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Study on the Effect of Anesthesia Application of Nalbuphine Hydrochloride Combined with Propofol in Painless Gastroscopy

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Abstract: In recent years, with the increase of patients with gastric disease, gastric examination has become more important, painless gastroscopy is very common in medicine, and the drugs with fast effect and safety are the most commonly used drugs nowadays. Among them, propofol injection has fast effect and quick awakening, which is suitable for painless gastroscopy, but it has certain limitations, and its shortcomings are mainly reflected in the serious suppression in the whistle drug, and the required dosage is large, and currently the clinical application of composite opium and other analgesic drugs in order to minimize the adverse reactions and reduce the consumption of propofol.

Keywords: Nalbuphine hydrochloride; Propofol; Painless gastroscopy; Anesthesia application

Introduction

Painless gastroscopy is adjusted on the basis of conventional gastroscopy, which is firstly injected into the patient with a corresponding amount of short-acting anesthetics by intravenous injection before the test, so that the patient can quickly reach a state of sedation and sleep, so that the patient can carry out gastroscopy without pain, and at the same time, the patient can also wake up very quickly after the completion of the test. Gastroscopy performed in a non-conscious state allows the patient to reduce pain, but also allows the patient to not produce unconscious agitation under the machine injury, etc., does not produce physical and mental burden.

1. Painless Gastroscopy

Painless gastroscopy refers to the routine gastroscopy on the basis of injecting anesthetics for a short period of time anesthesia so that the patient enters the stage of sedation and coma, and then in the patient's state of unconsciousness through the gastroscope operation for detection, the end of the treatment to let the patient wake up very soon after the method. The application of painless gastroscopy can ensure that the results of gastroscopy without pain, reducing the patient due to pain caused by mechanical injury, for the smooth progress of testing activities. For the use of anesthetics medical use of propofol, but because of the characteristics of the body of elderly patients, respiratory function and circulatory system function

degradation of the body recovery efficiency is also significantly reduced, so the selection of anesthetics also need to take into account the impact on the respiratory and circulatory system function, as far as possible [1]. Because propofol has a faster onset of action, due to the patient's respiratory and circulatory system function is slow, so the medical profession also hope that the emergence of new anesthesia methods can change this situation. Dezocine is also a stronger analgesic, a κ-receptor agonist and μ-receptor antagonist, and is particularly suitable for postoperative pain relief.

2. Safety of Painless Gastroscopy

General gastroscopy, if laryngeal surface anesthesia is adopted, will form a serious impact on the patient's pharynx, which in turn will lead to abnormal excitation of the parasympathetic nervous system, which will lead to a variety of adverse reactions, such as severe headache in the pharynx, nausea, diarrhea, increase in blood pressure, accelerated average heart rate and so on, and some reports may even lead to serious poisoning. In the process of general gastroscopy testing, there is a phenomenon of cardia skin mucous membrane tearing caused by the patient due to severe diarrhea, while pharyngeal contusion and gastroduodenal contusion have occurred in the process of entering the mirror [2]. In the general gastroscopy patients blood pressure increased significantly, the average heart rate accelerated, but the change is large, in the process of painless gastroscopy patients lowering blood pressure, the average heart rate is significantly reduced, and in the detection process is more stable. Wang Yuewei et al. Experimental results show that the changes in blood pressure, heart rate and oxygen saturation of patients in the painless gastroscopy group are significantly lower than those of patients in the ordinary gastroscopy group, and the operational stability is better.

3. Advantages of Painless Gastroscopy

3.1 Pain reduction, before and after the test physicians will be injected into the patient with the appropriate anesthesia, so the patient in the process of painless gastroscopy test did not feel any pain, which is more ideal for nervous or afraid of gastroscopy test patients.

3.2 Less traumatic, so in the painless gastroscopy, can also be through the gastroscope on the digestive tract bleeding, polyps or have ulcers and other symptoms of acute minimally invasive treatment, because this can make the patient does not have to carry out a major surgery at all, so as to avoid the pain of open surgery [3].

3.3 Less costly, the testing time of painless gastroscopy minus the preparation time needed before the test, while the actual testing time is only a few minutes.

3.4 The results are clear and precise, the emergence of painless gastroscopy is a great progress in our current medical treatment. Its examination results are very clear and precise, in the current medical treatment is not any means of detection can be compared, some small lesions or gastrointestinal mucosal diseases can also be detected using painless gastroscopy [4].

4. Disadvantages of Painless Gastroscopy

4.1 Before the implementation of painless gastroscopy, the patient needs to be injected with a small amount of anesthesia, so patients who are sensitive to sedative drugs, pregnancy and lactation are not suitable for the implementation of painless gastroscopy.

4.2 Suffering from diseases that can cause asphyxiation, such as patients with bronchitis accompanied by a lot of coughing up sputum, patients with gastric retention, etc., are not suitable for painless gastroscopy, which will cause more harm to the patient's body.

4.3 Patients who are too old to tolerate anesthesia, as well as patients suffering from severe bradycardia, tachycardia, or with severe hypertension and severe heart disease are not suitable for painless gastroscopy.

5. Difference between regular gastroscopy and painless gastroscopy

The biggest difference between conventional gastroscopy and painless gastroscopy is the method of anesthesia. Instead of general anesthesia, general gastroscopy anesthesia is performed by injecting the patient with throat anesthetics as well as antispasmodics or sedatives [5]. When the patient completes the process of routine gastroscopy, when the lens enters the mouth, pharynx, esophagus and even the stomach and other areas, the patient will feel severe pain, discomfort, nausea, vomiting, and the spirit is in a state of high tension, which will have a great impact on

the effectiveness of gastroscopy.

6. Precautions for Gastroscopy

6.1 In order to avoid cross-infection in the detection process, a very reasonable disinfection program must be carried out during the implementation of gastroscopy, and tests for hepatitis B, hepatitis C, syphilis, AIDS, etc. must be carried out before and after the gastroscopy test.

6.2 During gastroscopy, patients need to undergo electrocardiogram testing to clarify whether they have cardiovascular lesions.

6.3 The patient needs to be prohibited from eating any food for six to eight hours before the examination and the examination needs to be performed on a completely empty stomach, any food residue in the stomach will affect the results observed [6].

6.4 A defoamer should be taken orally before the test to remove surface tension and allow less area for bubble bursting on the surface of the skin mucosa so that the test is performed with better results, the test is clearer and the conclusions are more accurate. Patients requiring painless gastroscopy can be injected with a short-acting dose of anesthetic prior to the examination, allowing the patient to enter a sedative sleep phase during the examination.

6.5 General gastroscopy patients must undergo pharyngeal anesthesia before receiving the test, the main purpose of pharyngeal anesthesia is to allow patients to reduce the pharyngeal reaction during the examination, so as to make the entry into the mirror more smoothly, and to reduce the patient's pain. Pharyngeal anesthesia: The patient is given an anesthetic drug, which is usually swallowed 15-30 minutes before the examination.

6.6 In the treatment, patients are instructed to relax the collar and belt, patients with moving dentures also need to pull out their dentures, lie on the bedside in the left position, with the head slightly tilted forward, the whole body is in a relaxed position, and the legs are slightly flexed, and the side of the mouth is put into the sterilized towel, and the curved plate is put on the sterilized towel to receive saliva or vomitus discharged from the mouth of the disease[7].

7. Data and Methods.

Eighty patients who underwent painless gastroscopy were admitted from January 2016 to February 2019, and were divided into an observation group (single number) and a control group (double number) according to the number of the visit, 40 cases each. The included patients were all accompanied by recurrent gastrointestinal diseases and needed to undergo gastroscopy to clarify their conditions; none of them had gastroscopy-related contraindications and no history of previous drug allergy; they were evaluated as class I-II by the anesthesia grading standards developed by the American Society of Anesthesiologists branch, and voluntarily accepted and cooperated with the gastroscopy modality and related anesthesia protocols [8]; there were twenty-three male cases in the observation group and seventeen female cases; the average age was (42.67±10.39) years old, and the mean age was (42.67±10.39) years old. 10.39) years old; intraperitoneal injection anesthesia graded as level i in 26 cases, level ii in 14 cases. In the control group, there were twenty cases of male and twenty cases of female; the average age was (43.01±10.47) years old; anesthesia grading was 28 cases of class I and 12 cases of class II. Comparison of the two groups in terms of gender, age and other general demographic information and anesthesia grading, the difference was not statistically significant ($P > 0.05$), but more reliable.

Methods: both groups of patients underwent routine fasting and water fasting before treatment. Nalbuphine hydrochloride as well as compounded propofol was given in the observation group, while propofol was given in the control group, and the same method of administration was intravenous drip [9]. The dosage of propofol in both groups was 2mg/kg, and the dosage of nalbuphine hydrochloride in each group was observed to be 10mg/kg. After the administration of the drugs, close attention was paid to the patient's signs of life, and symptomatic treatment was given to the somatic reaction and respiratory blockage that occurred during anesthesia, and the dosage of anesthetics was added appropriately.

Observation index: by comparing the induction time of intraperitoneal anesthesia (from the moment of drug administration to the disappearance of eyelash reflex), anesthesia awakening time (from the beginning of anesthesia to the time of eye opening), anesthesia waking up (leaving the hospital), and the dose of propofol of the two groups of patients; all the adverse

reactions from the beginning of the intraperitoneal anesthesia to the leaving of the hospital should be recorded.

Statistical methods: Big data analysis was performed by SPSS19.0 software, and the statistics of mean life expectancy, anesthesia induction time, anesthesia awakening time in the abdominal cavity, awake time, and propofol dosage were all expressed as (±s), and the t-test was performed; the statistical information of age status, anesthesia grading of intraperitoneal injection, and serious adverse reactions were all expressed as %, and the χ^2 test was performed to indicate the statistical value of the difference, and the $P < 0.05$ was recorded. indicates the statistical value of the difference.

8. Results

Comparison of the general anesthesia conditions between the two groups: observation of each group's anesthesia induction time, intraperitoneally injected anesthesia awakening time, wakefulness time, and the dosage of propofol were lower than that of the control group, and the comparison of the induction time of anesthesia injected into the peritoneal cavity of the two groups, the difference was not statistically significant ($P > 0.05$); however, compared with the standard, the difference was statistically significant ($P < 0.05$). Comparison of the incidence of serious adverse reactions between the two groups:Observation of nausea, vomiting, choking sensation, body movement, respiratory blockade, sedation, hypotension and other more serious adverse reactions between the groups were lower than the control group, and the incidence of malignant, vomiting, body movement, hypotension and other serious incidence of inter-group comparisons, the difference is more statistically significant ($P < 0.05$).

9. Discussion

Gastroscopy is mainly an invasive means of examination, and its operation of exogenous infection stimulation of the patient's pharynx, esophagus, stomach, etc., can cause parasympathetic agonistic function abnormalities and produce nausea, vomiting, choking and coughing, arrhythmia, and other undesirable stress response phenomena, and in serious cases, can lead to cardiovascular, cerebrovascular, and other circulatory system complications. Painless gastroscopy can significantly improve this stress reaction phenomenon and enhance the patient's tolerance to the examination. Propofol, as a short-acting intravenous anesthetic widely used in the clinic, has a fast onset of anesthesia due to its relatively high lipid solubility, which significantly reduces pharyngeal discomfort produced by exogenous operations, and also reduces the amount of saliva, which then reduces the undesirable stress reactions caused by invasive operations. However, in the clinical practice of painless gastroscopy, the phenomena of deep anesthesia, hypotension, and respiratory depression caused by the large dose requirement of propofol often lead to poor anesthetic safety [1].

The experimental results show that the observation of the groups of intraperitoneal injection of anesthesia induction time, awake time after anesthesia, awake time, duration of wakefulness and the total dosage of propofol are lower than the control group, in which intraperitoneal injection of anesthesia awakening time, wakefulness duration and the total dosage of propofol for the comparison of the groups, the difference is statistically significant; at the same time, but also in some patients with nausea, diarrhea, choking, body movement, respiratory depression, sedation, hypotension and other The incidence of serious adverse reactions are lower than the control group, suggesting that nalbuphine hydrochloride and propofol are better for intraperitoneal anesthesia, nalbuphine hydrochloride is a typical opioid receptor excitatory inhibitor, with the double effect of excitation and inhibition, which can be balanced for pain relief, especially for the viscera; at the same time, the drug metabolism does not need to rely on liver and kidney tissues, and has a short half-life, and therefore is not easy to produce Circulatory system inhibition. It has synergistic anesthesia effect with propofol, which can reduce the dose of propofol and improve the safety of painless gastroscopy.

Traditional gastroscopy sedation and analgesia, in the drug time, drug dosage and operation method and other related aspects, does not fully take into account the patient's personalized differences, the method is also relatively mechanical, so it can not fully reflect the flexibility, personalized features, so usually need to have a high enough technical standard and rich experience, in order to make a diagnosis of the patient's vital signs change the situation of the specific circumstances, there is a clear subjective arbitrariness.

There is a clear subjective arbitrariness, and there will be different degrees of errors in the specific abdominal injection anesthesia, which will cause a decrease in the safety of the patients in the actual operation, and even accidents such as gastrointestinal hemorrhage or even perforation may occur.

At this stage, endoscopic technology is constantly improving and innovating, and gastrointestinal endoscopy testing has become a very critical operation method in the practice of medicine, and it also has excellent diagnostic accuracy and credibility in various key areas of digestive system tumors. In the gastrointestinal testing process, it is increasingly common to adopt painless gastroenteroscopy technology, in which intravenous analgesia or sedation anesthesia technology can be effectively used, which can further relieve the patient's tension and pain, etc., so that the patient's satisfaction is significantly improved [3]. At the same time, under the guidance of the relevant examining physician, this can produce a good anesthetic effect and patient compliance. At present, hospitals often use propofol for drug anesthesia. This method has a better sedative effect and better drug stability, and the patient can complete all the metabolism of the drug in a short period of time after the operation, which does not cause greater interference to the patient's nerves.

Conclusion

To sum up, propofol is used in painless gastroscopy in the abdominal injection anesthesia treatment effect is remarkable, and can maintain the patient's heart rate, blood pressure and other indicators of stability, and the adverse reactions are small, safe, so it is worth to be widely used to promote.

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