DOI: 10.16016/j.1000-5404.1998.06.011

A study of the therapeutical efficacy of Ca^{2+} sensitizer MCI-154 on endotoxic shock rabbits

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Abstract Objective: To investigate the effects of MCI-154, a calcium sensitizer, on organ blood flows, arterial blood gases, some plasma biochemical parameters and survival rate in endotoxic shock rabbits. Methods: After treatment with MCI-154, changes of blood flows of the liver, kidneys and mesentery, arterial bood gases, plasma levels of lactic acid, activity of LDH and β-G were determined, and the survival rate observed. Results: Ten hours after injection of E. coli endotoxin in rabbits, the blood flow the liver, kidneys and mesentery was decreased obviously, metabolic acidosis and respiratory alkalosis occurred and the blood levels of lactic acid, activity of LDH and β-G were increased markedly. Treatment with NS alone had little effect on the above disorders. However, following the treatment with MCI-154+ NS, the blood flow of the above organs was increased significantly, the degree of the derangement of blood gases and acid-base equilibrium was improved and the plasma levels of lactic acid, activity of LDH, β-G were not markedly increased as compared with those of NS treated group. The animal survival rate in MCI-154+ NS group was higher than that in NS group. Conclusion: It is suggested that the blood flows and supply of oxygen to tisues and cells were increased markedly in endotoxic shock rabbits following the treatment of MCI-154, and that MCI-154 could attenuate some of the circulatory disorders caused by endotoxic shock.

Key words endotoxic shock; calcium sensitizer; MCI-154

6例胃平滑肌母细胞瘤的影像诊断

Imaging diagnosis of 6 cases of leiomyoblastoma of the stomach

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胃平滑肌母细胞瘤较为少见,约占胃内肿瘤的 1%[1]。现收集我院经手术病理证实的 6例作一回顾性分析,以探讨其影像诊断价值。

1 临床资料

本组 6例中,男 4例,女 2例,年龄 14~71岁,平均 40岁。临床表现主要为腹痛,伴有腹胀、腹部包块、黑便各 3例。病程半年至 10余年,平均 3年。5例胃镜检查,均发现腔内肿块。胃镜诊断为胃癌 2例,平滑肌瘤、胃溃疡及未定性者各 1例。胃镜取活检者 4例,病理诊断为胃炎 2例,胃溃疡及恶性肿瘤各 1例。手术所见:肿块边缘光滑,界限清楚 4例,肿块与周围组织有粘连者 2例。肿块带蒂者 2例。病理诊断为胃平滑肌母细胞瘤,低度恶性 3例,恶性变、潜在恶性及良性者各 1例。

2 影像表现

6例胃平滑肌母细胞瘤均行 X线上消化道钡餐检查,1例行 CT检查,2例行 B超检查。

2.1 X线钡剂造影表现

本组 6例发生于胃窦部 4例,胃体和胃底各 1例。位于胃后壁 3例,胃小弯侧 2例,胃大弯侧 1例。腔内型 5例,腔内外型 1例。6例胃平滑肌母细胞瘤共 8个病灶。病灶呈球形者 6个,椭圆形 2个。肿块边缘均较光整,其中有分叶 4例。4个病灶有龛影。肿块表面附有不规则的胃粘膜者 2例,病灶周围胃粘膜被推移者 1例。胃窦均有不同程度狭窄,其中 1例腔内外型使胃向前推移受压。肿块周围胃壁蠕动正常。合并肺错构瘤 1例。X线诊断为胃窦癌、胃底恶性肿瘤及平滑肌瘤各 1例;诊断为胃占位性肿块未定性者 3例。

2.2 CT表现

本组 1例行 CT扫描发现胃后壁有向腔内突出的 5 cm×5 cm大小的肿块,边缘光滑,密度较均匀,胃壁不增厚。强化后肿块呈混杂性不均匀性强化,CT值为+56~+76 Hu。

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(收稿: 1997-12-15;修回: 1998-03-18)

(编辑　汪勤俭)

Expression of protooncogene c-fos in catecholamine neurons in the brain stem after acute soman intoxication in rats

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Abstract Objective: To observe the changes of the activity of catecholamine neuron groups in the brain stem after acute soman intoxication. Methods: The changes of fos protein were observed with ABC immunohistochemistry. Results: The number of Fos immunoreactively positive nuclei in catecholamine neurons in the rat brain stem was dramatically increased after soman intoxication. C-fos expression was found to be classical temporary expression. The number of fos positive nuclei began to increase at the 1st h, reached its peak between the 2nd and 3rd h and began to decrease at the 4th h after intoxication. C-fos expression was related to dose of soman rather than seizure activity. Conclusion: Catecholamine neurons are generally activated by soman intoxication, which might represent the primary events of brain behavioral changes. The events seem to be the key reason for seizure activity as well as respiratory and circulatory depletion after soman intoxication.

Key words soman; brain stem; catecholamine neuron; c-fos; rat

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2.3　B超检查

发现胃窦后壁有 3.2 cm× 2.6 cm的低回声块影 1例,边界清晰形态基本规则。另 1例 B超检查发现肿块内有液性暗区。

3　讨论

胃平滑肌母细胞瘤由 Martin于 1960年首先提出,国内外均有报道[1,2]。其特征性病理学改变为瘤细胞为圆形、多边形,大部分瘤细胞原浆内有肌丝,故认为本瘤来源于平滑肌,属肌原性肿瘤,故而划为胃平滑肌瘤的一种特殊类型。

该肿瘤男性多于女性[1],本组 6例中 4例为男性。年龄偏小。临床表现以腹痛为主,病程多较长。胃镜检查多能发现病灶,但因病灶位于肌层,其定性诊断准确性较低。即使是活检,4例中无 1例提及胃平滑肌母细胞瘤的诊断,这与病变位置深且其表面常为粘膜覆盖及钳取的病理组织太少,位置太浅,取材部位太局限等因素有关。

胃平滑肌母细胞瘤多位于胃窦部,胃底及胃体也有发生。病灶多起源于胃后壁肌层,单发多见,多为腔内型,少数为带蒂肿物。肿块多为球形或椭圆形,边缘光整,有深浅不一的分叶。肿物表面多有龛影,为圆形或卵圆形,典型者形成"牛眼征"。其表面的胃粘膜多存在,但分布较紊乱,而周围的胃粘膜及胃壁多有推移改变。

CT检查不仅可显示肿块的腔内部分,还可显示腔外部分,并能清晰显示肿块大小、轮廓、密度、范围及肿物对周围脏器的侵犯和转移等情况[2,3]。灰阶超声检查方便,经济实用,可显示肿瘤的结构及其与周围脏器的关系。

胃平滑肌母细胞瘤 X线诊断极易误诊[1,2]。本组病例除 1例提示胃平滑肌瘤的诊断外,其余均被误诊。且胃平滑肌母细胞瘤与胃平滑肌瘤、平滑肌肉瘤的鉴别亦较困难,主要区别是细胞病理学的细胞组成形态不同[3]。因此,消化道钡餐以及 CT、B超等影像学多为发现病变,对于定性诊断非常困难,即使胃镜或活检都存在一定难度。由于该肿瘤有恶性倾向,本组 5例病理提示有恶变,故发现病变应尽早手术。

关键词　胃肿瘤;平滑肌母细胞瘤

中图法分类号　R816.5

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(收稿: 1998-05-12;修回: 1998-07-14)

(编辑　汪勤俭)

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