以满足临床病理检验的要求。

鼠源性单克隆抗体及兔源性多克隆抗体进行免疫组化研究显示,染色效果比较理想,背景染色可能反映基质中这些因子的存在。保存达 7个月的石蜡块切片进行 RNA原位杂交同样取得了理想的结果,提示该方法可用于长期保存标本的研究。免疫组化与原位杂交之间阳性细胞数有显著相关性,提示实验结果可靠,未受其他客观条件的明显干扰。

骨髓细胞涂片进行免疫组化和原位杂交的研究国内早有报告,但造血调控很大程度上都属于自分泌与旁分泌作用,因此在造血组织原位显示这些因子的表达尤其重要。我们建立的骨髓组织免疫组化和原位杂交技术具有简便、稳定的特点,可利用常规骨髓活检保存的石蜡块进行研究,值得推广应用。

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Study of bone marrow biopsy samples with immunohistochemistry and *in situ* hybridization

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Abstract Objective: To establish a method that may fulfill the need for routine pathological examination, immunohistochemistry and *in situ* hybridization researches of bone marrow biopsy samples. Methods: After fixation and decalcification with Lowy FMA solution, bone marrow biopsy samples were stained routinely as well as with immunohistochemistry and *in situ* hybridization of TGF-β1 and MIP-1α. Results: The samples showed a good preservation of morphology in routine examination while immunohistochemistry and *in situ* hybridization with different antibodies and probes achieved perfect staining too. Conclusion: Fixation and decalcification of bone marrow biopsy samples with Lowy FAM solution may not only be used as a routine method for clinical bone marrow pathological examination, but also provide a perfect procedure for immunohistochemistry and *in situ* hybridization research.

Key words bone marrow biopsy; immunohistochemistry; *in situ* hybridization

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控制性过度通气和纳洛酮辅助抢救重度休克并发脑疝成功 1例

Emergency treatment of infantile severe shock complicated with cerebral hernia with controlled hyperventilation and naloxone

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1 临床资料

患者,男,1岁 4个月,因“坠入酒糟池后 2 h”于 1996年 12月 9日急诊入院。溺池数分钟被救起,已无呼吸,心跳“微弱”,脉搏未扪及。当地医生做人工呼吸至有自主呼吸后送我院,途中出现抽搐。入院查体:体温 36.1℃,脉搏 112次/min,呼吸 24次/min,体重 10 kg,血压 0,深昏迷,四肢强直,唇周发绀,呼吸深大,不规则,双肺满布干鸣音。入院后血气分析:pH 6.934, $PaCO_2$ 11.27 kPa, PaO_2 2.4 kPa, HCO_3^- 18.1 mmol/L。肾功:

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Establishment of human glioma cell line CHG-5 and its biological features

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Abstract Objective: To establish a human malignant human glioma cell line and investigate its biological features. Methods: Surgically resected specimen of a case of mixed astrooligodendrocytoma of grade Ⅱ was collected. After primary culture and cloning, a cell line designated as CHG-5 was established and its biological features were studied with optical and electron microsopies, immunocytochemistry, flow cytome try, karyotype analysis and experimental transplantation to nude mice. Results: The surgical specimen, cell line and xenografted tumor exhibited the characteristics of glioma under electron microscopy. Immunohistochemical staining for GFAP, vimentin and VEGF were positive. There was a high rate of xenografted tumor formation in nude mice. CHG-5 cell line showed a stronger reaction to GFAP and weaker reaction to vimentin than SHG-44 cell line. Conclusion: CHG-5 cell line is cell line of malignant glioma and certain biological characteristics of CHG-5 are different from those of SHG-44.

Key words glioma cell line; cell culture

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BUN 7.83 mmol/L, Cr 87.9μmol/L。血常规: Hb 130 g/L, WBC 8.2× 10^9/L, N 0.78, L 0.22, Pt 96× 10^9/L。肝功: ALT 48 IU/L。心肌酶谱 AST 130 IU/L, CPK 1 627 IU/L, LDH 664 IU/L, HBDH 626 IU/L。胸片"右上肺炎伴不张"。诊断:① 溺酒糟池;② 呼吸衰竭(Ⅱ型);③ 吸入性肺炎伴右肺不张;④ 重度休克;⑤ 缺氧性脑病;⑥ ARDS;⑦ 多器官功能衰竭。入院后立即给予安定、鲁米钠止痉,多巴胺、地塞米松、甲基强的松龙、速尿、毒 K及碳酸氢钠、654-2等药物治疗,予限制入量,遥控心电监护、经皮测定氧饱和度、二氧化碳监测仪等仪器监护。入院后 2 h 40 min测血压仍为 0,2 h 45 min给予纳洛酮 10μg/kg静注 1次,1 h后测血压升至 12/8 kPa,再予纳洛酮 10μg/kg静注,血压维持于 11~ 12/8~ 9 kPa,继续予抗感染,纠正酸中毒,强心,气管插管,纽邦 2000 E呼吸机人工通气等治疗,血 pH值入院后 3 h升至 7.327 入院后 13 h神智好转,呼之能应。入院后 19 h患儿突然再次出现抽搐,双侧瞳孔一大一小,对光反射消失。即行控制性过度通气治疗,保持 $PaCO_2$在 3.33~ 4.67 kPa, PaO_2在 12.0~ 20.0 kPa 30 min后双侧瞳孔恢复等大。3 h后复查血气: pH 7.299, $PaCO_2$ 5.22 kPa, PaO_2 15.09 kPa, HCO_3^- 20.5 mmol/L。继续给予甘露醇等治疗。入院 29 h脱离呼吸机,后期予促进脑细胞功能恢复药物。出院后随访,患儿智力正常。

2 讨论

纳洛酮是阿片受体特异性拮抗剂,拮抗内啡肽,能重新建立前列腺素和儿茶酚胺的循环机制,增加左室收缩力,提高动脉压[1];同时,对Ⅱ型呼吸衰竭及酒精中毒治疗亦有效,故而使用该药 1 h后休克回逆。

本例患儿心功能受损,脑疝时如选择甘露醇降颅压可导致心肺功能恶化甚至肾小管坏死。为此,我们选择了控制性过度通气。方法:气管插管下,吸入 0.4~ 1.0浓度氧气,使 PaO_2维持在 12~ 20 kPa, $PaCO_2$维持在 3.33~ 4.67 kPa,而以 3.33~ 4.0 kPa最为理想。持续数分钟即起降低颅压作用($PaCO_2$每下降 0.133 kPa脑血流量可减少 4%,脑容量可减少 0.049 ml/100 g脑组织)。其作用可维持 2~ 3 h。过度通气时间以不超过 1 h为宜。若 $PaCO_2$低于 2.67 kPa时,可引起脑缺血、缺氧,反而加剧颅内高压[2]。本患儿过度通气维持 30 min脑疝回纳,生命体征稳定,后继甘露醇维持降低颅压,效果满意。若病情反复,应每 4 h进行一次血气分析、调整人工呼吸机之频率、潮气量、呼吸比及压力。作者认为,控制性过度通气降低颅内高压,尤其是与休克并存时不失为无创抢救脑疝的一优先选择。

关键词　控制性过度通气;纳洛酮;休克;脑疝

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