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Inhibitory effects of cisplatin in combination with γ-ray irradiation on abdominal dissemination of ovarian cancer in nude mice

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Abstract Objective: To investigate the inhibitory effects of cisplatin in combination with γ-ray irradiation on the abdominal dissemination of ovarian cancer. Methods: After the model of the abdominal dissemination of ovarian cancer was established in nude mice, cisplatin in combination with γ-ray irradiation was employed to treat the disease. Results: The abdominal dissemination of ovarian cancer was partly inhibited by low-dose cisplatin in combination with γ-ray irradiation while completely inhibited by high-dose cisplatin in combination with γ-ray irradiation. Conclusion: Cisplatin in combination with γ-ray irradiation can exert synergistic effects of anti-ovarian cancer.

Key words ovarian cancer; radiotherapy/chemotherapy; cisplatin; nude mouse

猫、狗、兔视神经管及眼眶形态的比较研究

A comparative study on optic canal and orbital form of cat dog and rabbit

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间接视神经损伤是临床最常见的视神经损伤类型[1],建立相应的动物模型是目前眼科研究视神经损伤的迫切需要。为此,我们对猫、狗、兔三种动物的眼眶形态、视神经及视神经管进行了解解剖观察和测量,为建立间接视神经损伤动物模型提供依据。

1 材料与方法

成年猫、狗、兔各4只(8只眼),雌雄不限,用空气栓塞或过量麻药致死,立即去除头盖骨和脑组织,仔细解剖出视交叉、视神经管眶口及视神经,并测量和观察眼眶形态。

2 结果

2.1 视神经、视神经管的测量,见表1

2.2 眼眶形态结构

猫、狗没有完整的骨性眼眶,其眶窝后外侧缘为韧带,其下后附着肌肉组成眶窝之后外侧壁,下眶壁也由一组肌肉构成,狗眶内壁与颅底形成约85度夹角;而兔有完整的骨性眼眶,骨壁薄,其形态呈半球形,视神经孔位眶底稍偏后,两眼后眦的连线正好对应视神经孔。

表1 视神经、视神经管的测量(*l*/mm)

动物	视神经			视神经管
	全长	眶内段	颅内段	
猫	22.7± 1.5	17.7± 0.8	3.8± 0.8	1.0± 0.2
狗	41.2± 1.3	31.5± .15	5.1± 0.5	4.1± 0.6
兔	16.4± 1.2	11.4± 1.2	4.1± 0.4	0.8± 0.1
人	40~ 50	25~ 30	10	5~ 10

3 讨论

猫、兔没有视神经管,而是视神经骨孔,而狗有真正的视神经管。若仅从视神经管角度考虑,为观察视神经的管内段损伤机制及相应疗法的效果评价,制作动模型宜选用狗。然而从眼

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Effects of TRH in combination with DA on cardiac function and survival time during hemorrhagic shock in rats*

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Abstract **Objective**: To investigate the effects of TRH in combination with DA on myocardial contractility and survival time during hemorrhagic shock in rats. **Methods**: After the Wistar rats were randomized into four groups of NS, TRH, DA and TRH+ DA and bled to reach a MAP of 5.3 kPa, the MAP value was maintained for 1.5 h and then the animals were intravenously injected with normal saline, TRH, DA and TRH+ DA respectively. **Results**: 5 mg/kg TRH or 1 mg/kg DA alone could significantly increase MAP, LVSP and ± dp/dt_{max} and prolong the survival time in rats during hemorrhagic shock. 2.5 mg/kg TRH in combination with 0.25 mg/kg DA could exert the same or even superior effects to TRH or DA alone. **Conclusion**: TRH in combination with DA can reduce the dose of TRH or DA used alone and exert certain synergetic effects in the treatment of hemorrhagic shock.

Key words thyrotropin-releasing hormone (TRH); dopamine (DA); hemorrhagic shock; rat

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眶形态结构而言,猫和狗均没有完整的骨性结构,只有兔有完整的骨性眶壁,在间接视神经损伤中,骨性眶壁的力传导作用起重要作用。临床资料表明,颅脑外伤伴发视神经损伤病例中70%的伤者是前额或额颞部受力所致[2]。Gross的研究也表明施力到前额骨,通过骨的传导使力最终集中在视神经管的区域[3],说明受力部位与视神经损伤有密切关系。因此,在制作动物模型时,眼眶的形态及受力点是模型成功的关键。猫的眶缘位于前方,而视神经孔则位于眼眶后内侧壁,其颅顶圆突,对其眶缘施加打击力,难以使力量传导至视神经孔部位造成视神经损伤,而若对其颅顶施打击,则可能直接对大脑造成重伤。狗的眼眶形态与猫很相似;此外,狗的眶内壁与颅底形成约85度夹角,而其视神经管则在颅底走行较水平,若在狗的颅顶施力,力的传导将在这一夹角处受力最大,而这一位点距视神经管口尚有一定距离。而兔有相对完整的骨性眶壁,半球状的形态有利力向眶底(视神经孔位)传导;两侧眶缘较颅顶稍高,两上眶缘间的距离较近,有利对上眶缘施力而不致对颅顶产生重损;两眼后眦间的连线正好对应于眼眶的视神经孔,大体标志也明显。因此,从综合因素考虑,兔用于制作间接性视神经损伤模型较为适宜。

关键词　视神经 /损伤;疾病模型,动物
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