

·论著·

# 硅胶袋整复与局部压迫治疗巨型脐膨出的疗效分析



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**【摘要】 目的** 探讨硅胶袋整复与局部压迫治疗新生儿巨型脐膨出的疗效。**方法** 回顾性分析青岛市妇女儿童医院 2010 年 10 月至 2017 年 4 月收治的 16 例新生儿巨型脐膨出患儿的病例资料,在保护羊膜囊完整的同时,将膨出内容物纳入无菌硅胶袋,进一步将无菌硅胶袋与腹壁缺损边缘皮肤缝合,逐渐挤压收紧硅胶袋,1~2 个月去除硅胶袋,改用自制半球形纱布袋加压包扎,创面用湿润烧伤膏外敷,观察治疗效果。**结果** 16 例巨型脐膨出患儿中,12 例膨出物逐渐完全还纳,腹壁逐渐生长直至缺损处完全愈合,形成接近自然脐部形态。1 例于生后 2 个月行“巨型脐膨出修补术+膈疝修补术”,3 例未完全回纳,但创面完全上皮化,2~3 年后行脐部修补整形术。所有病例随访 5 个月至 6 年,患儿脐部外观均满意,发育良好,无并发症和死亡病例。**结论** 对于巨型脐膨出患儿采取保留羊膜囊、硅胶袋整复、局部压迫治疗及择期行脐部修补整形术的方法,能够提高新生儿巨型脐膨出的治愈率,降低病死率。

**【关键词】** 脐膨出; 新生儿; 硅胶袋整复; 局部压迫

**Clinical experience for giant neonatal omphalocele adopting with silica bag plus local pressing.** Sun Jian<sup>1</sup>, Qi Yongbo<sup>1</sup>, Zhang Lei<sup>2</sup>, Gao Qiang<sup>1</sup>, Li Lianghui<sup>3</sup>, Lu Hongting<sup>4</sup>. 1. Department of Pediatric Surgery, Municipal Women & Children's Hospital, Qingdao, 266000, China; 2. Department of General Surgery, Affiliated Hospital, Qingdao University, Qingdao, 266000, China; 3. Maternal & Child Health Care of Family Planning Service Center, Qingdao 266000, China; 4. Department of Pediatric Surgery, Affiliated Hospital, Qingdao University, Qingdao 266000, China. Corresponding author: Lu Hongting, Email: luhongting@126.com

**【Abstract】 Objective** To explore the therapeutic efficacy of giant neonatal omphalocele adopting with silica bag plus local pressing. **Methods** A total of 16 cases of neonatal giant omphalocele were retrospectively analyzed from October 2010 to April 2017. For protecting the integrity of amniotic sac, sterile silica bag was used for wrapping protruding viscera and sutured with the edge of abdominal wall. Protruding viscera were gradually returned into abdominal cavity. Silica bag was extracted after 1-2 months. Then a semi-spherical gauze bag was adopted for pressure bandaging. MEBO cream was applied to observe the therapeutic efficacy. **Results** Among them, the protruding viscera of 12 cases were placed in abdominal cavity. Abdominal wall gradually healed like a natural umbilicus. Repairing of giant omphalocele and diaphragmatic hernia was performed for 1 case after 2 months. The protruding viscera of 3 cases were not fully returned. Yet wound became completely epithelialized. And omphalocele repair was conducted after 2-3 years. All cases was followed up for 5 months to 6 years. Umbilical regions of all cases showed satisfactory appearances. All developments were excellent and there was neither complication nor mortality. **Conclusion** For protecting the integrity of amniotic sac, reconstruction with silica bag plus local pressing and elective omphalocele repair are effective and efficacious. It may improve the cure rate and decrease the mortality for neonatal giant omphalocele.

**【Key words】** Omphalocele; Neonate; Reconstruction With Silica Bag; Local Pressing

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脐膨出是一种新生儿腹壁缺损的先天畸形,病情复杂,常并发多种畸形,病死率高,已严重威胁新生儿的健康<sup>[1]</sup>。据统计,脐膨出发生率为 1.16/10 000,病死率高达 52%,而巨大危重型脐膨出的病死率更是高达 67%<sup>[2,3]</sup>。近年来国外报道新生儿脐膨出的发

病率并没有降低,反而呈现上升趋势<sup>[4]</sup>。随着医学及相关学科的发展,对于脐膨出的认识及治疗都得到了不断的提高,其治疗方法繁多,不仅要求高治愈率,还应争取一期或在短期内完成治疗<sup>[5]</sup>。对于巨型脐膨出的治疗多采用Ⅱ期和分期整复修补术,也有人采用广泛游离腹膜及腹壁皮肤的方法行Ⅰ期修补术,但手术并发症多,且腹腔间隔综合征的发生率高,存活率低<sup>[6,7]</sup>。本研究自2010年10月至2017年4月收集青岛市妇女儿童医院收治的16例巨型脐膨出患儿的病例资料,采用保留羊膜囊硅胶袋整复与局部压迫治疗,取得较好的治疗效果,现报道如下。

## 材料与方法

### 一、临床资料

收集青岛市妇女儿童医院2010年10月至2017年4月收治的16例巨型脐膨出患儿的临床资料,其中男童10例,女童6例,年龄为生后5 min至48 h,体重1 800~4 500 g。所有患儿腹壁缺损直径在6 cm以上,最大直径10 cm。膨出物为肠管和肝、脾等内脏器官,表面囊膜透明,无破裂。1例合并左侧膈疝,其余15例均未发现有其它脏器发育异常情况。

### 二、手术方法

患儿取仰卧位,严格按照无菌原则,局部消毒,将部分膨出物还纳入腹腔,紧缩羊膜囊,结扎切除远端多余羊膜囊组织,将体外膨出脏器纳入无菌硅

胶袋,并与腹壁缺损皮缘处间断缝合,术后逐渐挤压收紧硅胶袋还纳肠管等脏器(图1至图3)。每日从硅胶袋顶端注入碘伏。一般术后1~2个月去除硅胶袋后,根据腹壁缺损大小及膨出物情况改用自制半球形纱布袋加压包扎(图4、图5),创面用湿润烧伤膏外敷,观察治疗效果。



图1 新生儿巨型脐膨出外观 图2 紧缩羊膜囊,结扎切除远端多余羊膜囊组织

Fig.1 Neonatal giant omphalocele Fig.2 Tightening amniotic sac and excising distal extra-amniotic sac

## 结果

16例巨型脐膨出患儿中,12例膨出物逐渐完全还纳,腹壁逐渐生长直至缺损处完全愈合形成接近自然脐部形态(图6)。1例合并膈疝的巨型脐膨出,在入院后按上述方法行“巨型脐膨出硅胶袋整复术”。术后2个月患儿膨出脏器完全还纳,在气管插管全身麻醉下行“巨型脐膨出Ⅱ期修补术+膈疝修补术”。3例巨型脐膨出患儿未完全回纳,但创面完全上皮化,2~3年后行脐部修补整形术。所有病例随访5个月至6年,脐部外观满意,发育良好,无并发症和死亡病例。



图3 硅胶袋整复,边缘缝合 图4 自制半球形纱布袋 图5 加压包扎,局部压迫 图6 愈合形成接近自然脐部形态  
Fig.3 Reconstruction with silica bag and suturing with edge of abdominal wall Fig.4 Semi-spherical gauze bag Fig.5 Local pressing Fig.6 Healing naturally

## 讨论

脐膨出是新生儿常见的腹壁发育畸形,是指先天性腹壁发育不全,腹壁中心缺损,腹腔内脏通过脐部缺损疝出腹壁为特征的先天畸形。研究表明,脐膨出是由于胚胎在发育过程中腹壁的4个褶中某个褶发育停顿或发育不良而形成<sup>[1]</sup>。随着产前诊断、麻醉、手术技术的提高以及术后呼吸管理和静脉

高营养的应用,该病的治疗效果明显改善,但如处理不及时或处理不当,其病死率仍高达25.8%~43%<sup>[8]</sup>。因此,正确认识该病,积极予以有效的治疗,有助于进一步提高新生儿脐膨出的治愈率,并改善预后。

按照腹壁缺损大小,脐膨出可分为小型脐膨出及巨型脐膨出,对于治疗方案的选择,主要根据腹壁缺损大小、囊膜破裂及感染与否、有无合并严重畸形等情况,选择最佳治疗方法。小型脐膨出,囊

腔不大,膨出物仅为肠管,无肝脏及其它器官,可将囊膜去除,在没有过度腹内压下,将腹壁Ⅰ期缝合即可治愈。而巨型脐膨出,通常腹壁缺损直径>6 cm,膨出物为胃、肝、脾、胰等脏器,手术修补时需广泛游离腹膜及腹壁皮肤,但如果勉强将囊膜内容物推回狭小的腹腔内,会提高腹内压力而产生不良的后果,如横膈位置提高导致呼吸障碍;下腔静脉受压而减少静脉血回流;肾脏的血流减少而引发肾衰竭等致死性腹高压<sup>[9]</sup>。近年来多主张行分期或Ⅱ期修补术,如使用手术手套、输血袋、纱巾、涤纶袋等替代材料扩大腹腔行分期手术治疗,也有用硅胶袋修复巨型脐膨出的报道<sup>[10,11]</sup>。对于无手术条件的患儿,腹壁缺损较大,出生时间>72 h,身体一般情况不佳或膨出囊膜有感染倾向的患儿,国内外有学者采用各种保守治疗方法,如 van Eijck 等<sup>[12]</sup>对 11 例巨大脐膨出采用组织分离技术;Kilbride 等<sup>[13]</sup>采用封闭式负压引流技术,均缓慢还纳脐膨出物,促进小腹腔容量扩张;也有学者采用 2% 红汞、70% 酒精和 0.25% 硝酸银混合液或硝酸银溶液及 70% 乙醇溶液等消毒结痂剂预防感染,促进上皮生长,瘢痕组织覆盖囊膜,最后择期再行手术修补治疗<sup>[14]</sup>;Ein 等<sup>[15]</sup>对 20 例巨大脐膨出采用早期局部覆盖磺胺嘧啶银而形成瘢痕组织,延缓脐膨出的关闭;2006 年,Tran 等<sup>[16]</sup>使用皮维酮碘外涂囊膜成功救治了巨大脐膨出患儿;同样,Adetayo 等<sup>[17]</sup>使用腹内组织膨胀剂治疗巨大脐膨出患儿也取得了成功。

本研究中,脐膨出患儿出生后将体外膨出脏器纳入无菌硅胶袋,并与腹壁缺损皮缘处间断缝合,逐渐挤压收紧硅胶袋,约 1~2 个月脏器可逐渐还纳,摘除硅胶袋后继续利用自制半球形纱布袋加压包扎,仍然每日消毒,外涂湿润烧伤膏。对于缺损相对较小,新生儿早期腹壁肌肉有向腹中线靠拢的生长机制,随着生长发育,脐环逐渐缩小,类似于脐疝缺口通过两侧直肌筋膜的延伸而关闭的机理,约 6~12 个月后腹壁逐渐生长直至缺损处完全愈合形成接近自然脐部形态。对于缺损大的患儿,出生后利用此方法,虽然腹壁肌肉不能完全愈合,但 6~12 个月创面完全上皮化。因此,与目前治疗巨型脐膨出的诸多方法相比,该方法主要优势如下:一是采用此种方法,虽然患儿成长至 1 岁后仍面临着二次手术,但对于手术的耐受力明显提高,同时该方法对新生儿呼吸、循环系统影响较小,一般不需要机械通气,避免了因缝合修补腹壁引起腹内压过大对呼吸、循环造成影响,防止发生腹腔间隔综合征及

手术相关并发症,减少脐膨出病死率<sup>[18]</sup>。二是该方法保留了羊膜囊,避免膨出物暴露,减少感染及器官粘连几率。三是使用该方法的患儿可早期进食,减少肠外营养时间。但在治疗过程中,应注意脐部局部护理,逐渐还纳过程中注意观察患儿呼吸循环等生命体征。因此,在新生儿脐膨出临床治疗过程中,保留羊膜囊的同时应用硅胶袋整复及局部压迫治疗相结合的方法,能够提高新生儿巨型脐膨出的治愈率,降低该病的病死率。

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