

How to Improve the Quality of Pharmacotherapy for Bone Diseases

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Abstract

Bone disease is one of the mostly met human diseases worldwide. Different avenues to improve clinical drug therapy for bone diseases are shared-including drug selection, dosing, personalized medicine, treatments according to patient age and nurse support.

Keywords: Osteoporosis; Drug Development; Cost-Effective; Diagnostics; Disease Risk; Drug Selection; Bone-Disease

Introduction

Human bone is one of the most vulnerable tissues in human body [1]. In the life-time of a lot of people, different bone diseases are commonly suffered [2-7]. High quality bone disease diagnosis, intervention and therapeutics is important for symptom alleviation and risk managements worldwide [8-14]. This editorial highlights ways to improve bone disease treatments.

Clinical conditions

Clinical pharmacotherapy plays key roles for bone disease treatments. However, many hidden problems can greatly impact therapeutic outcomes of drug treatments. Several avenues to improve clinical drug therapy are discussed.

Common clinical problems

Drug selections

Therapeutic drug selection is one of most important areas in pharmacologic issues against bone diseases. However, many doctors only notice on drug efficiency. Undesired side-effects of selected drugs are neglected in pharmacotherapy. The undesired side-effects and costs of selected drugs may greatly change the therapeutic outcomes and drug adherence. Certainly, the double-edged swords of many high effective drug or therapy may even cost more life. Accordingly, medical students should be educated with more information of drug toxicity in the college.

Seek personalized medicine in future

Co-morbidity is a common character of most chronic and metabolic diseases-including some kinds of bone diseases [15-18]. Previously, we ask enigmatic question of whether there is an association between pathology and pharmacologic choice. In the future, growing body of biomedical research for co-morbidity of both diagnosis and drug targets will be promoted.

Drug therapeutics according to different ages

Bone disease treatment is a special pharmacological category that needs to be noticed according to different age of patients. Young patients with bone diseases will recover quickly and highly response to drugs than old people. Therefore, young patients will be treated differently from old patients with same symptoms (Table) [19]. By noting this character, clinical bone disease treatments will be improved in quality and economy.

Patients ages	Physio-pathological characters	Major nutrition or therapies
Teenage	Nutritional-insufficient individuals	Mineral or food supports
Young adults	Bone pain and vulnerable to attack	Sports/less sedentary
Middle-ages	Bone pain and osteoporosis	Chemical drug or vitamin
Old people	Serious osteoporosis/immobility	Bio-therapy + hormone + new therapeutics

Table: The different symptoms and therapeutics among varied patient ages [19].

Promoting the enthusiasm from nurses and technicians

The high-quality assistant work from nurses is important [20-22]. Doctors are also human beings. It means that they can make mistakes in clinical pharmacological decision (both drug selection and drug dosing). Many nurses can notice these mistakes in the clinic. Some of nurses will report it and other nurses may keep silence because they are afraid of revenges from doctor’s sides [20]. Healthy clinical regulation and environments is quite important for high-quality pharmacotherapy in the clinic.

Conclusion

High-quality clinical pharmacotherapy may be useful to improve bone disease treatments. Apart from drug development, medical knowledge and regulatory network must also be promoted in the future.

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