

Analysis of the Clinical Effectiveness of Antimicrobials in the Clinical Management of Gynecological Patients

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Abstract: Objective: to understand the practical application of antibacterial drugs in gynecological patients. In order to prevent blindness or abuse of antibacterial drugs, we need to summarize a series of scientific and rational use of antibacterial drugs. Methods: 80 patients who were treated with antibacterial drugs in gynecology department of our hospital from February 22.3, 2021 were selected as the research objects, and they were divided into two groups according to the order before and after admission, namely, group A and group B, with 40 patients in each group, among which sulbactam was selected in group A and clavulanic acid was selected in group B. Then, the clinical adverse reaction rate and treatment effect of the two groups should be compared. Results: the total effective rate and adverse reaction rate of clinical treatment in the experimental group were 95.00% and 7.50% respectively, while those in the control group were 90.00% and 10.00% respectively. It was found that the difference was not obvious and there was no statistical advantage, $P > 0.05$. Conclusion: in the process of treating gynecological diseases with drugs such as clavulanic acid and sulbactam, the clinical therapeutic effect of patients is very obvious, and there are no adverse reactions. Therefore, antibacterial drugs are worthy of application and promotion in the treatment of clinical gynecological diseases.

Keywords: antibacterial agents; gynecology; clinical treatment; application effect

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Introduction

At present, with the change of people's living habits, the prevalence of gynecological diseases has greatly increased. On a certain level, the invasion of bacteria is a key inducing factor of gynecological diseases. Therefore, it is very important and creative to choose antibacterial drugs for clinical treatment. Of course, there are many types of antibacterial drugs used clinically, such as antibiotics, imidazoles, sulfonamides, etc. It can play an active role in bacteriostasis and sterilization, and is very important for disease treatment and infection prevention. However, the clinical therapeutic effects of different drugs are completely different. In order to understand the practical application and effect of antibacterial drugs in gynecological diseases more concretely and comprehensively^[1].

Generally speaking, many women have different degrees of bacteria in their bodies, especially different bacteria in their reproductive systems. Generally speaking, this kind of bacteria, microorganisms, etc. will not cause patients to get sick, but if patients have problems such as weak physical resistance and abnormal pathological state, they will cause the formation and appearance of diseases. If some patients don't make an accurate judgment in clinical treatment, they want to control the disease in a short time, so they usually choose broad-spectrum antibiotics for treatment, which can curb the activity of bacteria or kill them directly^[2]. Generally speaking,

however, many clinicians will make a scientific screening of related drugs based on their practical experience, or make a scientific screening according to the patients' economic level and changes in their condition. Next, the author selected 80 gynecological patients who were treated with antibacterial drugs at a certain stage in our hospital as the research object, discussed their clinical application of antibacterial drugs, and analyzed the practical clinical application value of antibacterial drugs. The relevant contents are as follows.

1 Objectives and Methods

1.1 General information

80 patients who received antimicrobial treatment in the department of gynecology of our hospital between March 2023 and February 2023 were selected as the study objects. They were divided into two groups according to the order before and after admission, namely, group A and group B, with 40 patients in each group. Among them, the age of the control group is between 22-73 years old, and the median value is (49.56 ± 2.13) years old. The age of the experimental group was between 23-78 years old, and the median was (49.44 ± 2.09) years old. The baseline data of the two groups were statistically compared. It was found that the difference was not significant and had no statistical value ($P > 0.05$); This experiment has been supported and approved by the Ethics Committee.

The screening criteria include: ① All patients have gynecological diseases and are hospitalized in gynecological clinics; ② The clinical data of all patients are clear and complete^[3].

The screening conditions include: ① Those with endocrine disorder and coagulation dysfunction; ② Patients with allergic reactions to the selected drugs in this study^[4].

1.2 Methods

Patients in group A chose sulbactam antibacterial drug (provided by Hainan Sinochem United Pharmaceutical Co., Ltd., 1.0g). The specific usage was: 1.0g drug was screened out, mixed with 150ml sodium chloride solution, and then the patients were instructed to receive drip therapy.

Patients in group B chose clavulanic acid (provided by Huabei Pharmaceutical Co., Ltd., 1.5mg), and the specific usage was: 1.5mg drug was screened out, mixed with 150ml sodium chloride solution, and then the patients were instructed to carry out drip therapy^[5].

1.3 Index analysis

The total effective rate and adverse reaction rate of clinical treatment between the two groups were compared. As far as the evaluation of clinical treatment effect of patients is concerned, it includes four grades, namely, remarkable effect, effective effect, ineffective effect, recurrence and so on. Among them, significant effect-all clinical symptoms and discomfort of the patient completely disappear or disappear; Effective-the clinical signs and symptoms of patients have been significantly reduced and improved; Ineffective-the patient's clinical signs and symptoms have not changed or alleviated significantly^[6].

Adverse reactions generally refer to: vomiting, nausea, rash, etc^[7].

1.4 Data processing

The data of this study were statistically processed by SPSS28.0 software, in which the counting index was evaluated by (n,%), and then the χ^2 test was needed. The measurement index is ($\bar{x}\pm s$) for evaluation, and t-test is carried out. If $p < 0.05$, it can be seen that the difference is obvious.

2 Results

2.1 Comparison of clinical treatment efficiency between the two groups

After clinical treatment, it can be found that the total effective rates of the experimental group and the control group are 95.00% and 90.00% respectively, and there is no significant difference between the two groups ($P >$

0.05). See table 1.

Table 1 Statistical comparison of the effective rate between the two groups (n,%)

Group	Number of cases	Remarkable effect	Effective	Invalid	Effective rate of treatment/%
Experimental group	40	23	15	2	38(95.00)
Control group	40	20	16	4	36(90.00)
χ^2					14.002
P					0.512

2.2 Comparison of adverse reaction rate between the two groups

The adverse reaction rates of the experimental group and the control group were 7.50% and 10.00% respectively, and there was no significant difference between the two groups ($P > 0.05$). See table 2.

Table 2 Statistically comparison of the adverse reaction rate of the two groups (n,%)

Group	Number of cases	Vomit	Feel sick	Rash	Adverse reaction rate/%
Experimental group	40	1	1	1	3(7.50)
Control group	40	0	2	2	4(10.00)
χ^2					14.022
P					0.715

3 Discussion

3.1 Research conclusion

Clinically, there are many types of gynecological diseases, and most patients have different clinical manifestations, which will have different effects on patients' health. Nowadays, the treatment of gynecological diseases is generally seen in drug treatment, but the choice of different drugs has a great influence on the clinical treatment of patients, so we must strictly follow the principles of scientific and standardized drug use. Through investigation, it is found that most patients with gynecological diseases have problems such as bacterial infection, so the common drugs are mainly antibacterial drugs, and the clinical therapeutic effects of different types of antibacterial drugs are completely different^[8]. In the research of this paper, we can find that: the author mainly makes a comparative analysis on the clinical application effects of sulbactam and clavulanic acid, and finally finds that the total effective rate and adverse reaction rate of the experimental group are 95.00% and 7.50% respectively, while those of the control group are 90.00% and 10.00% respectively. It is found that there is no obvious difference and no statistical advantage, P

> 0.05 . According to this result, sulbactam was selected in Group A, and the patients had nausea, vomiting, rash and other adverse reactions. Group B chose clavulanic acid, and the patients had adverse reactions such as nausea and rash, which indicated that there was no obvious difference in the adverse reaction rate and the clinical treatment effect, which showed that the clinical application effects of these two antibacterial drugs were similar, and both of them could effectively control the patients' diseases^[9]. From the mechanism of action, sulbactam is an irreversible competitive B- lactamase inhibitor, and its oral application effect is not obvious. Generally, it is mainly based on drip in clinic. According to the pharmacological reaction, after the drug enters the body, it can be combined with special enzymes, which can produce stress reaction, leading to the gradual weakening of the activity of special enzymes, thus having a strong inhibitory effect on B- lactamases formed by Gram-positive bacteria, negative bacteria, etc., so it can achieve antibacterial and disinfection purposes. Clavulanic acid also belongs to a common class of B- lactamases inhibitors. Because B- lactamases are synthesized by bacteria, if the activity of this class of enzymes can be weakened or made inactive, it will inevitably lead to drug resistance of bacteria. However, clavulanic acid can just inhibit B- lactamases, thus weakening the hydrolysis of antibiotics. Therefore, the drug has a very strong broad-spectrum inhibitory effect on B-lactamases produced by drug-resistant bacteria, so as to play a certain therapeutic effect in disease treatment^[10].

3.2 Research experience

3.2.1 Overall usage of antibacterials

Antibiotics are commonly used in clinical gynecological diseases. They can generally play the role of antibiosis and sterilization, and have certain positive significance in preventing bacterial infection and invasion. Therefore, they can improve the clinical treatment effect of patients and reduce the adverse reaction rate after medication. However, due to the different mechanisms of action of different antibacterial drugs, it is necessary to scientifically select reasonable antibacterial drugs in combination with the disease types and actual needs of patients during clinical application, so as to achieve the ideal therapeutic purpose. It is worth noting that, with regard to the treatment of antibacterial drugs during the treatment of clinical gynecological diseases, we can find that it is very common for patients to use antibacterial drugs, but some problems such as abuse and misuse can easily occur during the use^[11]. Through research, some scholars found that 600 patients in a gynecology department who received drug treatment from February 2021 to May 2022 were the experimental objects, and discussed and studied the specific situation of their clinical treatment. Among them, 370 patients chose antibiotics during the disease treatment, accounting for 61.67%; However, the purpose of choosing antibacterial

drugs is generally more common in preventive treatment, that is to say, among 370 patients, the number of patients using preventive drugs is 322, accounting for 87.03%; In addition, there are two kinds of drug use modes, namely, single drug use and double drug use, with the number of cases being 135 and 200 respectively, accounting for 36.49% and 54.05% respectively. According to this data, it can be seen that the proportion of antibacterial drugs used in this hospital is 61.70%, which is far from the world health requirement of less than 30%, but it is not very high compared with the data that the average rate of clinical antibacterial drugs used in some gynecological hospitals in China is over 70%^[12]. The reason may be that although the number of gynecological patients accepted by our hospital is relatively large, most of them are mainly clinical disease diagnosis, and the proportion of surgical treatment is not very high, so the utilization rate of antibacterial drugs is lower than the average utilization rate of gynecological hospitals in China.

3.2.2 Application trend and application time of antibacterial drugs

Through clinical research, many scholars can find that many gynecological hospitals generally achieve the purpose of preventive treatment in the process of returning to patients to use antibacterial drugs, but there is not much demand for disease treatment. For the clinical application of prophylactic antibiotics nowadays, the opinions and opinions given by clinical scholars are different, so there is a certain adjustment to this problem. However, combined with long-term clinical research results and a series of real clinical cases, it can be seen that prophylactic antibiotics are usually used before patients undergo surgery, but for some patients who have not undergone surgery, their use time will generally not exceed 3 days. The reason is that after the preventive antibacterial drugs are used for more than 3 days, the efficiency of infection prevention will gradually weaken, and some adverse reactions will occur, and even some drug-resistant strains will be formed, which will make the treatment of patients' diseases more difficult and complicated. According to the basic requirements of the Principles of Clinical Application of Antibacterials, it should not be used for more than 2 days in the prevention of infection in surgery. After the operation, due to the change of antimicrobial susceptibility to bacteria, some patients will have acute drug-resistant strains, so there is no need to continue medication at this time. For example, some scholars have conducted statistical analysis on the duration of the use of antibacterial drugs by gynecological patients, and found that they are basically concentrated in two different periods, namely, 1-3 days and 4-6 days, etc. The probability of the latter is very high, but it is generally dominated by gynecological patients undergoing surgical operations. In this case, it is relatively reasonable to insist on medication.

3.2.3 Types of common antibacterials in gynecology

At present, in the treatment of clinical gynecological diseases, common antibacterial drugs include

metronidazole, penicillin, cephalosporins, aminoglycosides and so on. Among them, the application probability of the first two kinds of drugs is very high. Through investigation, it is found that the use ratio of penicillins and metronidazole is generally 19.8% and 23.56% respectively, and the use probability of aminoglycosides is 12.23%. With regard to the clinical use of antibacterial drugs, we must pay attention to the application scope of the drugs, and at the same time, we need to know the adverse reactions and side effects. For example, if there are unreasonable phenomena in clinical use of metronidazole antibacterial drugs, it will induce tumors, etc., and its accumulation in milk is relatively high. Therefore, it is generally necessary to disable such drugs for breast-feeding patients with tumor diseases.

3.2.4 Selection of antibiotics in antibiotics

Because there are different types of bacteria in the body, especially in the female reproductive tract system, there are more than 10 kinds of bacteria, which usually do not cause disease under normal circumstances. However, if imbalance is found in the female body, it will lead to the formation of disease. However, most patients cannot directly determine the specific causative pathogens after the onset. Therefore, in this case, in order to curb the activity of related bacteria, many patients will blindly choose some low-cost broad-spectrum antibiotics with low drug properties. Based on the research of some scholars, it is found that the use of penicillin, cephalosporins, metronidazole and other antibiotics is the most common. Generally, they can be used alone or in combination, but the probability of dual use is the highest. However, before drug compatibility, it is necessary to pay attention to understand the incompatibilities of various antibacterial drugs, and explore the reasons, because in the case of blind combination of drugs. The probability of adverse reactions in patients is very high, and it will also lead to the formation of drug-resistant bacteria, which is not conducive to effective treatment of patients' conditions, but also will cause a series of treatment pressure and burden, and even lead to drug waste.

In a word, considering the problem of choosing antibacterial drugs during the treatment of gynecological diseases, although this is a very common clinical phenomenon, we must pay attention to the standardized application. After all, the abuse of antibacterial drugs in clinical practice is very common, so medical staff must strengthen the supervision of patients' antibacterial drugs, guide patients to use them in a standardized and scientific

way, and maximize the safety and effectiveness of clinical drug use. Therefore, the treatment of the patient's condition can achieve the goal of consolidation.

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