

双胎妊娠一胎宫内死亡 18 例临床分析

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摘要 目的 探讨双胎妊娠中一胎宫内死亡的原因、对母亲和存活胎儿的影响及临床处理方法。方法 对 2001 年 1 月至 2011 年 10 月分娩的双胎妊娠之一胎宫内死亡的 18 例产妇临床资料进行回顾性分析。结果：双胎妊娠一胎宫内死胎的发生率占双胎的 1.08%，其中单绒毛膜双羊膜囊双胎(monochorionic-diamniotic twin, MCDA)11 例(61.11%)，双绒毛膜双羊膜囊双胎(dichorionic-diamniotic twin, DCDA)7 例(38.89%)。胎儿死因 胎盘脐带因素 3 例(16.67%)，胎儿畸形 1 例(5.56%)，妊娠并发症 3 例(16.67%)，双胎输血综合征(twin-twin transfusion syndrome, TTTs)3 例(16.67%)，宫内感染 3 例(16.67%)，不明原因 5 例(27.78%)。另一胎选择剖宫产者 13 例，阴道分娩 3 例。双胎一胎死亡后对母体的凝血功能影响不大($P>0.05$)。结论 单绒毛膜双胎较双绒毛膜双胎母儿结局存在差别，双胎一胎宫内死亡对母体及存活儿有一定影响。对于孕周小，胎儿尚不成熟的病例，可严密监测存活胎儿宫内情况，行期待治疗延长孕龄至足月再分娩。

关键词 双胎妊娠；一胎死亡；期待疗法

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18 cases of Twin Pregnancy Complicated by Single Intrauterine Fetal Death

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ABSTRACT Objective: To investigate the cause and factors of the mother and fetus survival in single intrauterine fetal death complicated by twin pregnancy and clinical treatments. **Methods:** To collect 18 cases of twin pregnancy complicated by single intrauterine fetal death in our hospital from January 2001 to October 2011 and their clinical data were retrospectively analyzed. **Results:** Single intrauterine fetal death accounted for 1.08% in twin pregnancy, in which 11 cases (61.11%) were monochorionic-diamniotic twin (MCDA), and 7 cases dichorionic-diamniotic twin (DCDA) (38.89%). The cause of fetal death: 3 cases of Placental umbilical cord factor (16.67%), 1 case of fetal malformation (5.56%), 3 cases pregnancy complications (16.67%), 3 cases twin-twin transfusion syndrome (TTTs) (16.67%), 3 cases intrauterine infection (16.67%), and unknown causes in 5 cases (27.78%). Cesarean section was the delivery mode in 15 cases, and 3 cases vaginal delivery. Little effect was on mother's coagulation in twin pregnancy after single intrauterine fetal death ($P>0.05$). **Conclusions:** There were differences in the maternal and fetal outcome between DCDA and MCDA. A lot of impact on the mother and survival fetus occurred after single intrauterine fetal death in twin pregnancy. Expectant therapy was an effective choice for twin pregnancy complicated by single intrauterine death before delivery because the small gestational age and immature fetus.

Key words: Twin pregnancy; Intrauterine fetal death; Expectant therapy

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双胎妊娠是妊娠各种并发症发生的高危因素之一，而一胎宫内死亡在双胎妊娠并发症中极为少见^[1]。死胎对另一存活胎儿及母亲将会产生何种影响，是终止还是继续妊娠，妊娠结局究竟如何，是临床上值得探讨的问题。双胎妊娠之一宫内死亡的临床处理需同时考虑宫内存活胎儿成熟度及死胎对母体凝血功能的影响，从而选择合适的分娩时机及方式，以获得最佳的妊娠结局^[2]。因此，本研究对 18 例双胎妊娠孕晚期一胎宫内死亡的病例进行回顾性分析，以探讨影响母儿预后的相关因素。

1 临床资料

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本院 2001 年 1 月至 2011 年 10 月共收治双胎 1667 例，在孕晚期双胎妊娠发生一胎宫内死亡者 18 例，发生率 1.08%。孕妇年龄 21 岁到 36 岁，平均年龄 27.1 岁。经产妇 1 例，初产妇 17 例。体外受精胚胎移植(IVF-ET)术后 3 例，自然受孕 15 例。根据产前检查及超声检查，诊断为双胎一胎宫内死亡的时间 28 周 ~33+6 周 8 例，≥ 34 周 10 例。分析指标包括双胎绒毛膜类型、一胎宫内死亡的孕周、终止妊娠的孕周及方式、死胎原因、存活胎儿情况等，并对相关临床处理进行探讨。

2 结果

2.1 母儿结局

18 例中 ≥ 34 周发现一胎宫内死亡的有 10 例，均在当天行剖宫产手术终止妊娠。其中单绒毛膜双羊膜囊双胎(monochorionic-diamniotic twin, MCDA)有 6 例，1 例(孕 35+ 周)多发

畸形, 出生后 3 小时死亡 (胎死宫内的一胎也是多发畸形) 3 例新生儿入 NICU。双绒毛膜双羊膜囊双胎(dichorionic-di-amniotic twin, DCDA)有 4 例 2 例入 NICU。 <34 周发现一胎死亡者 8 例。2 例早产临产, 为 DCDA, 阴道分娩。其中 31 周分娩的早产儿因宫内感染, 1 小时死亡。另 1 例 29 周分娩的入 NICU。34 周前一胎胎死宫内的病例中, 有 3 例发现一胎死亡后当天剖宫产术(32+ 周, 31+ 周, 28+ 周) 3 例均为 MCDA, 新生儿均入 NICU 2 例为 16, 38 天。另 1 例因宫内感染手术, 新生儿入 NICU 60 天。34 周之前一胎胎死宫内的另 3 例选择期待

治疗。期待治疗中 1 例为 DCDA, 期待至 36+6 周, 阴道分娩 2 例为 MCDA, 1 例期待治疗中发现存活胎儿脑积水, 孕 32 周行利凡诺引产, 另一例在孕 33 周剖宫产终止妊娠, 新生儿严重脑室扩张, 存活 3 天死亡。

2.2 死胎原因

脐带胎盘因素 3 例(脐带高度螺旋 2 例, 胎盘早剥 1 例), 双胎输血综合征 3 例, 胎儿畸形 1 例, 宫内感染 3 例, 子痫前期重度 1 例, GDM 1 例, 羊水过多 1 例, 原因不明 5 例。

表 1 双胎妊娠之一胎宫内死亡 18 例母儿结局一栏表

Table 1 18 cases of maternal and fetal outcome in single intrauterine fetal death complicated by twin pregnancy

No.	Type of twin pregnancy	Gestational age of single intrauterine fetal death	Weeks of delivery	Mode of delivery	Cause of death	Live fetal weight(g)	Live fetal Apgar Score	Entry into NICU	Live fetal outcome
1	MCDA	35+6	35+6	C-section	Multiple malformations (multiple finger deformities, cleft lip and palate)	1770	4-2-5	Abandon rescue	Multiple malformations, Cleft palate. Survived for 3 hours
2	DCDA	31+6	36+6	Vaginal delivery	Unknown	2858	10	Yes, 6 days	Well
3	MCDA	32+4	32+4	C-section	Severe preeclampsia	1570	8-10	Yes, 16 days	Well
4	DCDA	38+6	38+6	C-section	A high degree of helical umbilical cord.	2822	10	No	Well
5	MCDA	31+1	31+1	C-section	intrauterine infection	1584	5-9	Yes, 60 days	Well
6	MCDA	30+1	32	induced labor by Rivanol	Unknown	1848	5-6-6	Abandon rescue	Survive for 45 hours, hydrocephalus, dilatation of the stomach
7	MCDA	36+3	36+3	C-section	TTTs	2215	3-4-6	Yes, 5 days	Well
8	DCDA	34+6	34+6	C-section	GDM	2425	10	Yes, 6 days	Well
9	DCDA	35	35	C-section	Unknown	2806	10	No	Well
10	DCDA	31+2	31+2	Vaginal delivery	intrauterine infection	1852	4-2	Abandon rescue	Survived for 1 hour
11	DCDA	36	36	C-section	Unkown	3234	10	Yes	Well
12	MCDA	36+6	36+6	C-section	A high degree of helical umbilical cord.	3180	10	No	Well
13	DCDA	29+5	29+5	Vaginal delivery	Polyhydramnios	1150	2-9	Yes, 31 days	Well
14	MCDA	35+5	35+5	C-section	TTTs	2408	7-7-8	Yes, 4 days	Well
15	MCDA	36+6	36+6	C-section	Placental abruption	2848	8-10	No	Well
16	MCDA	34+5	34+5	C-section	TTTs	2310	9-10	Yes, 14 days	Well
17	MCDA	28+3	28+3	C-section	intrauterine infection	1490	9-10	Yes, 38 days	Well
18	MCDA	30	33	C-section	Unknown	2022	7-8	Abandon rescue	Survived for 3 hours. Severe ventriculomegaly

2.3 母体凝血功能

所有病例均未产生弥漫性血管内凝血(DIC)。期待治疗的病例,每周检测2次凝血功能,多次检查均为正常。分娩后,母亲恢复佳,未发生并发症,均按期出院。

表2采用均数和四分位数间距表示(P25~P75),进行秩和检验发现期待治疗患者凝血功能与当天分娩者无统计学差异($P>0.05$)。

表2 孕妇凝血功能比较

Table 2 Comparison of coagulation of pregnant women

Group	PT(s)	TT(s)	APTT(s)	Platelet(*10 ⁹ /L)
The day of delivery when found fetal death. (n=15)	12.3(11.6~12.9)	17.5(16.8~18.0)	33.2(31.8~34.6)	198.5(144.5~218.2)
Expectant therapy (n=3)	12(11.5~12.4)	17.2(16.5~17.7)	33.5(31.4~35)	176.3(117.2~205.3)
P-value	>0.05	>0.05	>0.05	>0.05

Note: PT: prothromb in time; TT: thromb in time; APTT: activated partial thromboplast in time

3 讨论

3.1 双胎之一胎死宫内的原因

双胎之一胎死宫内较少见,我院11年间孕晚期发生仅18例,发生率1.08%。该病临床上较少见,鲜有前瞻性大样本的病例分析。国外发生率0.5~6.8%,国内报道3.65%~8.9%^[3]。本组病例不包括早孕及中孕期间一胎死亡。而在早中孕发生双胎一胎死亡的概率较大,据Malinowski W等^[4]报道,妊娠前3月常规B超发现双胎之一胎死宫内的发生率为24.2%。双胎之一胎死宫内的原因在多数情况下并不清楚^[5]。死亡原因主要有:(1)脐带因素:缠绕、打结、扭转;(2)胎儿胎盘因素:胎儿畸形、染色体异常、妊娠合并症;(3)双胎独有因素:双胎输血综合征、脐带缠绕(单羊膜囊双胎)。

双胎输血综合征^[6]是造成单卵双胎一胎死亡的主要原因。双胎输血综合征因其动静脉吻合可使供血儿出现贫血,血容量减少,生长受限。受血儿血容量增多,水肿^[7]。有研究报道,28周之前诊断的双胎输血综合征均以难免流产告终,而28周之后诊断者围产儿病死率20%,并且相关治疗难以改善预后^[8]。

3.2 母体凝血功能的变化

死胎超过5周时,来自死胎及其胎盘的凝血激酶进入母体后,可能对母亲的凝血系统造成一定的影响,DIC危险性大大增加^[9]。如孕周尚早,存活胎儿未成熟,过早地终止妊娠势必增加早产儿的病死率,采取期待疗法又担心死胎滞留后是否会释放凝血活酶,引起母体凝血功能障碍。但是,国外数篇文献报道,双胎中一胎死亡后很少或几乎不影响母体的凝血功能^[10-12]。主要原因在于曾供给死胎的胎盘大量纤维蛋白沉积,直接降低母体纤维蛋白原,增加纤维蛋白的降解产物。同时或可阻断从胎儿和胎盘来的促凝血酶原激酶进入母体循环,预防DIC的发生。Malinowski W等^[13]报道妊娠晚期双胎之一胎死宫内的12例均未发生DIC。本研究18例也未发生DIC。但是,在双胎一胎死亡后的期待治疗过程中仍应动态监测DIC的各项指标,及早发现异常。

3.3 对存活胎儿的影响

双胎一胎死宫内可能出现第二个胎儿死亡,发生存活胎儿神经系统损伤、多器官损伤和早产。而绒毛膜类型对存活胎儿的预后有很大影响^[14]。双绒毛膜包括双卵双胎和30%的单卵双

胎,预后较好。而单绒毛膜双胎,胎盘中几乎总是(96%)存在血管吻合,血管吻合不可预测,且随机分布。一胎儿死亡后,死胎释放的凝血活性物质通过胎盘血管吻合进入活胎,造成DIC。大量组织和器官坏死和囊性变,包括肾、肺、脾、肝、脑。活胎可向血压为零的死胎灌注血液,迅速发生贫血和低血压,导致死亡^[15]。

3.4 终止妊娠的时机选择

主要考虑早产对新生儿的影响及存活胎儿是否存在脏器损伤。双绒毛膜双胎因不存在吻合血管,一胎死宫内后一般不会影响生存儿的生长发育,预后较好。预后主要与早产相关^[15]。34周之后发现一胎死亡,应进行胎肺成熟度检查后,再考虑终止妊娠,以提高围产胎儿存活率。34周之前,可期待治疗,尽量延长孕周,并加强存活儿的宫内检测^[11]。本组病例中有1例双卵双胎,期待治疗至36+6周,预后佳。单绒毛膜双胎,死胎滞留宫内时间长短与存活胎儿脑损伤之间是否存在联系,提前分娩能否避免或减少这种损害,尚不清楚。对单绒毛膜双胎,一般认为,中孕晚期和晚孕期有发生多囊性脑软化的风险,但神经系统何时受到影响尚不清楚。存活胎儿的围产儿死亡率38%,存活者也常有多脏器的损伤,如脾、肾、胃肠道、皮肤、脑^[16]。也有报道,单绒毛膜双胎如死胎滞留宫内5天以上,死胎血中大量凝血活酶和经双胎间的吻合血管进入活胎引起栓塞,生存儿发生脑障碍的危险性极高,如在5天之内分娩,则能改善其预后。对孕34周以后发现的单绒毛膜双胎一胎死亡的病例,估计胎儿出生能存活,即可终止妊娠。本组的6例,除1例多发畸形,新生儿死亡外,其余5例新生儿预后佳。34周之前发现单绒毛膜双胎一胎死亡的病例,终止妊娠时机需兼顾到早产及存活儿的损伤。Gall^[17]认为单卵双胎期待治疗达33周可考虑终止妊娠,双卵双胎可观察治疗到36周。该研究发现新生儿出生体质随终止妊娠孕周的增加而增高,且34周以后出生的新生儿住NICU的时间明显缩短,抢救及住院费用降低。关于死胎滞留宫内时间长短与存活胎儿脑损伤之间是否存在联系,提前分娩能否避免或减少这种损害,尚不清楚。各项监护正常时,也可能已发生损伤。NST、生物物理评分、脑部超声等监测效果有限,但有报道胎儿脑MRI能在产前检查到脑白质软化^[18]。因此,孕14周前超声测定绒毛膜性十分重要。一旦在孕晚期发生一

胎宫内死亡,在积极处理产科并发症的同时,B超监测活胎宫内发育情况,并配合母体的凝血功能监测,获得良好母子结局。

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