DOI:10.16016/j.1000-5404.1999.06.004

Effects of blast injury of the lungs on learning and memory capacity and their mechanisms in rats*

Jiang Jianxin, Ibolja Cernak, Wang Zhengguo, Liao Weihong, Xu Hong, Liu Dawei, Shi Lin, Li Xiaoyan, Wang Kewan (Research Institute of Field Surgery, Daping Hospital, Third Military Medical University, Chongqing, 400042)

Abstract Objective: To study the changes of learning and memory capacity after blast injury of the lungs in rats. Methods: Before the infliction of blast injury, all the rats were trained in a computer-controlled two-way shuttle box 20 trial sessions per day for 6 consecutive days to establish active avoidance response (AAR). The rats with an acquisition rate of 80% or more for AAR in the last 2 days were inflicted with pulmonary blast injury (PBI) in a BST-Ⅱ bio-shock tube. Cerebral content of NO_2^-/NO_3^- and cGMP was determined with colorimetric assay kit and enzyme immunoassay kit respectively. Results: ①After PBI, AAR was significantly decreased and the latency of AAR and escape response was markedly prolonged. ②The content of NO_2^-/NO_3^- and cGMP in the hippocampus and brainstem was significantly increased. ③The changes of NO_2^-/NO_3^- in the brain tissue were significantly correlated with injury severity, AAR, escape response and latency of AAR respectively. Conclusion: Our findings suggest that simple PBI can induce damages in the remote organs such as the central nervous system throuth the increased production of NO in the hippocampus and brainstem.

Key words pulmonary blast injury; neurotrauma; pathogenesis; nitric oxide; rat

* This project was supported by the "Ninth five" obligatory budget of PLA, No. 96L040

子宫腔纱条填塞术控制剖宫产出血26例

个案与短篇

Control of post-cesarean section hemorrhage with intra-uterine ribbon gauze packing——Report of 26 cases

樊国玉* （重庆市第八人民医院）重庆，400015
李良容 （重庆市巴南区人民医院）重庆，401320

1 临床资料

重庆市巴南区人民医院1987年1月至1998年12月分娩总数10 885例，其中剖宫产2 300例，剖宫产产后出血226例，发生率为9.8%(226/2300)。剖宫产产后出血行宫腔纱条填塞术26例，年龄最大37岁，最小20岁，平均年龄26.5岁。孕产次：第一胎2例，≥2胎24例；初产妇21例，经产妇5例。

术后观察一般情况及血压、脉搏等生命体征，注意观察宫底高度、子宫大小变化、阴道流血量。常规使用催产素静脉滴注加强宫缩3 d，全部静脉滴注广谱抗生素防治感染。

纱条放置时间及取出经过：纱条放置时间15～39 h，平均23.3 h。在取纱条的同时静脉使用宫缩剂，外阴常规消毒后缓慢抽出纱条。17例取出纱条全部血染，9例纱条部分血染。所有病例纱条取出无困难。本组26例剖宫产产后出血经宫腔纱条填塞术后（或合用阴道纱条填塞），出血都得到及时控制。术后所有病人一般情况好，血压、脉搏正常。纱条放置至取出前阴道出血量一般不多。26例中出血量最多的1例100 ml，其余病例出血量小于50 ml。1例前置胎盘手术者在取出纱条5 min后阴道流血，用宫缩剂无效，出血达400 ml。再次用纱条填塞阴道压迫止血成功。

26例中8例发生术后病，占30.8%，术后4～10 d体温恢复正常。其中1例有胎膜早破史，4例有产前出血史。26例剖宫产伤口均为一期愈合，无严重感染及晚期产后出血发生。术后住院天数7～10 d，平均住院7.8 d。

2 讨论

宫腔纱条填塞术是一种比较古老的止血方法，近年来国内外产科工作者重新评价了该方法，认为该方法不但可以争取产后出血抢救时间，而且对保留严重出血患者的生育机能具有一定意义。它适用于宫缩乏力及胎盘因素引起的产后出血[1]。本组26例剖宫产产后出血，由宫缩乏力所致15例，占57.7%，居首位。胎盘因素所致11例，占42.3%，居第二位。26例经常规处理无效行宫腔纱条填塞术（7例合用阴道纱条填塞）止血一次成功。术后无宫腔隐匿出血，无严重宫腔感染。文献报道剖宫产术后病率为13%～59%，本组术后病率为30.8%。故认为，宫腔纱条填塞术仍不失为剖宫产产后出血一种有效的止血方法。

关键词 剖宫产；产后出血；子宫腔纱条填塞术
中图法分类号 R714.461；R719.8

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（收稿：1998-04-05；修回：1999-06-10）
（编辑 张大春）

* 樊国玉，女，54岁，副主任医师

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