

Short Communication

We Must Judge Analgesic Effect of Analgesic Medicine

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Abstract

Analgesic medicine that does not provide analgesic effect in each patient is merely a toxic substance for the patient. The judgement of analgesic effect after analgesic medicine administration is the most basic of pharmacological treatment for pain. The judgment is classified into four categories: improvement, invariance, deterioration, and obscureness. If the patient's answer is ambiguous, it should be considered invariance. If the judgement is impossible because of ambiguous answer of the patient, we should discontinue the medicine or increase the dose to judge the analgesic effect. If it's invariance or deterioration and the initial dose is maximum dose, we should switch to another medicine. If it's invariance or deterioration and the initial dose is not maximum dose, we should increase the dose. If it's improvement and patient satisfies the pain, the dose should be maintained. If it's improvement and patient does not satisfy the pain, we have two options. If the initial dose is maximum dose, another medicine should be added. If the initial dose is not maximum dose, the dose should be maintained. The period from initiation of pharmacological treatment to judgement of analgesic effect varies depending on the medicine. In case of nonsteroidal anti-inflammatory drugs or acetaminophen, the period is less than 1 week. If the initial dose of the medicine for neuropathic pain is maximum dose, the period is usually 4 weeks. If the initial dose of the medicine (such as amitriptyline) for neuropathic pain is not maximum dose, I increase daily dose every 1 week.

Keywords: Analgesic Medicine; Analgesic Effect; Pharmacological Treatment; Nonsteroidal Anti-inflammatory Drugs; Acetaminophen; Neuropathic Pain

1. Introduction

Pain should not be treated with pharmacological treatment alone. We should know that pharmacological treatment is only one of treatments for pain. However, the advantage of pharmacological treatment is universality. For example,

600 mg pregabalin is the same treatment anywhere in the world. The disadvantages of pharmacological treatment are as follows; First, available medicine, maximum dose, and indication depend on nations. Second, we have to pay attention to adverse effects. Third, the response to the same medicine depends on patients. For example, a medicine provides remarkable analgesic effect to one patient, however, identical medicine is not only ineffective but also responsible for serious adverse effects in other patient. I specialize in pharmacological treatment for pain, especially pharmacological treatment of neuropathic pain [1-3]. In this article, basics of pharmacological treatment of pain is explained. In other words, this article was written for non-specialists of pain such as internist or orthopedic surgeon. A pain specialist said, "We should not tell a lie, but we must not further tell the truth." I told the truth in this article based on my experience and literatures.

We should know the following; Medicine is not effective if it is not taken. Ineffective medicine sometimes show analgesic effect (placebo effect). Pain is sometimes exacerbated when ineffective medicine is discontinued (adverse placebo effect). Analgesic medicine that does not provide analgesic effect in each patient is merely a toxic substance for the patient. Even if analgesic medicine does not provide analgesic effect in a patient, it provides a sense of safety to families and physicians. Toxicity in a patient overwhelms the sense of safety in others.

2. Judgement of Analgesic Effect

When analgesic medicine is administered, judgement of analgesic effect is necessary. Analgesic medicine is often administered for a long time without the judgement of analgesic effect. It is comparable to no measurement of blood glucose value after insulin administration or no measurement of blood pressure after antihypertensive medicine administration. The judgement of analgesic effect after analgesic medicine administration is the most basic of pharmacological treatment for pain. We should describe the results in the medical record. Unfortunately, many physicians do not conduct the judgement of analgesic effect.

When we conduct a judgement, we should not accept ambiguous answer of the patient. The judgment is classified into four categories: improvement, invariance, deterioration, and obscureness. In case of obscureness, we should ask the patient "Do you feel analgesic effect?" If the patient's answer is ambiguous, it should be considered invariance. If the judgement is impossible because of ambiguous answer of the patient, we should discontinue the medicine or increase the dose to judge the analgesic effect.

If the patient's answer is invariance or deterioration and the initial dose is maximum dose, we should switch to another medicine. If the patient's answer is invariance or deterioration and the initial dose is not maximum dose, we should increase the dose. If the patient's answer is improvement and patient satisfies the pain, the dose should be maintained. If the patient's answer is improvement and patient does not satisfy the pain, we have two options. In case that the initial dose is maximum dose, another medicine should be added. In case that the initial dose is not maximum dose, the dose should be maintained. Because low back pain or pain after injury, etc. are relieved with rest or over time, it is very difficult to distinguish analgesic effect and natural course (or placebo effect). Because we

cannot use placebo in a clinical practice, it is impossible to distinguish them strictly. Even if we initially consider the medicine as effective, I recommend discontinuation of the medicine several months later.

Continuing the same dosage without judging analgesic effect is the worst and it should be avoided. The period from initiation of pharmacological treatment to judgement of analgesic effect varies depending on the medicine. In case of nonsteroidal anti-inflammatory drugs or acetaminophen, the period is less than 1 week. If the initial dose of the medicine for neuropathic pain is maximum dose, the period is usually 4 weeks. If the initial dose of the medicine (such as amitriptyline) for neuropathic pain is not maximum dose, I increase daily dose every 1 week.

3. Adverse Placebo Effect

Even if a medicine is initially effective, it may be ineffective after long-term administration. If administration period exceeds 6 months, we should discontinue the medicine to determine sustainment of analgesic effect. However, as previously described, pain is sometimes exacerbated when ineffective medicine is discontinued. If pain is aggravated after discontinuation of a medicine, the possibility of reverse placebo effect cannot be denied. Therefore, a second attempt of discontinuation after several weeks is acceptable. In this case, I recommend to switch to medicine with few adverse effect such as acetaminophen as a first step. As a second step, acetaminophen is discontinued.

4. Conclusion

When analgesic medicine is administered, judgement of analgesic effect is necessary. Based on the judgement, we should increase, discontinue, or maintain the analgesic medicine. This is the most basic of pharmacological treatment for pain. Many physicians do not comply it.

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