控因子来调节这种周期性的生长过程。

实验表明群体细胞生命活动不仅被动地接受环境的作用发生变化,还能主动通过产生调节因子,自我调节主动地适应环境和进行生命活动。

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A study on regulative factors of bacterial biowaves*

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Abstract Objective: To observe the self-regulation of wave growth of Proteus mirabilis (P. mirabilis) and to explore the role of the regulative factors of bacterial biowaves in self-arrangement of a group of cells. Methods: P. mirabilis was used to observe the dynamic changes in pH value and regulative factors of bacterial biowaves during wave growth. Results: 1) The pH value of the outer red ring was increased and waste materials were discharged. 2) The regulative factors were produced during the wave growth. Conclusion: As multicellular organisms, bacteria are not only regulated by the environment but also self-regulated by the regulative factors produced by themselves to adapt to the environment and survive in nature.

Key words cryptic growth order; non-equilibrium environment; regulative factor of bacterial biowaves

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硬膜外麻醉下完全性束支传导阻滞暂时恢复 2例

Temporary recovery of complete bundle branch block under epidural anaesthesia a report of two cases

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在完全性束支传导阻滞(CBBB)病人中,特别是完全性左束支传导阻滞(CLBBB)病人,在麻醉手术时,由于有可能影响到明显的血液动力学变化,而致严重后果,本处观察到两例CBBB的病人在硬膜外麻醉下恢复正常,下面进行报道并对产生机制进行初步分析,以期有利于提高麻醉手术安全性。

1 临床资料

例 1,患者,男,68岁,因左腹股沟斜疝,行斜疝修补术。术前 BP20/12 kPa, ECG示 CLBBB,无自觉症状,未经治疗。术前半小时常规肌注鲁米那钠,阿托品。入室后 ECGⅠ导联示 P-R增宽, QRS间期增宽,平顶大 R型波,无 q及 S波型,结合术前ECG,诊断为 CLBBB。手术采用硬膜外麻醉(穿刺间隙 T_{12}-L_1↑, 1.6%利多卡因+ 1∶20万 AD),穿刺成功后,注入药物 5 ml, 5 min后注入 7 ml, 10 min后手术开始,此时 BP16/8 kPa, ECG由 CLBBB转复为正常,测麻醉阻滞平面上限 T_8,下限因手术影响测量困难,未进行测量。手术历时 65 min,手术结束

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Expression of pulmonary surfactant associated protein A, B and C mRNA in plateau ARDS*

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Abstract Objection: To study the expression and regulation of pulmonary surfactant associated protein A, B and C mRNA on oleic acid-induced model of RDS of rats under acute hypoxia. Meanwhile, the mechanism of the changes was investigated. Methods: Rats were placed in hypobaric chamber for 12 h and then oleic acid was injected into the superior vena cava to induce RDS. The expression of pulmonary surfactant associated protein A, B and C mRNA was observed with the method of dot blot hybridization. Results: Oleic acid could inhibit the expression of surfactant associated proteins since SP-A, SP-B and SP-C mRNA were expressed significantly lower in the group receiving loeic acid injection. Conclusion: Oleic acid can inhibit the expression of SP-A, SP-B and SP-C mRNA in hypoxic rats with pulmonary injury.

Key words hypoxia; surfactant associated proteins; gene expression; respiratory distress syndrome

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后,麻醉平面消退至 T_{12}时,心电图监测由正常又转为 CLBBB.整个手术过程血压稳定于 16/8 kPa,呼吸平稳,面罩吸 O_2, SPO_2 100%。

例 2,患者,女,54岁,因慢性结石性胆囊炎行胆囊切除术,术前 BP19/10 kPa, ECG示完全性右束支传导阻滞(CRBBB),无自觉症状,未行治疗,术前半小时常规肌注鲁米那钠,阿托品。入室后 ECG I 导联示 P-R增宽,S波型明显增宽粗钝,结合术前 ECG检查,诊断为 CRBBB.手术采用硬膜外麻醉(穿刺间隙 $T_{8,9}$↑,2%利多卡因+ 1∶20万 AD),穿刺成功后注药 5 ml, 5 min后追加 7 ml, 15 min后手术开始,此时 BP17/8 kPa,测平面 T_{4-10}.手术开始时 ECG由 CRBBB转变为正常波形,手术历时 75 min.手术结束后,当麻醉平面消退至 T_9时,ECG监测又复现 CRBBB,整个手术过程 BP波动于 17~19/8~10 kPa,呼吸平稳,采用面罩吸 O_2, SPO_2 100%。

2 讨论

在 CBBB的病人中,特别是 CLBBB的病人,在麻醉手术时,由于有可能影响到明显的血液动力学变化,而致严重后果,危及病人安全。因此,对于束支传导阻滞(BBB)的病人,如何避免麻醉手术对病人的影响,对于提高手术的安全性有重要意义。腰麻时,CLBBB暂时性恢复的病例已见报道,但硬膜外麻醉下致 CLBBB.CRBBB恢复的病例进行观察的极少。出现 BBB时,应考虑心肌存在病变,特别是 CLBBB.本两例病人,均为中老年病人,处于冠心病的高发期,冠心病在发病早期具有隐匿性,即病人无自觉症状,临床各种检查无明显心肌缺血征象,但心肌损害已经出现,当心肌供血供氧与耗氧矛盾改善时,心肌损害减轻或逆转;反之,则加重。利多卡因药理作用属于局麻药和 Ib类抗心律失常药物。作为后者,可改善希-浦系统传导并消除单向传导阻滞,抑制心肌收缩,提高致颤阈;作为前者,可以阻断神经传导,利多卡因在麻醉时,较低浓度即可阻断交感神经传导,所以交感神经阻断平面通常较临床测定镇痛平面广,进而扩张胸腹腔脏器血管,降低外周阻力。利多卡因在局部吸收入血后,作用于心肌,抑制心肌收缩。二者相互作用减少心肌耗氧,缓解供氧耗氧矛盾。另一方面,由于利多卡因所特有的 Ib类抗心律失常作用,改善希-浦传导系统功能,消除单向传导阻滞。当麻醉平面消退时,其药理作用亦消退,病人的 BBB的病因又再次出现。

关键词　硬膜外麻醉;束支传导阻滞
中图法分类号　R614.4

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