毒素 C3a 与前列腺增生症合并组织炎症的关系

Relationship between Toxin C3a and Prostatic Hyperplasia Complicated with Tissue Inflammation

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摘要：目的 本次研究希望通过临床分析了解毒素 C3a 对于前列腺增生病症的合并组织炎症的诊断价值，并且进一步确认临床的病理特征关系。方法 根据本次研究需要在本院收集相关研究患者资料 42 例，采取 PSA(血清前列腺特异抗原)、fPSA（血清游离前列腺特异性抗原），以及尿常规和血常规的检查方式。以上检查均采用国际的前列腺病症诊断评分标准，即 IPSS 体系进行验证，评价患者尿路的病症。同时采取 NIH-CPSI（即国际慢性前列腺炎症指数）评定患者资料的前列腺炎症状况。通过直肠方式的 B 超收集患者资料前列腺体积，在患者接受手术治疗前对患者的 EPS 进行双向抗体的 ELISA 夹心方法测试，观察毒素 C3a 浓度。在手术过程中收集前列腺组织的标本，作为后期病理炎症等级划分使用。再收集 8 例正常人资料提供 EPS 比对，作为对照组。结果 通过本次研究发现，前列腺增生组织的严重炎症资料 EPS 的毒素 C3a 浓度高于轻度组别，P＜0.05；两组数据与对照组相比存在明显上升情况，P＜0.05。EPS 显示毒素 C3a 能够判断前列腺增生的合并组织炎症情况，其灵敏程度为 97%，特异程度为 70%。EPS 内部毒素 C3a 的浓度和血清的 PSA 及 fPSA 含量显示，患者的年龄及体重情况不具备关联性；但是和 NIH-CPSI 具有关联性，且 r=0.494,P＜0.05。小体积的前列腺分组与大体积的前列腺分组，以及尿常规 WBC 存在异常组别和 EPS 正常组别的毒素 C3a 浓度并不存在统计学差异，P≥0.05。另外，安置尿管组和没有安置尿管组的患者 EPS 毒素 C3a 浓度差异存在统计学差异，P＜0.05。结论 通过本次研究发现，应用毒素 C3a 进行患者前列腺增生合并炎症的诊断具有一定的科学价值，患者 EPS 中的毒素 C3a 浓度和患者资料 NIH-CPSI 评定分数，以及安置尿管情况具有关联性，但是与患者的年龄、体重指数、血清 PSA，以及 fPSA 的浓度逐渐不存在关联性，患者资料的前列腺体系与尿常规的 WBC 数据具有关联性。

Abstract: Objective- To study the diagnostic value of antitoxin C3a for prostatic hyperplasia complicated with tissue inflammation in the clinical analysis, and to further confirm the clinical pathological characteristic relationship. Methods- According to the study needs, we collected 42 cases of patients data in our hospital, and conducted PSA (serum prostate specific antigen), fPSA (serum free prostate specific antigen), and urine routine and blood routine examinations. For the above checks, we adopted the international prostate disease diagnostic score standard (i.e. IPSS system) to verify and evaluate patients' urinary tract disease. Meanwhile, we took NIH-CPSI (i.e., the International Chronic Prostatitis Index) to assess the prostate inflammation from patient's data. We collected the patient's prostate tissue volume by rectal B ultrasonography. The patients were treated with EPS before with ELISA. The concentration of toxin C3a was observed by ELISA method. During the course of surgery, we collected prostate tissue specimens for late dividing pathology inflammation level division. And then we collected 8 cases of normal persons' data as the Control Group for EPS comparison. Results- We found from this study that the level of toxin C3a in the severity prostatic hyperplasia group was significantly higher than those in the mild one (P <0.05). There was a significant increase in the two groups compared with the Control Group (P <0.05). EPS showed that toxins C3a can determine the combined tissue inflammation of prostatic hyperplasia, with a sensitivity of 97%, specific degree of

70%. The concentration of EPS internal toxin C3a and the serum PSA and fPSA levels were not associated with the age and weight of the patients, but with NIH-CPSI and r = 0.494, P <0.05. There was no statistically significant difference between the small volume of the prostate group and the large volume of the prostate group, as well as the presence of abnormal urinary conventional WBC abnormalities and EPS normal C3a concentrations, P≥0.05. In addition, there is statistically difference of EPS toxin C3a concentration between the two groups (P <0.05). Conclusion- We find out from this study that using toxins C3a for treating patients with prostatic hyperplasia combined with inflammation has a certain scientific value. The concentration of toxin C3a in patients, NIH-CPSI assessment scores of patient data, and the group placed catheter are associated with each other, but gradually not with the patient's age, body mass index, serum PSA, and fPSA concentration; the prostate system of the patient data is related with WBC data of urine routine.

关键词：毒素 C3a；前列腺增生症；合并；组织炎症；关系

Keywords: Toxin C3a; Prostatic Hyperplasia; Combination; Tissue Inflammation; Relationship

为了能够掌握科学的诊断和治疗方法，提升患者回复效率，能够满足医学事业发展需求。因此，本次研究希望通过临床分析了解毒素 C3a 对于前列腺增生病症的合并组织炎症的诊断价值，并且进一步确认临床的病理特征关系。具体研究报告如下：

To be able to master the scientific diagnosis and treatment methods, enhance the efficiency of rehabilitation of patients, and meet the development needs of medical career, therefore, this study hopes to clinically analyze the diagnostic value of antitoxin C3a for the combined tissue inflammation of prostatic hyperplasia, and to further confirm the clinical pathologic relationship. The specific study report is as follows:

1 资料与方法

1 Data and methods

1.1 一般资料

1.1 General data

根据本次研究需要进行相关患者资料收集，在本院收集 2015 年 1 月到 2016 年 1 月近一年时间内的患者资料 42 例，以上患者均在本院接受了经过尿道的前列腺电切手术治疗干预。以上患者资料均派出存在前列腺手术历史，以及穿刺活检历史的患者资料，并排除存在前列腺病症确切患者资料。除此之外需要在门诊收集 8 例健康的男性资料作为对照组。以上一般资料信息收集均得到本人的允许，一般资料并不存在统计学差异，P≥0.05，可以进行研究比对使用。

According to the study need for relevant patient data, we collected 42 cases of patient data nearly a year (from January 2015 to January 2016) in our hospital. The above patients were underwent prostate transurethral resection treatment intervention in our hospital. All of the above data were sent and kept in the history of prostate surgery, as well as those data in the history of pediatric biopsy, excluding the existence of prostate disease patients with exact data. In addition, it was required to collect further 8 cases of healthy male data from outpatients as the Control Group. Above general data collection had been allowed personally, without statistical differences, P ≥ 0.05, and could be used for study and comparison.

1.2 方法

1.2 Methods

研究设计的相关操作流程要求，首先需要在本院收集相关研究患者资料 42 例，然后需要采取 PSA(血清前列腺特异抗原)、fPSA（血清游离前列腺特异性抗原），以及尿常规和血常规的检查方式。以上检查均采用国际的前列腺病症诊断评分标准，即 IPSS 体系进行验证，评价患者尿路的病症。同时采取 NIH-CPSI（即国际慢性前列腺炎症指数）评定患者资料的前列腺炎症状况。通过直肠方式的 B 超收集患者资料前列腺体积，在患者接受手术治疗前对患者的 EPS 进行双向抗体的 ELISA 夹心方法测试，观察毒素 C3a 浓度。在手术过程中收集前列腺组织的标本，作为后期病理炎症等级划分使用。再收集 8 例正常人资料提供 EPS 比对，作为对照组。具体操作方式如下：

According to the relevant operational requirements of the study design, we firstly needed to collect 42 cases of relevant patient data in our hospital, and then to conduct examination methods, such as, PSA (serum prostate specific antigen), fPSA (serum free prostate specific antigen), urine routine and blood routine. The above checks adopted the international prostate disease diagnostic score standard, that is, IPSS system to verify the evaluation of patients with urinary tract disease. Meanwhile, we took NIH-CPSI (i.e., the International Chronic Prostatitis Index) to assess the patient's prostate inflammation. The patient's prostate tissue was collected by rectal ultrasonography. The patient's EPS was tested by ELISA sandwich method for bi-directional antibody before the patient was treated surgically. The concentration of toxin C3a was observed by ELISA method. During the course of surgery, we collected prostate tissue specimens for late pathology inflammation level division. And then, we collected 8 cases of normal person data as the Control Group for EPS comparison. The specific operation is as follows:

第一，要求针对收集到的患者资料进行手术治疗前的检查，并收集和整理手术前的检查指标信息。

Firstly, it is required to check the collected patient data before surgery, and collect and sort the preoperative inspection indicator data.

第二，需要根据本次研究设计的相关流程进行前列腺组织的炎症等级划分，选择标准化等级进行级别划分。这项操作需要在手术过程中以无菌的方式进行，保证通过电切镜方式手机到前列腺的组织，使用生理盐水进行清洁处理。在收集切片组织的过程中利用电切的方式区分组织大小，观察切片对组织的制作和映像，使用国际标准的计算机网络途径划分前列腺组织的炎症程度，并进行细胞浸润的组织处理，通过划分的病理学理论实现对组织炎症的划分及程度确认。

Secondly, it is required to divide the prostate tissue inflammation level according to the study design relevant process, by the standardized level. This operation needs to be carried out in a sterile manner during the surgery, ensuring that the cells are moved to the prostate tissue by means of a resect scope, using physiological saline for cleaning. In the process of collecting tissue, the tissue size was distinguished by the way of cutting, and the degree of inflammation of the prostate tissue was divided according to the international standard computer network. And the cell infiltration of the tissue treatment, achieve to confirm the division and the degree of the tissue inflammation through the pathology theory.

1.3 炎症划分标准

1.3 Classification standard of inflammation

通过国际标准将收集的组织资料，即前列腺炎症严重程度进行划分，其划分标准为：轻度，即前列腺组织存在炎症性的分散浸润细胞；中度，即前列腺组织存在炎症性的细胞聚集情况，但是不存在腺体上皮组织的损伤，或者是淋巴样的结节情况；重度，即前列腺组织中存在炎症性的细胞聚集，并伴随存在腺体的上皮组织损伤，或者是淋巴样的结节问题。

Through the international standards will be collected from the tissue of data, that is, the severity of prostatitis division, the classification criteria: mild, that is, there are inflammatory tissue scattered prostate infiltration of cells; moderate, that is, there is inflammatory tissue aggregation of prostate tissue, But there is no glandular epithelial tissue damage, or lymphoid nodules; severe, that is, the existence of inflammatory tissue in the prostate tissue aggregation, and accompanied by the presence of glandular epithelial tissue damage, or lymphoid nodules The

1.4 统计学处理

1.4 Statistical processing

本次研究当中所有数据均采用 SPSS17.0 统计软件进行处理，计数数据以均数±标准差表示，用一般线性模型中的单变量（Univariate）分析检验，多重比较用 LSD 检验。计数数据以率表示，用 Pearson 卡方检验。计数资料、均数比较、计量数据分别采用（n）率（%）表示，t 检验、X^2，检验表示，P＜0.05 表示差异具有统计学意义。

All data in this study were processed using SPSS 17.0 statistical software. The count data were expressed as mean ± standard deviation. Univariate analysis was used in general linear model, and LSD was used for multiple comparisons. Count data is expressed in terms of rate, with Pearson chi-square test. (N) rate (%), t test, X2, test said, P <0.05 that the difference was statistically significant.

2 结果

2 Results

根据本次研究操作能够得到以下结果信息，前列腺增生组织的严重炎症资料 EPS 的毒素 C3a 浓度高于轻度组别，P＜0.05；两组数据与对照组相比存在明显上升情况，P＜0.05。EPS 显示毒素 C3a 能够判断前列腺增生的合并组织炎症情况，其灵敏程度为 97%，特异程度为 70%。EPS 内部毒素 C3a 的浓度和血清的 PSA 及 fPSA 含量显示，患者的年龄及体重情况不具备关联性；但是和 NIH-CPSI 具有关联性，且 r=0.494,P＜0.05。小体积的前列腺分组与大体积的前列腺分组，以及尿常规 WBC 存在异常组别和 EPS 正常组别的毒素 C3a 浓度并不存在统计学差异，P≥0.05。另外，安置尿管组和没有安置尿管组的患者 EPS 毒素 C3a 浓度差异存在统计学差异，P＜0.05。

According to the results of this study, the following results can be obtained. The concentration of EPS in the prostatic hyperplasia is higher than that in the mild group (P <0.05). There is a significant increase in the two groups compared with the Control Group, P <0.05 The EPS showed toxins C3a can determine the proliferation of prostatic hyperplasia of the tissue, the sensitivity of 97%, specific degree of 70%. The concentration of EPS internal toxin C3a and the serum PSA and fPSA levels showed that the age and weight of the patients were not associated; but were associated with NIH-CPSI and r = 0.494, P <0.05. There was no statistically significant difference between the small volume of the prostate group and the large volume of the prostate group, as well as the presence of abnormal urinary conventional WBC abnormalities and EPS normal C3a concentrations, P≥0.05. In addition, the difference of EPS toxin C3a concentration between the two groups was statistically significant (P <0.05).

3 讨论

3 Discussions

通过本次研究操作和信息收集能够得到以下结论，应用毒素 C3a 进行患者前列腺增生合并炎症的诊断具有一定的科学价值，患者 EPS 中的毒素 C3a 浓度和患者资料 NIH-CPSI 评定分数，以及安置尿管情况具有关联性，但是与患者的年龄、体重指数、血清 PSA，以及 fPSA 的浓度逐渐不存在关联性，患者资料的前列腺体系与尿常规的 WBC 数据具有关联性。研究的具体结果信息能够说明研究具体的效力作用，即前列腺增生组织的严重炎症资料 EPS 的毒素 C3a 浓度高于轻度组别，P＜0.05；两组数据与对照组相比存在明显上升情况，P＜0.05。EPS 显示毒素 C3a 能够判断前列腺增生的合并组织炎症情况，其灵敏程度为 97%，特异程度为 70%。EPS 内部毒素 C3a 的浓度和血清的 PSA 及 fPSA 含量显示，患者的年龄及体重情况不具备关联性；但是和 NIH-CPSI 具有关联性，且 r=0.494,P＜0.05。小体积的前列腺分组与大体积的前列腺分组，以及尿常规 WBC 存在异常组别和 EPS 正常组别的毒素 C3a 浓度并不存在统计学差异，P≥0.05。另外，安置尿管组和没有安置尿管组的患者 EPS 毒素 C3a 浓度差异存在统计学差异，P＜0.05。综合上述研究内容可以判断，利用毒素 C3a 的方式能够诊断合并前列腺的组织炎症问题，还可以通过毒素 C3a 的界值掌握关于前列腺出现增生合并症极其组织炎症的影响因素。

Through the study of the operation and data collection can be the following conclusions, the application of toxins C3a in patients with prostatic hyperplasia associated with the diagnosis of inflammation has a certain scientific value, the patient's toxin C3a concentration and patient data NIH-CPSI assessment scores, and placement of the catheter The association with the patient's age, body mass index, serum PSA, and fPSA concentration was not associated with the patient's data, and the prostate system of the patient data was associated with conventional WBC data. The specific results of the study can explain the specific effect of the study, that is, severe inflammation of prostatic hyperplasia data EPS toxin C3a concentration higher than the mild group, P <0.05; two groups of data compared with the Control Group there is a significant increase in the situation, P <0.05. EPS showed toxins C3a can determine the proliferation of prostatic hyperplasia of the tissue, the sensitivity of 97%, specific degree of 70%. The concentration of EPS internal toxin C3a and the serum PSA and fPSA levels showed that the age and weight of the patients were not associated; but were associated with NIH-CPSI and r = 0.494, P <0.05. There was no statistically significant difference between the small volume of the prostate group and the large volume of the prostate group, as well as the presence of abnormal urinary conventional WBC abnormalities and EPS normal C3a concentrations, P≥0.05. In addition, the difference of EPS toxin C3a concentration between the two groups was statistically significant (P <0.05). This study can be used to determine the use of toxins C3a way to diagnose the problem of inflammation of the prostate tissue, but also through the threshold of toxins C3a grasp of the prostatic hyperplasia of the complications of extreme tissue inflammation of the factors.

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