普贝生用于足月妊娠促宫颈成熟的疗效观察

刘爱连[1] 陈嗽玉[1] 屈利萍[1] 彭阿梅[1] 张小平[1] 彭耀金[2]

(1 湖南省湘乡市第二人民医院妇产科 湖南 湘乡 411400;2 湖南师范大学医学院 湖南 长沙 410008)

摘要 目的:探讨普贝生促进宫颈成熟,提高足月妊娠经阴道分娩的有效性和安全性。方法:120 例足月妊娠的未临产孕妇随机分为试验组与对照组,其中试验组 50 例给予阴道后穹隆置入普贝生 1～2 次,对照组 50 例给予小剂量催产素静脉滴注,比较两组宫颈成熟度,分娩情况及对于产妇、新生儿的影响。结果:①试验组宫颈 Bishop 评分增加 3.81± 1.04,对照组增加 3.09± 1.15,两组间差异有统计学意义 (P<0.05) ②试验组促宫颈成熟的显效率为 78.33%,总有效率为 91.67%,高于对照组 35.00%显效率和 63.33%总有效率 (P<0.01) 。③ 试验组阴道分娩率 73.33%,进入产程时间 (34.19± 13.20) h,产程 (8.47± 2.68) h,对照组阴道分娩率 41.67%,进入产程时间 (52.14± 16.05) h,产程 (12.25± 3.73) h,两组间比较差异有显著性 (P<0.01 或 0.05) 。④试验组产后出血量 (225.31± 67.80) ml,新生儿体重 (3369.48± 311.65) g,Apgar 评分 9.52± 0.39,对照组产后出血量 (232.44± 75.76) ml,新生儿体重 (3417.63± 359.68) g,Apgar 评分 9.48± 0.47,两组间差异无统计学意义 (P>0.05) 。结论:普贝生可有效促进足月妊娠产妇的宫颈成熟,提高经阴道引产成功率,降低剖宫产率,且安全性好,对母儿影响小。

关键词:普贝生;前列腺素;催产素;宫颈成熟;阴道分娩

中图分类号:R714 **文献标识码**:A **文章编号**:1673-6273 (2011) 11-2144-03

Propess for Promotion of Cervical Ripening in Full-term Pregnancy

LIU Ai-lian[1], CHEN Sou-yu[1], QU Li-ping[1], PENG A-mei1, ZHANG Xiao-ping[1], PENG Yao-jin[2]

(1 The second people hospital of Xiangxiang city of Hunan province, 411400, Xiangxiang, China;

2 School of Medicine; Hunan normal University, Changsha 410008; China)

ABSTRACT Objective: To explore the efficacy and safety of Propess for induction of cervical ripening and vaginal delivery in term pregnancies. Methods: 120 cases of term pregnancies were randomly divided into experimental group and control group. Propess was inserted in posterior vaginal fornix in 60 cases for 1~2 times, and the control group was treated with microoxytocin. The cervical maturity, time from administration to delivery, stages of labor, rate of vaginal delivery, and side effects of drugs were compared between the two groups. Results: ①The increase of Bishop's score was 3.81± 1.04 in experimental group, significantly higher than 3.09± 1.15 in control group (P<0.05). ② The treatment of Propess was more effective in the experimental group than the control group (excellence rate 78.33% vs 35.00%, total effective rate.91.67% vs 63.33%) (P<0.01). ③ In experimental group, the rate of vaginal delivery was 73.33%, time from administration to delivery 34.19± 13.20h, time for labor stages 8.47± 2.68h, while in the control group 41.67%, 52.14± 16.05h and 12.25± 3.73h respectively. Difference between the two groups was statistically significant (P<0.01 or 0.05). ④ The difference of postpartum hemorrhage (225.31± 67.80ml vs 232.44± 75.76ml), birth weight (3369.48± 311.65g vs 3417.63± 359.68g), and Apgar's scores (9.52± 0.39 vs 9.48± 0.47) was not significant between the experimental group and control group (P>0.05). Conclusion: Propess could promote the cervical ripening of term pregnancies, increase the successful rate of vaginal delivery and decrease the cesarean section rate effectively and safely.

Key words: Propess; Prostaglandin; Oxytocin; Cervical ripening; Vaginal delivery

Chinese Library Classification: R714 Document code: A

Article ID: 1673-6273 (2011) 11-2144-03

前言

对于妊娠晚期,特别是足月妊娠者,安全有效的适时终止妊娠可显著降低不良妊娠结局发生率,而阴道自然分娩相较于剖宫产具有危险性小,并发症少,费用低等优点,因此应作为计划分娩方式的首选而得到大力提倡[1-3]。宫颈成熟是保证阴道自然分娩成功的基本条件。研究表明,前列腺素 E2 (PGE2) 可有效促进宫颈成熟,与自然成熟过程相仿,且不易引起子宫过度收缩,因此本研究中采用控释性 PGE2 的阴道栓剂 (普贝生) 促进引产,结果相较于催产素静脉滴注,产妇阴道分娩率明显提高,而剖宫产率被有效降低,疗效比较满意,现报道如下[4,5]。

作者简介:刘爱连,女,妇产科主治医师,

E-mail:751643465@qq.com

(收稿日期:2011-01-12 接受日期:2011-01-29)

1 资料与方法

1.1 一般资料

选取 2008 年 10 月至 2010 年 10 于本院产科住院的 120 例 38～42 周足月妊娠孕妇,均为单胎头位,宫颈 Bishop 评分≤ 6 分,产前检查无头盆不称和骨产道异常,无阴道分娩禁

忌证，并排除前列腺素过敏者，伴哮喘、青光眼者，伴心、肝、肾严重功能不全者，随机分为试验组和对照组，其中试验组 60 例，年龄 21～37 岁（平均 26.8± 5.2 岁），对照组 60 例，年龄 24～38 岁（平均 27.7± 4.8 岁）。两组患者年龄、孕周、孕次、宫颈评分等情况比较差异无显著性（P>0.05），具有可比性（表 1）。

表 1 试验组与对照组一般情况比较($\bar{X}$± S)

Table 1 Comparison of general condition of patients between experimental group and control group

Group	Total Number	Age(years)	Gestational age (weeks)	Gravidity (times)	Bishop score
Experimental group	60	26.8± 5.2	39.2± 0.8	1.4± 0.3	3.45± 0.91
Control group	60	27.7± 4.8	39.3± 0.7	1.5± 0.6	3.51± 1.23
P value		>0.05	>0.05	>0.05	>0.05

1.2 方法

试验组孕妇取膀胱截石位，碘伏消毒外阴后，进行阴道检查和宫颈评分，并横置普贝生栓 1 枚于阴道后穹隆（提前以 10ml 生理盐水浸湿），阴道口留约 2cm 左右终止带，孕妇卧床 2h 同时开始胎心监护，若无宫缩出现，改为每隔 1h 检测胎心一次并观察宫缩情况，若出现临产、胎儿窘迫、自然破膜或人工破膜、宫缩过频过强、严重恶心呕吐时立即取药，否则放置 12h 后取出，并再次进行宫颈评分，如 Bishop 评分≤ 6 分且未正式临产、胎儿反应良好的孕妇，于次日再放置 1 枚普贝生栓。对照组给予催产素 2.5u 加入 5%葡萄糖 500ml 静脉滴注，从 8 滴 / 分开始逐渐增加至出现规律宫缩（间隔 2～5min，30～60s/ 次），但最大滴速不应多于 40 滴 / 分，同时密切观察胎心及宫缩情况，若出现胎儿窘迫或临产立即停药，连续用药 3 天仍未临床者视为催产素引产失败。

1.3 观察指标

分别于入院时及用药 12h 后进行宫颈 Bishop 评分，计算临产率，记录总产程、分娩方式、新生儿 Apgar 评分及产后出血量，观察孕妇有无不良反应；以用药 72h 内出现规律宫缩及宫颈管消失、宫口开大为引产成功。

1.4 效果评估

①显效：Bishop 评分提高≥ 3 分或 24h 内自然临产；②有效：3 分 >Bishop 评分提高≥ 2 分；③无效：Bishop 评分提高 <2 分或无改变。

1.5 统计学处理

计量资料采用 t 检验，计数资料采用 x^2 检验，P<0.05 为检验显著性水平。

2 结果

2.1 两组间用药前后宫颈 Bishop 评分比较

用药后患者宫颈逐渐成熟，其中试验组患者宫颈 Bishop 评分增加 3.81± 1.04，对照组增加 3.09± 1.15，两组间差异有统计学意义（P<0.05）（表 2）。

表 2 两组治疗前后宫颈 Bishop 评分比较($\bar{X}$± S)

Table 2 Comparison of Bishop score before and after treatment between groups

Group	Total number	Before treatment	After treatment	Difference value
Experimental group	60	3.45± 0.91	7.28± 0.67	3.81± 1.04
Control group	60	3. 51± 1.23	6.34± 0.88	3.09± 1.15
P value		>0.05	<0.05	<0.05

2.2 两组间促宫颈成熟效果比较

试验组和对照组显效率分别为 78.33%和 35.00%，总有效率为 91.67%和 63.33%，试验组效果显著高于对照组（P<0.01）（表 3）。

表 3 两组宫颈成熟情况比较(n, %)

Table 3 Comparison of cervical ripening between the two groups

Group	Total Number	Excellence rate		Effective rate		Ineffective rate		Total effective rate	
		n	%	n	%	n	n%	n	%
Experimental group	60	47	78.33	8	13.33	5	8.33	55	91.67
Control group	60	21	35.00	17	28.33	22	36.67	38	63.33
P value		<0.01		<0.05		<0.01		<0.01	

2.3 两组间分娩情况比较

试验组用药后 45 例在 12h 内临产，5 例在 24h 内临产，对照组用药后 23 例在 12h 内临产，10 例在 24h 内临产，组间比较差异有统计学意义（P<0.01 或 0.05）；试验组有 6 例放弃阴道分娩，选择剖宫产，其中 2 例原因为胎儿宫内窘迫，4 例为社会因素，对照组有 8 例改选剖宫产，其中 3 例为胎儿宫内窘迫，3

例为社会因素，2 例为引产失败，组间比较差异无显著性（P>0.05）。对照组孕妇用药至出现宫缩时间明显短于试验组，而用药至分娩与产程时间均明显长于试验组（P<0.05）（表 4）。

表 4 两组分娩情况比较

Table 4 Comparison of delivery methods between the two groups

Group	Parturient rate (within 12h)		Parturient rate (within 24h)		Vaginal delivery rate		Administration to uterine contraction (h)	Administration to delivery (h)	Delivery course time (h)
	n	%	n	%	n	%			
Experimental group	45	75.00	5	8.33	44	73.33	7.28± 2.44	34.19± 13.20	8.47± 2.68
Control group	23	38.33	10	16.67	25	41.67	6.03± 3.28	52.14± 16.05	12.25± 3.73
P value	<0.01		<0.05		<0.01		<0.05	<0.05	<0.05

2.4 两组间产后出血、新生儿体重、Apgar 评分比较

试验组中 2 例产妇产后出血量≥ 500ml，新生儿胎音异常 1 例，羊水粪染 2 例，新生儿窒息 2 例，对照组中 3 例产妇产后出血量≥ 500ml，新生儿胎音异常 3 例，羊水粪染 3 例，新生儿窒息 1 例，两组间比较差异无显著性（P>0.05）；试验组与对照组产妇产后出血量与新生儿体重和 Apgar 评分比较差异同样无统计学意义（P>0.05），

表 5 两组产后出血量、新生儿体重、Apgar 评分比较($\bar{X}$± S)

Table 5 Comparison of postpartum hemorrhage, birth weight and Apgar's scores between the two groups

Group	Total number	Postpartum hemorrhage (ml)	Birth weight (g)	Apgar's scores
Experimental group	60	225.31± 67.80	3369.48± 311.65	9.52± 0.39
Control group	60	232.44± 75.76	3417.63± 359.68	9.48± 0.47
P value		>0.05	>0.05	>0.05

2.5 两组间不良反应比较

对照组患者未出现明显不良反应，而试验组患者 2 例出现宫缩过频过强，经取出普贝生栓和硫酸镁静脉滴注后情况好转。

3 讨论

普贝生为可控释前列腺素 E2 阴道栓剂，可在局部缓慢释放外源性 PGE2，引起宫颈平滑肌的松驰，并通过刺激内源性 PGE2 的合成与释放，增加宫颈组织基质内水分与粘多糖含量，增加胶原溶解酶、弹性蛋白酶释放和活性，减少胶原纤维含量，促进宫颈软化成熟，同时内源性前列腺素的释放，可增加子宫肌细胞间缝隙连接数量，提高子宫对于催产素的敏感性，增强子宫收缩力，诱发宫缩[6-8]。相较于普贝宁栓剂，静脉滴注催产素可选择性兴奋子宫平滑肌，诱导子宫产生规律性收缩，增强子宫收缩力，但由于宫颈中缩宫素受体分布量少，使得其促宫颈成熟作用差，因此在本研究中，试验组中促宫颈成熟的显效率与总有效率分别为 78.33%的 91.67%，高于对照组 35.00%的显效率和 63.33%的总有效率，且产妇宫颈成熟程度也显著高于对照组，使得试验组 12h 临产率、阴道分娩率均高于对照组（P<0.01 或 0.05），表明普贝生可有效促进足月妊娠产妇的宫颈成熟，提高引产成功率，效果优于催产素[9-11]。而且催产素短期效果差，虽可较快的引起宫缩，使得从用药至产生宫缩的时间显著短于试验组，但常需连续用药 1～3d 子宫才能进入临产状态，分娩发动时间和平均产程要显著大于试验组（P<0.05），提示普贝生的应用可缩短待产时间，减轻产妇痛苦，提高阴道分娩信心，降低因社会因素所增加的剖宫产率[12]。

普贝生使用简单，可持续稳定地释放 PGE2，且在产程启动或出现不良反应时，可通过终止带迅速取出药物，并且由于 PGE2 代谢迅速（半衰期仅 1～3min），安全性被大大提高。结果本研究中，两组间产后出血量、新生儿体重与 Apgar 评分差异无统计学意义（P>0.05），其中试验组仅 2 例患者出现宫缩过频过强，经过对症治疗后症状消失[13]。

综上所述，足月引产中普贝生的应用可有效增加宫颈成熟度，缩短产程，提高阴道自然分娩成功率，对于母儿影响小，安全性好，值得临床上推广应用。

参 考 文 献(References)

[1] Cambic CR, Wong CA. Labour analgesia and obstetric outcomes [J]. Br J Anaesth, 2010, 105 (Suppl 1): 50-60

[2] Grobman WA, Lai Y, Landon MB, et al. The change in the rate of vaginal birth after caesarean section [J]. Paediatr Perinat Epidemiol, 2011, 25(1):37-43

[3] Wong CA. Advances in labor analgesia [J]. Int J Womens Health, 2010, 9(1):139-154

[4] 万桂华,丁永清.分娩方式不同的护理观念[J].现代生物医学进展, 2006,6(6):53-54
Wang Gui-hua, Ding Yong-qing. Nursing theoretical concept on different modes of delivery [J]. Progress in Modern Biomedicine, 2006, 6(6):53-54

[5] Shakya R, Shrestha J, Thapa P. Safety and efficacy of misoprostol and dinoprostone as cervical ripening agents [J]. JNMA J Nepal Med Assoc, 2010, 49(177):33-37

（下转第 2158 页）

Zhang Hui, Peng Wen-ling. Analysis of the Effects of Pendulum Appliance on Molar Distalization[J]. Chinese Journal of Coal Industry Medicine, 2009,4:553-554

[5] 王宁,段银钟,郑虹,等. GMD 远移磨牙的临床研究[J].中国美容医学,2004,13 :200- 201
Wang Ning, Duan Yin-zhong, Zheng Hong, et al. The clinical application of green field molar distalization(GMD) [J]. Chinese Jouranl of Aesthetic Medicine, 2004,13:200-201

[6] 夏春鹏,杭望雁,李菲菲等.GMD 矫治器与传统磨牙远移技术的对比研究[J]. 中国美容医学,2006 1407-1409
Xia Chun-peng, Hang Wang-yan, Li Fei-fei, et al. A comparative study of distalizing upper molar by Greenfield Molar Distalization and traditional molar distalization appliance [J]. Chinese Journal of Aesthetic Medicine, 2006:1407-1409

[7] Joydeep G, Rams N. Evaluaton of an int raoral maxillary molardistalization technique [J]. Am J Ort hod Dentofac Ort hop, 1996, 110: 640-646

[8] Friedrich K,Dorendeliler M. Distal movement using the pen2dulum appliance , Part1 : Clinical and radiological evaluation [J]. Angle Ort hod , 1997 ,67 (4) :255 - 256

[9] 刘茜,段银钟,宁芳,等.第二磨牙存在状态对远移第一磨牙效果的临床研究[J].口腔医学,2007,27 (6) :308-310
Liu Qian, Duan Yin-zhong, Ning Fang, et al. Effects of second maxillary molar of three different positions on molar distalization[J]. Stomatology, 2007,27 (6) :308-310

[10] Bondemark L, Kurol J. Class II correction with magnets andsuperelastic coils followed by straight - wire mechanotherapy [J]. JOrofac Orthop, 1998,59:127-138

[11] Bondemark L. A comparative analysis of distal maxillary molar movement produced by a new lingual intra-arch Ni-Ti coil appliance and a magnetic appliance[J]. Eur JOrthod, 2000,Dec22(6):683-695

[12] Cheng SJ, Tseng IY, Lee JJ, et al. A prospective study of the risk factors associated with failure of mini-implants used for orthodontic anchorage[J]. Int J Oral Maxillofac Implants, 2004,19(1):100-106

[13] 叶静, 王春玲, 寇波, 等. 摆式矫治器与口外弓远中移动磨牙的疗效比较[J]. 上海口腔医学,2006,15 (3) :254-258
Ye Jing, Wang Chun-ling, Kou Bo, et al. Compar ison of the tr eatment effects of two molar distal movement appliances: pendulum appliance and face- bow [J]. Shanghai Journal of Stomatology, 2006,15 (3) : 254-258

[14] 罗卫红,王壬. 口外弓椎磨牙向后治疗安氏Ⅱ类 1 分错牙合的分析研究[J]. 实用口腔医学杂志,2000 ,16(13):229-231
Luo Wei-hong, Wang Ren, Fu Min-kui. An eva lua tion for trea tmen t of Cla ss IIma locclus ion by extraora l force [J]. Journal of Practical Stomatology, 2000,16(13):229-231

[15] Yao CC, Lee JJ, Chen HY, et al. Maxillary molar intrusion with fixedappliances and mini- implant anchorage studied in three dimensions[J]. Angle Orthod, 2005,75 (5) :754-760

(上接第 2146 页)

[6] El-Shawarby SA, Connell RJ. Induction of labour at term with vaginal prostaglandins preparations: a randomised controlled trial of Prostin vs Propess [J]. J Obstet Gynaecol, 2006, 26(7):627-630

[7] Ayaz A, Shaukat S, Farooq MU. Induction of labor: a comparative study of intravaginal misoprostol and dinoprostone [J]. Taiwan J Obstet Gynecol, 2010, 49(2):151-155

[8] Ferraiolo A, Dellacasa I, Bentivoglio G, et al. Evaluation of patients' satisfaction of cervical ripening using dinoprostone by either intravaginal gel or pessary: an open-label, randomized, prospective study [J]. J Reprod Med, 2010, 55(9-10):423-429

[9] Driessen M, Bouvier-Colle MH, Dupont C, et al. Postpartum hemorrhage resulting from uterine atony after vaginal delivery: factors associated with severity [J]. Obstet Gynecol, 2011, 117(1):21-31

[10] Hofmeyr GJ, Gü lmezoglu AM, Pileggi C. Vaginal misoprostol for cervical ripening and induction of labour [J]. Cochrane Database Syst Rev, 2010, 6(10):CD000941

[11] Wei SQ, Luo ZC, Qi HP, et al. High-dose vs low-dose oxytocin for labor augmentation: a systematic review [J]. Am J Obstet Gynecol, 2010, 203(4):296-304

[12] Kunt C, Kanat-Pektas M, Gungor AN, et al. Randomized trial of vaginal prostaglandin E2 versus oxytocin for labor induction in term premature rupture of membranes [J]. Taiwan J Obstet Gynecol, 2010, 49(1):57-61

[13] Nanda S, Singhal SR, Papneja A. Induction of labour with intravaginal misoprostol and prostaglandin E2 gel: a comparative study [J]. Trop Doct, 2007, 37(1):21-24