

## **Analgesia Pump**

In recent years, the use of anesthesia postoperative analgesia pump is a tool that enables analgesic drugs can remain stable in the plasma concentration of a timely manner, and can be administered to the patient own press quickly enhance the effect, more individualized treatment . To improve the quality of hospital services, on the one hand we want to continue to improve postoperative analgesia, on the other hand, when a patient with analgesia pump back to the ward, but also you can have a great need of care and guidance in this area, which directly related to the quality of postoperative analgesia play. We believe that, with your cooperation, the patient must have felt more comfortable.

Pain pump regular dosing painkiller medical devices, also known as analgesia pump. There are many species, but in general the damping control, dosing mouth, reservoir, protective housing, filters, flow control tube, protective cover, etc., within marked with analgesic or anesthetic drugs. Mainly used for post-operative analgesia, painless childbirth, chronic pain, cancer pain, as well as other needs continuous infusion trace liquid treatment. According to the treatment by a doctor you need to set the right dose of liquid, select analgesia pump models. In addition, with the PCA (patient-controlled device), so that patients can control their own additional doses of liquid infusion, the purpose of personalized medicine.



With the constant improvement in the medical field, as well as the continuous improvement of people's living standard, the pain as the fifth vital signs have understood more and more people, more and more patients to reduce pain as their fundamental rights.

Use of pain pumps, increased patient comfort, enabling patients early activity, reducing lower extremity thrombosis and pulmonary embolism, and promote early recovery of gastrointestinal function. At the same time, to reduce the catecholamines and other stress-hormone release after a patient's body, helps reduce the heart rate and prevent postoperative hypertension, acting and reduce myocardial oxygen consumption, cardiac dysfunction in patients with particularly advantageous.

Pain pump because of different drugs loaded inside are divided into two kinds of epidural and intravenous pump. Epidural local anesthetic commonly used, such as morphine, fentanyl and intravenous pumps used, the use of both the need to strictly distinguish, can not receive intravenous epidural end, nor can receive dural venous pump outside the joints, there would be a general anesthetic or a local anesthetic effect due to opioid overdose patient respiratory depression, nausea, vomiting and other serious complications occurred more than once in an accident ward is very dangerous.

Therefore, in addition to the anesthesiologist, no one is allowed to arbitrarily change analgesia administration.

PCA is a new analgesic drug delivery device. Health care based on the patient pain and physical condition, pre-set dose of analgesic drugs, the patient wears an infusion control device, when realized that pain, analgesic drugs by the controller once injected into the body, so as to achieve the purpose of pain. PCA is the preferred method of modern pain management is an important means of treatment of postoperative pain. Overcome individual differences in analgesic pharmacokinetics and pharmacodynamics, be administered as required. When analgesic therapy to reduce the incidence of side effects of excessive sedation and postoperative complications and improve quality of care for patients and their families the satisfaction rate.

## Scope:

1. The wide scope of operation, long time patients, such as sections of cancer radical surgery combined with surgery, head and neck chest and abdomen.
2. thoracotomy, laparotomy incision and longer surgical patients. Such patients often need to stay in a chest tube, tube, also increases their pain. If you do not want to stand up because of pain, cough, easy to increase the incidence of lung infections.
3. transurethral resection of the prostate urology patients. Using postoperative pain pumps also help relieve prostate spasm, reduce bleeding.
4. orthopedic surgery patients.
5. part laparoscopic surgery patients.
6. surgical patients with high blood pressure or a history of coronary artery disease.
7. sensitive to female patients. Elderly patients and children with relatively slow response to pain, and young women are often the opposite.
8. Patient strong demand.

## Clinical classification:

Depending on the route of administration of the PCA, it will be divided into: patient-controlled epidural analgesia, intravenous patient-controlled analgesia, plexus patient-controlled analgesia and subcutaneous patient-controlled analgesia.

- (1) patient controlled epidural analgesia: patient controlled epidural analgesia (PCEA), is the use of PCA device for epidural drugs, mainly used in the treatment of pain in the chest and back and the following areas. PCEA analgesia precise, relatively few side effects.
- (2) intravenous patient-controlled analgesia: intravenous patient-controlled analgesia (PCIA) is to use the PCA device administration by intravenous route, easy to operate, widely used drugs, including narcotic analgesics and non-steroidal analgesics. PCIA rapid onset of a wider scope, but it is systemic administration, higher side effects worse than epidural analgesia patient-controlled analgesia.

- (3) plexus patient-controlled analgesia: Plexus patient-controlled analgesia (PCNA) using PCA device in the treatment of peripheral nerve plexus or peripheral nerve pain medication.
- (4) percutaneous patient-controlled analgesia: Percutaneous patient-controlled analgesia (PCSA) is to use the PCA device subcutaneously analgesia. PCSA patient venipuncture difficult and long-term needs of patients PCA therapy has its advantages, can avoid other PCA methods puncture and catheter-induced complications.