

Observation on the Effect of Minimally Invasive Technique in Clinical Treatment of Orthopaedic Trauma

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Abstract: Objective To observe, analyze and study the application and value of minimally invasive technique in orthopaedic trauma. Methods thirty-eight patients admitted to the Department of Orthopaedic Trauma of Jilin Provincial People's Hospital in the past one year were selected as observation objects, and they were divided into two groups: control group and observation group, with 19 patients in each group. The control group received conventional treatment, while the observation group received minimally invasive treatment. The control subjects included clinical treatment effect, pain score, quality of life score, incidence of clinical complications and treatment indicators. Results through observation, analysis and research we found that the comprehensive clinical effect and index to observe group was obviously superior to observe group ($p < 0.05$), and the observation group of intraoperative blood loss, operating time, postoperative wound healing, switching frequency effect is better than that in control group ($p < 0.05$), at the same time, the probability of complications to observation group was obviously lower than the control group.

Keywords: Minimally invasive technology; Orthopaedic trauma; Clinical treatment

Introduction:

Minimally invasive technology has been used in China's medical system for many years and has become a mature medical technology. Using minimally invasive technology to treat orthopedic trauma patients can significantly improve the therapeutic effect. Therefore, minimally invasive technology has great significance in the treatment of orthopedic trauma.^[1]

Data and Methods

1. General information

Thirty-eight patients admitted to orthopaedic trauma in our hospital in the past year were selected as observation objects, and they were divided into control group and observation group, with 19 patients in each group. The observation group was treated with minimally invasive technology, while the control group was treated with conventional technology. The observation group included 8 female patients and 11 male patients, aged between 20 and 76 years; The control group included 9 women and 10 men, aged 21 to 77 years.

The criteria we used to include patients were:(1) The patient is in a normal mental state, able to carry out normal communication and communication, without mental problems or violent tendencies; (2) To ensure the integrity of patients' clinical data; (3) Patients and their families have a correct and comprehensive understanding of the informed consent and have signed the informed consent.

Our exclusion criteria for inclusion of patients were: (1) patients with poor mental or emotional state; (2) patients who are breastfeeding or have other special conditions; (3) patients with other major diseases or obvious pathological changes of organs; (4) Patients with contraindications such as minimally invasive surgery and routine surgery.

The clinical data of the two groups of patients we selected were complete and the age difference was small, so the submission was comparable.

2. Method

After the patient was admitted to the department for diagnosis and treatment, we immediately examined the patient and had a detailed understanding of the patient's situation. After that, we performed minimally invasive surgery on the patients in the control group. First, we will shift the patients to surgery on the bed, and adjust the most comfortable and convenient for the position, then according to the actual situation of patients, with the help of anesthesia operation, the most appropriate way of anesthesia, and then adopt relevant imaging instrument of lesion in patients with meticulous observation and analysis on the actual situation, to more accurately determine the fracture position, The tissue around the lesion was analyzed, observed and judged. To understand the patient after thoroughly, under imaging instrument observation and guidance, make a small cut in the focal areas, attention should be paid to avoid in the process of incision in patients with major blood vessels, broken bones or foreign bodies by incision of clear, and cleaning, finishing in patients with bone, reset is completed, the disinfection and dressing work done in accordance with the relevant provisions,

Subsequently, the patient needs to change medication regularly;

For patients with conventional treatment, it is necessary to transfer their lesions to the operating table under the condition of full understanding, and select appropriate anesthesia for anesthesia. Anesthesia work is completed, the attending physician needs to cut patients lesions position, and will fully exposed, the affected area of trauma of bone and foreign body wash, after complete patient bone, restoration work is completed, actual situation should be based on patients use medical tools such as steel plate, screw to be fixed, after complete the suture surgery. After surgery, both groups received conventional sterilization, anti-inflammatory and anti-infection treatment.

3. Observation criteria

The treatment effect of the two groups of patients were observed and compared, the symptoms of patients after treatment were significantly reduced and improved compared with before treatment, and the ability of daily activities was restored, which we call remarkable effect; If the patient's symptoms are improved to a certain extent and the ability of daily activities is basically restored, it is called effective; If the patient has severe pain at the wound after the surgical treatment, and their daily life is troubled by the pain of the disease, we call it ineffective. The total effective rate was calculated as follows: Total effective rate = (significant effect + effective)/total number of columns * 100%.^[2]

We compared the clinical indicators of patients in the two groups, including dressing change times, wound healing time, blood loss during operation time, quality of life score and pain score, etc. The higher the quality of life score, the better the patient's quality of life. The higher the pain score, the more intense the pain. In addition, the complications of the two groups were observed and compared, including incision infection, fever and swelling.

4. Statistical methods

In data collection, analysis and processing, we use SPSS 18.0, a processing software, to process the measurement data by t test, which is expressed as ($x \pm S$); X^2 is used to process the counting data in the form of (%) representation. The final statistical result is $P < 0.05$, which has practical significance in statistics.

Comparison of surgical indicators between the two groups

Group number of cases	Wound	healing time (d)	operative time (min)	intraoperative blood loss (mL)	dressing change times
Study group	19	20.2 ± 1.38	85.71 ± 5.15	171.35 ± 19.5	12.13 ± 1.25
Control group	19	33.07 ± 1.34	117.42 ± 7.03	344.32 ± 18.55	20.33 ± 1.50
T	--	35.125	17.718	33.767	0.768
P	--	0.000	0.000	0.000	0.000

Note: Compared with control group, $P < 0.05$

4.1 The results

(1) Therapeutic effect. In the clinical treatment of orthopaedic trauma, minimally invasive technology has a more prominent effect, which is conducive to improving patient satisfaction.^[3] From the results of surgical time, postoperative healing, intraoperative blood loss, dressing change times, complication incidence, pain score and life score, the treatment effect of the observation group is significantly better than that of the control group.

(2) Adverse reactions. The adverse reactions in the observation group were significantly lower than those in the control group.

(3) Clinical indicators. The clinical indexes of observation group were obviously better than control group.

4.2 The discussion

After the application of minimally invasive technology in orthopaedic trauma, we only need to make small incisions in the surgical summary to complete the subsequent surgery, and have achieved remarkable clinical results. The postoperative incision healing is faster, the risk of postoperative infection is reduced, and the scar after recovery is smaller, which meets the aesthetic needs of patients. Nowadays minimally invasive techniques are widely used in the clinical treatment of orthopaedic trauma. Through the observation and comparison of the two groups of patients, we found that minimally invasive treatment technology can significantly improve the clinical symptoms of patients, postoperative recovery faster, in clinical treatment is worth promoting and application.

References:

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