

Possible Ways of Bone Pain Alleviation

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Abstract

Bone disease is a commonly disease accompanied with severe pain. Different biomedical approaches can be used to solve this event. Experimental and clinical studies should be translated and applied in more patients. This Editorial discusses this topic of pain alleviation possibility in bone diseases.

Keywords: Bone Fracture; Bone Cancer; Pain; Osteoarthritis; Anesthesia; Surgery

Introduction

Bone disease is a common disease that affects more than half human population, especially old people or extremely sports worldwide [1-4]. Bone disease is a commonly disease accompanied with severe pain. Different biomedical approaches can be used to solve this event. Experimental and clinical studies should be translated and applied to the treatment of more patients.

Many patients with bone diseases such as fracture, surgery, osteoarthritis, sports injury, bone cancer, goat and others commonly accompany with a great pain and other symptoms [5-9]. Proper ways of pain alleviation are proposed to treat bone healthcare disorders for patients with bone diseases and subsequences of pain symptoms.

Methods

Several pathways are used for pain alleviation in bone or other diseases [9-23]:

- Anesthetics (gas or chemical)
- Pain killer for bone cancer and metastasis
- Radiotherapy
- Common drugs
- Acupuncture
- Herbals
- And others.

Results

Pain alleviation is a useful way for patients with many bone diseases. But positive and negative factors are universally present. Optimally selection of different forms of therapeutics needs a great skill. They have different pathogenesis and targeted molecules. In order to understand it, different strategies should be aimed (Table 1).

Therapeutic types	Mechanisms	References
Anesthesia	Whole-body or local	5
Cancer	Palliative	19-20
Radiotherapy	Cancer metastasis	21-22
Drugs	Doses, toxicity and additive	3, 7
Herbal	Long term and relatively low toxicity	12-13
Acupuncture	Assistant and long term	10-11
Surgery	Pain prevention	14-15
Vitamin or hormone	Bone fracture or osteoporosis	6
Others	Non-pharmaceutical option	23

Table 1: Pharmacological and medical consideration on therapeutic selection for pain alleviation.

Discussion

Treatment selection and combination beyond drugs are especially important for the benefits of low toxicity, such as acupuncture and others. Several important issues are reiterated.

Acupuncture is an effective therapeutic measure for pain alleviation. It needs no special materials and drugs. It is thus low costs and side-effective. Many patients are sensitive to acupuncture. Fixed schedules of this therapy many times show unexpected outcomes in the clinic. This tradition of Chinese medicine is now practiced worldwide.

More recently, radiotherapy for cancer bone metastasis pain alleviation is significantly effective. It does not show efficacy to tumor growth inhibition. Tumor metastasis is the most important risk factors for patient's mortality [21,22].

Selection of proper therapies needs to promote diseases diagnosis [24-26]. Several diagnosis systems should be noticed. Revolution in diagnostic knowledge, routines and techniques, like math-supporting systems (artificial intelligence) may be useful for pain alleviation and therapeutic studies [27]. In this stage, it needs to improve diagnostic capability of orthopaedics or oncologists [28].

Conclusion

More types of medical and pharmaceutical development for patient's treatment and recovery need to be done in the future. They are involving with different pathways and mechanisms of action. Systematic approaches should be followed.

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