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44 例不同孕周脐带脱垂患者的临床资料分析 *

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摘要 目的:探讨不同孕周脐带脱垂患者相关因素的差异。**方法:**回顾性比较分析 2012 年 01 月至 2017 年 12 月我院收治的 44 例脐带脱垂患者的临床资料。将患者按照脐带脱垂发生的孕周分为足月组、早产组及流产组,使用 SPSS18.0 统计软件处理数据。**结果:**我院近六年脐带脱垂总的发病率为 1.829/1000。44 例患者中,足月组 7 人,占 15.91%;早产组 22 人,占 50%;流产组 15 人,占 34.09%。三组患者的年龄、产次及孕次均无显著统计学差异(P>0.05)。足月组新生儿 apgar 评分最高,与其它两组相比均有统计学差异(P<0.05),早产组 apgar 评分显著高于流产组(P<0.05);足月组剖宫产率为 100%,早产组为 63.64%,流产组则为 13.13%,三组患者剖宫产率比较存在统计学差异(P=0.000),足月组剖宫产率与早产组比较无统计学差异(P=0.075),足月组剖宫产率与流产组比较有统计学差异(P=0.000),早产组剖宫产率与流产组比较有统计学差异(P=0.003)。足月组异常胎方位的发生率显著低于早产组(P=0.038)。早产组胎儿数(单胎、双胎)与足月组及流产组相比均有统计学差异(P＜0.05),而足月组与流产组胎儿数则无统计学差异(P>0.05)。早产组双胎妊娠占比例更高。三组患者发生脐带脱垂的地点比较无统计学差异(P=0.256)。**结论:**不同孕周是否发生脐带脱垂与患者的年龄、产次、孕次及地点无关。脐带脱垂较多发生于早产者,且早产患者中双胎、异常胎方位发生率更高。一旦发生脐带脱垂,尤其是有机会存活的胎儿,应以最快的方式娩出胎儿,提高新生儿存活几率。

关键词:脐带脱垂;孕周;围产儿结局;预防

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Analysis of 44 Patients with Umbilical Cord Prolapse with Different Gestational Week*

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ABSTRACT Objective: To explore the difference of associated factors among three groups patients (term group, gestational week ≥ 37, preterm group, gestational week ≥ 28 , ＜37, and abortion group＜28) with umbilical cord prolapse. **Methods:** A retrospective analysis was performed in the 44 cases with umbilical cord prolapse from January 2012 to December 2017 in our hospital. The patients were divided into three groups: term group, preterm group and abortion group. The data was analyzed with SPSS 18.0. **Results:** The total incidence of umbilical cord prolapse was 1.829/1000 in the last six years. The distribution of patients with umbilical cord prolapse was analyzed. Among the 44 patients, the term group includes 7 patients, accounting for 15.91%; preterm group was 22, accounting for 50%; The abortion group accounted for 34.09%. There was no statistically significant difference among the three groups in age, parity and gravida (P>0.05). The results showed that the apgar score was the highest in the group of the term, which was statistically different with the other two group(P<0.05)s Also, there was significant difference between the group of preterm and abortion. In the term group, cesarean section was the only way of delivery, the rate was 100%. The preterm group was 63.64%, while 13.13% in the abortion group. There were significant differences among the three groups for the delivery way, P=0.000. The term group and preterm group had no significant difference (P=0.075), while term and abortion group had significant difference (P=0.000), and premature and abortion group also had significant difference (P=0.003). The results showed that abnormal fetal orientation was more common in patients of preterm group(P＜0.05). Also, the proportion of twin pregnancy in preterm group was higher than the other two (P＜0.05). There was no significant difference among the three groups of the location for umbilical cord prolapse (P=0.256). **Conclusion:** Whether or not umbilical cord prolapse occurred at different gestational weeks was independent of the patient's age, parity, gravida. and location. The incidence of umbilical cord prolapse was higher in preterm group, and the incidence of twins and abnormal fetal position was also higher in these patients. Once umbilical cord prolapse occurs in pregnant women, for the sake of increasing the infant survival ration, the delivery of the fetus should be per-

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formed in the fastest way.

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前言

脐带脱垂是指在胎膜破裂情况下，脐带脱至宫颈口外，位于胎先露一侧(隐性脐带脱垂)或越过胎先露降至阴道甚至露于外阴部(显性脐带脱垂)，是严重威胁围产儿生命的产科急症，发生率为 0.1%-0.6%[1]。目前研究表明导致脐带脱垂的主要原因包括胎位不正、多次分娩、胎膜早破、羊水过多、产科干预等因素[2,3]，其导致的胎儿不良结局包括早产、新生儿窒息甚至新生儿死亡。认识脐带脱垂的高危因素并进行积极预防，早期发现脐带脱垂并及时处理对降低围产儿死亡率、改善新生儿预后非常关键。但不同孕周之间发生脐带脱垂的影响因素是否存在差异，目前尚不明确。因此，本研究对 2012 年 01 月至 2017 年 12 月我院收治的 44 例脐带脱垂产妇的临床资料进行统计分析，探讨不同孕周(足月、早产及流产组)脐带脱垂发生风险因素及预后影响因素的差异，以期改善围产儿的预后。

1 临床资料

1.1 一般资料

回顾性分析 2012 年 01 月至 2017 年 12 月我院分娩的 44 例脐带脱垂病历，均详细准确描述了孕期情况、分娩过程及围产儿预后情况，将其分为 3 组：足月组(≥ 37 周)，早产组(≥ 28 周，<37 周)，流产组(<28 周)。相关因素包括年龄、孕次、产次、新生儿 5 分钟 Apgar 评分、胎方位、胎儿数(单胎、双胎)、分娩方式与发生地点(门诊(包括院外发生如家中、转运途中)、住院部(包括病房、手术室及产房))。胎方位中正常胎位为头位，异常胎位为臀位或横位。分娩方式分为剖宫产和阴道分娩。

1.2 统计学分析

用 SPSS 18.0 统计软件处理数据，其中连续性资料满足正态性检验的采用均数± 标准差($\bar{x}\pm s$)，多组间比较采用单因素方差分析，两组间比较采用 t 检验，分类资料采用频数构成比表示，不同组别之间的比较采用卡方检验。以 $P<0.05$ 为差异有统计学意义。

2 结果

2.1 我院近六年脐带脱垂的发生情况

我院近六年脐带脱垂的总发病率为 1.829/1000。44 例患者中，足月组 7 人，占 15.91%；早产组 22 人，占 50%；流产组 15 人占 34.09%。

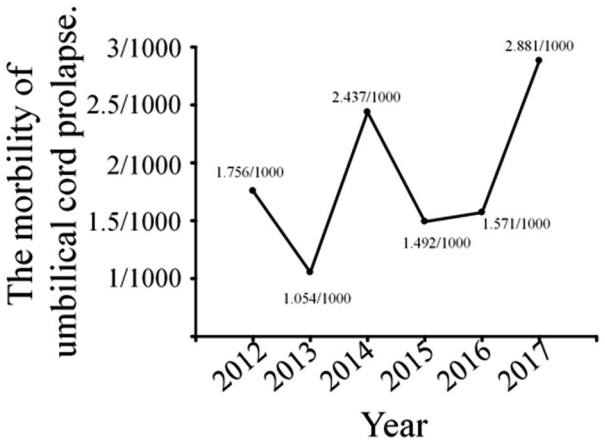

图 1 我院近六年脐带脱垂的发生概况

Fig.1 The incidence of umbilical cord prolapse through the last six years

2.2 三组患者的基本资料的比较

三组患者基本情况包括年龄、产次、孕次比较均无统计学差异($P>0.05$)。

表 1 不同组别患者基本资料的比较

Table 1 Comparison of the basic data among three groups

Groups	Age (year)	Gravida (times)	Parity (times)
Term	33.29± 5.99	3.29± 1.60	0.86± 0.69
Preterm	29.27± 5.25	2.41± 1.84	0.55± 0.67
Abortion	29.91± 4.84	2.53± 1.66	0.47± 0.52
F value	2.136	0.744	0.959
P value	0.131	0.481	0.392

2.3 三组母婴结局的比较

2.3.1 三组胎儿出生时的 apgar 评分比较 三组新生儿出生时的 apgar 评分比较有统计学差异($P=0.000$)。足月组新生儿出生时的 apgar 评分显著高于早产组 ($P=0.015$) 与流产组相比($P=0.000$)，早产组新生儿出生时的 apgar 评分显著高于流产组($P=0.000$)。

2.3.2 三组分娩方式的比较 足月组剖宫产率为 100%，早产组为 63.64%，流产组则为 13.13%。足月组剖宫产率与早产组比较无统计学差异($P=0.075$)，但显著高于流产组($P=0.000$)，早产组剖宫产率与流产组比较显著升高($P=0.003$)。

2.4 不同组别脐带脱垂影响因素的比较

2.4.1 胎方位 因流产组月份较小，胎方位不定，因此，该组在

此未行相关统计。足月组异常胎方位的发生率显著低于早产组(*P*=0.038)。

2.4.2 **胎儿数** 早产组胎儿数(单胎、双胎)与足月组及流产组相比均有统计学差异(*P* 值均＜0.05),其中早产组分别与足月组及流产组相比,早产组双胎所占比率显著高于其它两组。而足月组与流产组胎儿数则无统计学差异(*P*=0.484)。

2.4.3 **发生地点** 三组患者发生期待脱垂的地点(门诊(包括院外发生如家中、转运途中)、住院部(包括病房、手术室及产房)比较无统计学差异(*P*=0.256)。

表 2 不同组别新生儿出生时的 apgar 评分比较

Table 2 Comparison of the apgar score of neonatal among different groups

Groups	Apgar score(5 min) ($\bar{x}\pm s$)	x^2 Value	*P* Value
Term group	8.43± 1.51		
Preterm group	5.95± 3.03	26.992	0.000*
Abortion group	0.27± 0.59		

Note: *Through the homogeneity test of variance, the variance was not homogeneity. Therefore, kruskal-wallis H test was used, and there was a statistical difference among the three groups. Further comparison between groups: term group and preterm group: Z=-2.447, *P*=0.015; term group and abortion group: Z=-4.091, *P*=0.000; preterm group and abortion group: Z=-4.431, *P*=0.000.

表 3 不同组别分娩方式的比较

Table 3 Comparison of the delivery ways among different groups

Delivery ways	Term group	Preterm Group	Abortion group	x^2 value	*P* value
Vaginal delivery	0(0%)	8(36.4%)	13(86.7%)	16.647	0.000*
Caesarean section	7(100%)	14(63.6%)	2(13.3%)		

Note:* Comparisons among the three groups were performed (Fisher's exact probability method) : there was no statistical difference between the term group and the preterm group (*P*=0.075), a statistical difference between the term group and the abortion group was found (*P*=0.000), and there was also a statistical difference between the preterm group and the abortion group (*P*=0.003).

表 4 不同组别分类资料比较分析结果

Table 4 Comparison and analysis of the data of different groups

Variable	Term group	Preterm Group	Abortion group	x^2 value	*P* value
Fetal position					
Normal	4(57.1%)	3(13.6%)	/		0.038[a]
Abnormal	3(42.9%)	19(86.4%)	/		
Fetal number					
Single	7(100%)	13(59.1%)	14(93.3%)	8.403	0.015[b]
Twin	0(0%)	9(40.9%)	1(6.7%)		
Location					
Outpatient Department	1(14.3%)	6(27.3%)	7(46.7%)	2.726	0.256
Inpatient Department	6(85.7%)	16(72.7%)	8(53.3%)		

Note: a Fisher's exact probability method was used in the data analysis.

b Chi-square test was performed first among the three groups. If there was a statistical difference, further analysis was performed: there was a statistical difference between the term group and the premature delivery group (*P*=0.042); No statistical difference was found between the term group and the abortion group (*P*=0.484); A significant difference was found between the premature delivery group and the abortion group (*P*=0.021).

3 讨论

近年来，随着各级医疗机构对脐带脱垂的认识不断提高，不断强化针对该急症的培训，处理该疾病的综合能力越来越强。由于脐带脱垂可以使一个相对低风险的正常妊娠瞬间转变为一个灾难性急症,有很高的围产儿发病率及死亡率,孕妇分娩的风险亦大大增加。因此,深入认识该疾病对改善该疾病预后有显著意义。

脐带脱垂的发生率各地报道不一[1],本研究结果显示我院近 6 年的脐带脱垂总的发病率为 1.829/1000，这与 Gannard-Pechin 等报道的 0.18%[4]及 Hehir 等报道的 1.9/1000 相类似[5]。对脐带脱垂发生的孕周进行分析,结果显示小孕周孕妇中脐带脱垂更常见，提示小孕周人群为发生脐带脱垂的高危人群,这与 Behbehani 等的研究结论一致[6,7]。但 Behbehani[6]等提出脐带脱垂在足月低危孕产妇中最常见，所占比例约 78%,而本研究结果显示早产孕妇所占比例最高,这可能与研究的人群不一致有关,虽然同为脐带脱垂的患者,但我们医院为疑难危重症救治中心,相对正常分娩人数,有合并症及小孕周孕产妇

更常见。且随着二胎时代及不孕患者增多,辅助生殖技术的开展,越来越多的多胎妊娠的出现,均可能导致脐带脱垂孕产妇人群分布的迁移。这在我们后续的分析结果中亦有体现,早产组双胎数比例显著高于其他两组。因此,多胎妊娠更易出现脐带脱垂。Adegbola O[8]及 Rakotozanany B[9]等的研究亦得出上述类似结论,在脐带脱垂患者中,多胎妊娠分别占 51.9%与 51%。

本研究结果显示不同孕周发生脐带脱垂的患者年龄、孕次及产次均无显著差异,提示年龄及既往孕产史对发生脐带脱垂的孕周无明显影响。虽然是否发生脐带脱垂可能与既往孕产史有关[6],有分娩史的孕妇出现脱垂的可能性更大,但不同孕周脐带脱垂的孕妇则与分娩史无显著关系,这提示发生脐带脱垂的孕周与既往孕产史无关。孕周为影响新生儿预后的独立危险因素[10],孕周越小,新生儿预后越差。本研究结果显示孕周越大,新生儿 apgar 评分越高,新生儿预后越佳。

如发生脐带脱垂,需尽快根据产妇的情况决定分娩方式,立即分娩可获得更好结局[11-13],而 Alouini 等多个学者[14-17]提出脐带脱垂孕妇更倾向于选择剖宫产终止妊娠,Hasegawa 等[18]通过回顾性分析,发现紧急剖宫产终止妊娠可获得更好的新生儿结局,且越早手术,结局越好[19]。因此,脐带脱垂亦为剖宫产率增加的原因之一[20]。尽管如此,有研究显示脐带脱垂围产期死亡率可达 7%,大部分在医院就诊途中即已死亡,无可避免[5]。而 Gibbons 等[21]通过对 69 年来脐带脱垂孕妇模式及新生儿结局变化趋势的分析提出剖宫产的出现对降低新生儿死亡率作出巨大贡献。我们分析结果提示足月组与早产组无统计学差异,因孕周>28 周后,新生儿为有生机儿,且我院新生儿科抢救力量雄厚,因此,对这类孕妇,通过与患者及家属充分沟通,选择紧急剖宫产终止妊娠占大部分比例。足月组则达 100%,早产组达 63.64%。流产组则除少数孕妇极珍贵儿要求剖宫产,绝大部分选择阴道分娩,以减少对孕妇的影响。

胎方位为脐带脱垂的独立危险因素[3,22],而我们研究显示发生脐带脱垂的早产组胎方位异常的发生率显著高于足月组,提示早产组发生脐带脱垂的孕妇中,胎方位异常更常见,而足月组孕妇中,即使胎位正常,亦须警惕脐带脱垂的发生。正如 Behbehani[6]等研究结果所提示,足月低危孕妇中脐带脱垂更常见。胎膜早破为脐带脱垂的危险因素[23],本研究中病例大部分为自发性胎膜早破,1 例为足月人工破膜。Kawakita T 等[24]通过分析经阴道分娩孕妇破膜时机发现不论胎头位置,宫口扩张 <6 cm 与宫口扩张 6 到 10 cm,胎方位≤ -3 相比,脐带脱垂发生率更高。

目前,随着二胎政策开放,越来越多产妇选择经阴道试产,因此恰当选择临产后破膜时机对减少脐带脱垂发生有重要意义。在足月引产方法中,水囊为常用方法之一,有研究显示水囊引产导致脐带脱垂的风险显著增加,故如采用水囊引产,需警惕脐带脱垂[25]。此外,在临床工作中,产科医生建议胎膜早破后孕妇平卧,直至抬头衔接,但目前尚无足够证据证明平卧可减少脐带脱垂的风险,且平卧后增加产妇紧张情绪,亦增加产妇转运费用。因此,目前并不推荐将此处理方案作为产科医生建议[26]。如发生脐带脱垂可上抬胎头,改变体位争取抢救时间[27]。

脐带脱垂为产科罕见的急症,需多科室协作,包括新生儿科、麻醉科、产科等[28]。为改善该急症的预后,需对多科室协作进行培训。有研究提示通过对多学科产科急救小组进行培训,可更好的合作,获得更高的抢救效率[29-31]。

综上,不同孕周发生脐带脱垂的孕妇其年龄、孕次及产次无差异,为改善围产结局,足月组及早产组以剖宫产为主要分娩方式。早产组中双胎较其它两组更常见,而早产组的胎位异常与足月组相比有显著统计学差异,异常胎方位在早产组更多见。为深入认识脐带脱垂,改善新生儿及孕妇结局,可启动多学科联合培训。

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