Discussion on influencing factors of clinical laboratory quality control and countermeasures

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Abstract: This paper discusses the factors affecting the quality control of clinical medical examination, and puts forward the countermeasures. All patients were found to be unqualified in dissolving blood lipids through clinical test, and clinical medical test quality control was implemented. After recollecting samples, the test results of the two groups before and after quality control were compared. For patients with unqualified hemolytic lipid blood, no improper operation was found during the implementation of medical inspection quality control, and the inspection accuracy was 100%, indicating that the implementation effect of medical inspection quality control measures is remarkable and has high application value. The test preparation stage and sample collection stage are the high incidence stages of improper operation in medical clinical testing. Improper behavior of patients, poor mood of patients and improper timing of collection site are the main factors affecting clinical medical testing errors. By formulating targeted countermeasures, we can effectively improve the quality control effect of clinical medical testing, reduce the detection error rate and improve the quality of clinical medical testing. It is worthy to be widely popularized and applied in clinic.

1. Introduction

The essence of medical examination is to examine the materials from human body in microbiology, immunology, biochemistry, genetics, hematology, biophysics and cytology, so as to provide information for the prevention, diagnosis, treatment of human diseases and evaluation of human health [1]. Clinical medical examination is a common medical auxiliary means in clinical medicine. Combined with the specific diseases and diagnostic needs of patients, clinical medical examination of various items can reveal the diseases and physical conditions of patients, help doctors take targeted treatment measures and promote the timely rehabilitation of patients [2]. It is a bridge discipline between basic medicine and clinical medicine. It is composed of Hematology, biochemistry, human parasitology, microbiology, immunology and other basic disciplines. It is an important part of medical and health work [3]. It can be seen that the quality of clinical medical examination is the key factor that directly affects the treatment effect of patients. It has a certain correlation with the medical level of the hospital, and it is also an important embodiment of the medical quality of the hospital [4]. The quality of clinical medical examination is affected by various factors, so it is necessary to carry out objective analysis and find specific application measures to improve the quality of clinical medical examination [5].

As one of the most common, effective and accurate medical tests in clinical medical testing system, blood test provides a basis for clinical diagnosis of diseases. In clinical medical examination, the processing results of blood samples are affected by many factors, which reduces the accuracy of clinical medical examination [6]. Some studies have shown that in the process of blood sample processing, the placement time, centrifugation time and processing method of blood samples are regarded as the influencing factors of clinical medical test quality control [7]. While improving various systems, it is particularly necessary to establish a standardized and standardized clinical medical testing quality control system, optimize clinical medical testing standards, strengthen the professional training of inspectors, and improve the subjective understanding and

responsibility consciousness of inspectors, so as to ensure that the patient diagnosis and treatment scheme is scientific and accurate, so as to help the continuous improvement of medical service quality and promote the modern development of medical work [8].

2. Clinical examination

2.1. Inspection data

According to the general data, after the re examination of the subjects of these studies, there were 84 patients with relatively large errors, accounting for 0.748% of the total. The subjects studied in this study, especially the patients with large errors, are informed of this study and can actively support the development of this study. Research methods: professional inspectors shall determine the error of the results, then recheck the data of the submitted samples, collect, sort and classify all aspects of information and data according to the clinical influencing factors and laboratory influencing factors of the samples, and then carry out corresponding statistics and analysis. The error of test preparation includes two aspects: improper behavior of patients and drug influence; Sample collection errors include patients' poor mood, improper selection of collection location and time, unqualified containers, etc; Sample handling and inspection errors include sample contamination, deterioration, confusion and so on; Errors in inspection equipment and methods include inspection equipment failure, improper data processing, marking error and so on. Through the statistics and analysis of data, we can better explore the influencing factors of clinical medical test, so as to provide help for improving the accuracy of clinical medical test results.

2.2. Test method

Influence of drugs. Drugs are a very important factor affecting the physical examination results, which will affect the test results. For example, when people take levodopa for creatinine before routine urine examination, AST will rise. At the same time, it is easy to get low results when measuring glucose in excreted urine. Specimen collection: for patients undergoing clinical medical examination, they do not understand the standard way of specimen collection and some importance of examination. In this case, the operation without leaving specimens will be carried out. In order to better improve the accuracy of clinical medical examination results, laboratory workers and medical staff should introduce and explain the importance of clinical medical examination to patients undergoing clinical medical examination in detail. For the storage of samples for inspection, the storage time should not exceed two hours. If the inspection samples can be submitted for inspection in time, they should be stored in a refrigerated or antiseptic state. In the process of sample inspection, it is very important to reduce the transportation and processing time of medical test samples, which has an important impact on the accuracy of the results. Affected by the metabolism, evaporation, chemical reaction and temperature of blood cells, the quality of samples will decline under the action of these factors.

3. Inspection quality control

3.1. Influencing factors of inspection quality control

Influencing factors of inspection quality control according to the current situation, there are four main influencing factors of inspection quality control, namely, inspection preparation, sample collection, sample processing inspection and improper inspection equipment and methods, as shown in Figure 1:

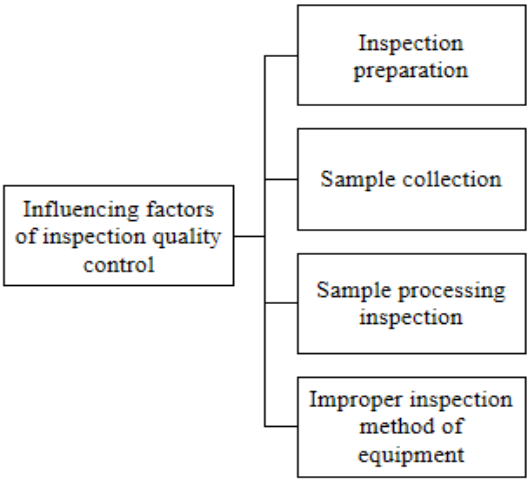

Figure 1 Influencing factors of inspection quality control

Because medical institutions receive a large number of patients every day, the workload of clinical testing is also increasing. Test preparation and sample collection are relatively important factors affecting test quality at present. In the future, these two work should be taken as the key work. In addition to standardizing the system, we should also strengthen random inspection, reduce subjective errors and improve the medical work level of inspectors. On the other hand, although the sample processing test and test equipment and methods have a hidden mode, there are still test errors, which has a great impact on patients and clinical medical staff. In the future, according to the specifications and requirements of sample processing and inspection, it shall be implemented by the staff, and the attitude of the staff must be corrected. Improper inspection equipment and methods require the cooperation of a number of work. For example, medical institutions need to update the testing equipment in time and select the medical equipment with high cost performance and good clinical testing effect to promote the comprehensive development of testing work.

3.2. Measures for quality control of inspection

Test quality control countermeasures in order to ensure that in the future work, fully improve the test level, promote the rehabilitation of patients and the development of medical work, we must formulate relevant countermeasures according to various influencing factors of clinical medical test quality control, solve problems objectively and subjectively, and achieve greater development of medical work. As shown in Figure 2, the inspection quality control measures are:

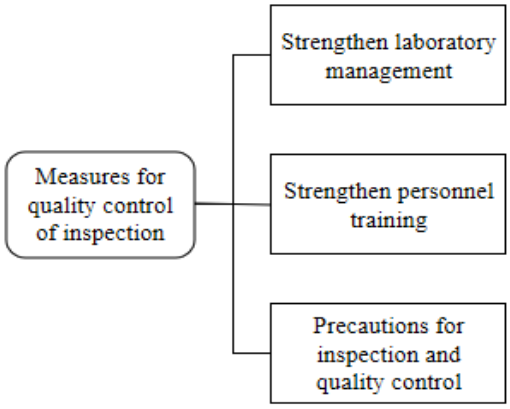

Figure 2 Countermeasures for inspection quality control

There are many influencing factors in the test preparation stage, such as improper patient behavior, drug influence and so on. To control these factors, medical staff need to inform patients of the key points of examination in detail and explain the reasons to reduce the resistance of the tested personnel. In the process of sample collection, try to maintain the emotional stability of patients,

especially children. Some children suffer from pain, hyperactivity and fear when collecting blood, resulting in unsatisfactory blood collection and test errors. During sample processing and inspection, any problem is caused by the improper working level of medical staff. In the future, it is necessary to consolidate the inspection level of medical staff through systematic training and regular assessment to reduce the occurrence of low-level problems such as sample loss. Improper inspection equipment and methods are objective problems. In order to avoid such problems affecting the inspection work. Any medical institution must inspect the medical equipment, replace the new medical equipment immediately when problems are found, back up the accurate data obtained, and properly introduce advanced inspection equipment to reduce unnecessary problems.

4. Conclusion

In disease diagnosis, sample analysis is a very important means. It can also play an important role in the observation and prevention of disease efficacy. When conducting sample analysis, it is easy to be disturbed by various factors, resulting in inaccurate inspection results. In this case, this phenomenon should be avoided as far as possible. The incidence of errors in the test preparation stage and the sample collection stage is relatively high. In the test preparation stage, the impact of patients' improper behavior is more intuitive. In the sample collection stage, patients' serious negative emotions will affect the sample collection effect, promote the missing of the best time of the collection site, or lead to patients' failure to prepare for the test according to the standard, resulting in errors in the test results. In terms of the drug use of the tested personnel, doctors should carry out comprehensive analysis, so as to effectively ensure the accuracy of clinical diagnosis. Test preparation stage and sample collection stage are the high incidence stages of test errors. Improper behavior of patients, poor mood of patients and improper timing of collection site are the main factors affecting the accuracy of clinical medical test. By formulating targeted countermeasures, we can effectively improve the quality control effect of clinical medical test and avoid improper operation, which is worthy of further promotion and research.

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