儿因双眼骨性鼻泪管发育异常,探通两次均未成功,后建议到上级医院诊治;患儿7例14眼因合并内眦赘皮、倒睫、长期慢性结膜炎、角膜炎、泪囊炎,导致泪囊及鼻泪管多处粘连,探通后反复阻塞而失败;另外患儿8例8眼因鼻泪管狭窄伴泪囊炎,泪道反复粘连,分别冲洗+探通3次,观察到6月龄时仍无好转,建议行泪道激光浚通治疗。对2组治愈眼数、泪道继发性粘连眼数进行记录、比较,两组治愈率均在80%以上,1~3月龄治愈率98.1%,3~6月龄治愈率

82.6%。虽然都有着较高的治愈率,但是1~3月龄患儿疗效明显好于3~6月龄患儿疗效,差异具有显著性( $\chi^2 = 26.69, P < 0.01$ )。1~3月龄泪道继发性粘连率29.3%,3~6月龄高达70.3%,第1组粘连发生率明显少于第2组,两组也具有显著差异性( $\chi^2 = 56.10, P < 0.01$ )。

### 3 讨论

先天性泪道阻塞多因为鼻泪管下口的Hasner瓣膜未于出生前自然开放,或是部分鼻泪管狭窄处被上皮细胞屑及黏稠分泌物阻塞所致,导致泪液排除受阻,出现溢泪、溢脓等症状。若长期不对其进行处理会导致泪囊内泪液滞留、细菌滋生,并引起眼睑、结膜甚至角膜的炎症。临床多主张6月龄以后对先天性泪道阻塞进行探通治疗<sup>[4]</sup>,部分医生建议提前到2~6mo探通<sup>[7]</sup>,通过作者多年的治疗与观察,以及本次系统性回顾分析,对不同年龄组治疗结果及继发性泪道粘连的发生率进行比较,1~3月龄泪道探通治愈率高达98.1%,泪道继发性粘连的发生率也明显低于3~6月龄的发生率;1mo内的新生儿因泪道发育还没有完全停止,所以我们认为新生儿不适合泪道探通,但可以行泪道冲洗、注药。新生儿皮肤娇嫩,冲洗时要轻柔。

综上所述,先天性泪道阻塞合并泪囊炎患儿在1~3月龄时是比较理想的探通时机。但是先天性泪道阻塞发病均出现在婴幼儿期,家长对泪道探通治疗普遍存在恐惧心理,患儿的哭闹又加重了家长的担心;多数眼科医生又主张保守治疗,同时也担心治疗中的安全问题及医疗纠纷

等潜在因素,所以许多患儿未能及时得到有效的探通治疗,导致泪道一处或多处炎症粘连,给以后的有效治疗增加困难。我们采用俯卧位边拔探针边冲洗泪道,可尽量多注入液体,彻底冲净泪道的炎性分泌物,不至于流入咽喉及口腔,避免了患儿呛咳、窒息和吸入药液的危险,增加了冲洗的安全性,同时也减小了药物进入患儿体内的副作用。在行泪道探通前应告知患儿家长治疗的风险及注意事项,并取得家长的理解和配合,同时签订知情同意书。规范操作流程也需要同道的共同探讨,尽快制定出统一的合理的科学的操作规范,并在基层医院广泛地推广应用,使众多的先天性泪道阻塞患儿得到及时有效的治疗。

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