

doi: 10.13241/j.cnki.pmb.2014.10.024

尿淀粉酶检测对急性胰腺炎临床诊断的意义*

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摘要 目的:探讨尿淀粉酶检测结果对急性胰腺炎临床诊断的意义。**方法:**选取2011年6月至2012年7月在我院接受治疗的急性胰腺炎患者50例定义为AP组,选取非胰腺炎急腹症患者50例定义为NP组,选取健康人群50例定义为HS组。分别检测三组患者的血淀粉酶(SAMY),尿淀粉酶(UAMY),尿肌酐(UCR)及尿淀粉酶与尿肌酐的比值(UACR),整理并分析检测结果。**结果:**急性胰腺炎组和非胰腺炎急腹症组的患者的血淀粉酶、尿淀粉酶、尿淀粉酶与尿肌酐的比值均高于健康对照组,组间比较差异显著($P<0.05$);非胰腺炎急腹症组与健康对照组的尿淀粉酶和尿肌酐比值相比差异不明显($P>0.05$)。急性胰腺炎组的淀粉酶和尿肌酐比值的敏感性为93.41%,特异性为93%;血清淀粉酶的敏感性为86.7%,特异性为92.2%,均高于临床诊断指标的常用值。**结论:**急性胰腺炎尿液与尿肌酐比值的测定是早前急性胰腺炎诊断和治疗的重要检测指标。

关键词:急性胰腺炎;尿淀粉酶;尿肌酐;尿淀粉酶和尿肌酐比值

中图分类号:R657.51 文献标识码:A 文章编号:1673-6273(2014)10-1904-03

Clinical Significance of UAMY Detection on the Diagnosis of Acute Pancreatitis*

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ABSTRACT Objective: To explore the clinical significance of UAMY detective results for the diagnosis of acute pancreatitis.

Methods: Fifty patients with acute pancreatitis who were treated in our hospital from June 2011 to July 2012 were selected as the AP group; Fifty patients with other abdominal diseases were chosen to be the NP group; and another fifty healthy people were defined as the HS group. Then the detective results of SAMY, UAMY, UCR and UACR of patients were detected and compared respectively. **Results:** The results of AP group and NP group were higher than those of the HS group, and there was statistically significant difference between two groups ($P<0.05$); There was no statistically significant difference between NP group and the HS group on the results of UAMY and UACR ($P>0.05$). The sensitivity of UAMY and UACR was 93.41%, the specificity was 93%; The sensitivity of SAMY was 86.7%, the specificity was 92.2%. The sensitivity and specificity of UAMY and UACR in the AP group were significantly higher than the standard for diagnosing. **Conclusion:** It is suggested that the detection of SAMY, UAMY, UCR and UACR could be the essential indicators on the diagnosis and treatment of the acute pancreatitis.

Key words: Acute Pancreatitis; UAMY; UCR; UACR

Chinese Library Classification(CLC): R657.51 **Document code:** A

Article ID: 1673-6273(2014)10-1904-03

前言

急性胰腺炎(Acute pancreatitis, AP)是指由多种病因引起的胰酶在胰腺内被激活,从而导致胰腺组织出现自身消化、水肿、出血甚至坏死等炎症反应^[1]。急性胰腺炎的临床表现多为急性上腹痛、恶心、呕吐、发热及血胰酶增高等^[2]。急性胰腺炎是消化科比较常见的一种急腹症,其发病原因和影响因素尚未得到明确^[3]。根据病变程度不同,临床上将急性胰腺炎分为轻症急性胰腺炎和重症急性胰腺炎。轻者以胰腺水肿为主,病情常呈自限

性,预后良好;重者则胰腺出血坏死,继发感染、腹膜炎和休克等,病死率极高^[4]。因此,准确检测患者的各项指标并及时提出治疗方案对急性胰腺炎患者病情的发展至关重要^[5]。临床上通常对患者的血淀粉酶、尿淀粉酶、尿肌酐和脂肪酶等进行检测,以此来诊断和治疗急性胰腺炎^[6,7]。其中对尿淀粉酶的检测更为普遍,既方便抽取,又不会对患者造成重大创伤^[8]。但由于生理、环境等多方面因素的影响,尿淀粉酶的检测会对临床诊断和治疗产生一定的影响,导致结果波动较大。本研究对患者的血淀粉酶、尿淀粉酶、尿肌酐及尿淀粉酶和尿肌酐比值进行检测,分

* 基金项目:解放军总医院临床科研扶持基金(2012FC-TSYS-3011);国家自然科学基金青年科学基金项目(30901795)

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(收稿日期:2013-05-10 接受日期:2013-05-30)

析急性胰腺炎患者上述各指标的变化情况,为临床研究提供可利用的资料,现将具体结果报道如下:

1 资料与方法

1.1 基本资料

选取 2006 年 8 月至 2007 年 5 月在本院接受治疗的急性胰腺炎患者 50 例作为 AP 组(急性胰腺炎组),其中,男性 28 例,女性 22 例。本组患者发病期间都曾出现恶心、呕吐、腹痛等急性胰腺炎的临床症状。选取同期接受治疗的非急性胰腺炎的急腹症患者 50 例作为 NP 组(急腹症组),其中,男性 24 例,女性 26 例。本组患者发病期间均表现为非急性胰腺炎的临床症状。另选取健康对照人群 50 例作为 HS 组(健康组),其中,男性 30 例,女性 20 例。以上三组患者年龄、性别等一般资料无统计学差异,有可比性。

1.2 检测方法

1.2.1 收集样本 所有患者抽取 2 mL 静脉血进行血样采集。

1.2.2 检测淀粉酶和肌酐 采用自动生化分析仪(MERCK 和 MEGA)检测血淀粉酶和尿肌酐,采用半自动化分析仪(VITA-LAB-Micro)测定尿淀粉酶。

1.2.3 设定临界值 血淀粉酶临界值为 220 U/L,尿淀粉酶临界值为 1000 U/L,尿淀粉酶和尿肌酐比值控制在 75 U/mmol。通过分析确定相关指标的敏感性和特异性。

1.3 统计学分析

采用 SPSS16.0 统计软件分析,数据比较采用 X^2 检验,以 $P<0.05$ 为差异有统计学意义。

2 结果

2.1 各组 SAMY, UAMY, UCR, UACR 测定结果

如表 1 所示,急性胰腺炎组和非胰腺炎急腹症组患者检测的血淀粉酶,尿淀粉酶,尿淀粉酶和尿肌酐比值的水平均高于健康对照组,差异显著且有统计学意义($P<0.05$);非胰腺炎急腹症组与健康对照组的尿淀粉酶和尿肌酐比值差异不明显($P>0.05$)。

Table 1 Detective results of SAMY, UAMY, UCR and UACR in different groups

Group	n	SAMY	UAMY	UCR	UACR
HS Group	56	110.02± 45.31	603.55± 231.50	13.01± 4.08	42.25± 13.11
AP Group	50	930.30± 478.60	8025.23± 5463.12	16.00± 5.32	799.46± 587.23
NA Group	53	168.49± 65.50	1025.70± 892.36	16.78± 6.21	50.01± 26.10

2.2 SAMY, UAMY, UACR 敏感性和特异性

如表 2 所示,急性胰腺炎组患者的血清淀粉酶敏感性为 82.7%,特异性为 88%;尿淀粉酶的敏感性为 86.54%,特异性为

86%;尿淀粉酶与尿肌酐比值的敏感性为 93.41%,特异性为 93%。三种指标的敏感性与特异性均高于临床正常的指标。

Table 2 Sensitivity and specificity of SAMY, UAMY and UACR

Group	Quality	AP Group	Sensitivity(%)	Specificity(%)
SAMY	Positive	39	82.70	88.0
	Negative	11		
UAMY	Positive	44	86.54	86.00
	Negative	6		
UACR	Positive	46	93.41	93.00
	Negative	4		

Table 3 Detective results of SMAY and UAMY

Group	SAMY(U/L)	UAMY(U/L)	P(SNK)
急性胰腺炎 Acute pancreatitis (n=41)	548.4± 292.6	2723.1± 1166.7	-
十二指肠溃疡 Duodenal ulcer (n=60)	114.7± 82.2	742.8± 346.1	<0.05
慢性胃炎 /NUD Chronic Gastritis/NUD(n=52)	73.5± 26.01	441.3± 218.2	<0.05
胆囊 / 胆管疾病 Cholecyst/bile duct disease (n=26)	103.9± 77.24	518.6± 262.2	<0.05
其他疾病 Others(n=24)	108.0± 81.22	682.2± 468.6	<0.05

2.3 血清淀粉酶和尿淀粉酶的临界值

如表 3 所示,急性胰腺炎患者的血清淀粉酶为 (548.4± 292.6),尿淀粉酶为(2723.1± 1166.7);十二指肠溃疡患者的血清淀粉酶为(114.7± 82.2),尿淀粉酶为(742.8± 346.1);慢性胃炎患者的血清淀粉酶为 (73.5± 26.01),尿淀粉酶为 (441.3±

218.2);胆囊 / 胆管疾病患者的血清淀粉酶为(103.9± 77.24),尿淀粉酶为 (518.6± 262.2);其他急腹症患者的血清淀粉酶为 (108.0± 81.22),尿淀粉酶为(682.2± 468.6)。急性胰腺炎组患者的血清淀粉酶和尿淀粉酶的临界值均高于其他各组,差异显著且有统计学意义($P<0.05$)。

3 讨论

随着我国社会经济的不断发展,医疗技术水平得到迅速提升,对急性胰腺炎的发病机制和治疗方法的研究也取得了一定的进展^[9,16]。深入研究急性胰腺炎的发病机制和治疗方法有利于诊断结果更加准确可靠,有利于提高临床疗效,从而使患者获得更好的治疗效果,改善患者的生活质量^[10-12]。有研究表明,急性胰腺炎患者的血淀粉酶和尿淀粉酶的检测值是正常值的三倍^[13,20]。因此,对急性胰腺炎患者的血清淀粉酶和尿淀粉酶进行检测是临床诊断中至关重要的^[14,19]。本研究通过对急性胰腺炎患者的血淀粉酶、尿淀粉酶、尿淀粉酶和尿肌酐比值进行检测,结果发现,急性胰腺炎患者的血淀粉酶,尿淀粉酶,尿淀粉酶和尿肌酐比值均高于非急性胰腺炎急腹症患者和健康对照组的测定值。由此说明,检测患者的血淀粉酶,尿淀粉酶,尿淀粉酶和尿肌酐比值有助于进一步诊断急性胰腺炎。

尿淀粉酶和尿肌酐比率的测定就是对一定时间内人体排泄的肌酐量进行分析,这可以弥补单纯检测尿淀粉酶对诊断的准确性,而且尿淀粉酶和尿肌酐比的敏感性和特异性要高于单一的血淀粉酶或尿淀粉酶^[15,17]。此外,患有急性胰腺炎引起的肠梗阻、急性胆囊炎、胆石症等疾病的患者,其血淀粉酶会不断升高,那么特异性就会不断下降^[16,18]。我们通过研究得知,急性胰腺炎组患者的血清淀粉酶敏感性为 82.7%, 特异性为 88%;尿淀粉酶的敏感性为 86.54%, 特异性为 86%;尿淀粉酶与尿肌酐比值的敏感性为 93.41%, 特异性为 93%。三种指标的敏感性与特异性均高于临床正常的指标。我们还发现,急性胰腺炎患者的血清淀粉酶为(548.4±292.6),尿淀粉酶为(2723.1±1166.7),其临界值均高于其他各组。这提示我们,通过检测尿淀粉酶对急性胰腺炎进行诊断具有一定的优势,但由于检测结果受多重因素影响,导致其波动较大,容易影响临床诊断的准确性。

综上所述,对血、尿淀粉酶,尿淀粉酶和尿肌酐比值进行检测并分析,对早期急性胰腺炎的诊断及预后具有重要的临床意义和参考价值。

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