

Treatment improvements by pediatric Theranostics

Abstract

Childhood disease diagnosis and treatment is more complicated than adult's diseases. According their small ages, diagnostic and therapeutic decision needs more biomedical care. More experimental or clinical knowledge and studies should be focused on special disease diagnosis and treatments. However, it needs a formalized strategies in biomedical researches and clinical applications. This editorial discusses this issue of child disease theranostic topics in upcoming decades.

Keywords: pediatrics, clinic symptoms, disease diagnosis, biotechnology

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Introduction

Child disease diagnosis and treatment is more complicated than adult's diseases.^{1,2} According their small ages (genetic or toxic factor vulnerability), diagnostic and therapeutic decision needs more biomedical care. More experimental or clinical knowledge and studies should be focused on special disease diagnosis and treatments. However, it needs a formalized strategies in biomedical researches and clinical applications. This editorial discusses this issue of child disease theranostic topics in upcoming decades.

Special demands and attention

According their ages, they are unable to well reveal their illness, symptoms and physiological feeling to doctors. They may be met with falsified treatment. Severe pharmaceutical consequences or loss the opportunity of quick disease managements are present worldwide. More care should be paid for pediatric disease diagnosis and treatments. The difference between child and adults is multiple-including vulnerability of cells and tissues for different risk factors in children will make therapeutics more demanding. It is pity that many disastrous events are discovered in children disease treatments, like many deafness in infectious disease treatments and mania as well as suicide occurrence in antidepressant or microbiotics treatments in children.³⁻⁷ Disease diagnosis and treatment progress can be possibly improved in upcoming decade studies.

Studies

To counteract this issue, doctors should be more care about the data of image, color and expressive characters of child faces with overall condition of potential treatments. New guideline and education should be based on new biomedical techniques, like genetic or sequencing changes.⁸⁻¹¹ Growing and new knowledge, philosophy and guidelines should be promoted in pediatric treatment studies.

Personalized medicine

Since children diseases are more difficult to identify, theranostics should be more reliance on experienced doctor's and modern technology. New diagnostic systems and technologies, such as personalized medicine (PM) should be utilized in child disease treatment.¹²⁻¹⁴ As cancer is the most leading disease deaths and sensitive persons for treatment responses, cancer treatments for children are especially important for diagnosis and treatment progress.¹⁵

New frontlines

The limitation for child disease diagnosis and treatment is dramatic.

Since children do not earn money, their treatment costs should be paid by their parents. Due to financial consideration, parents commonly refuse to pay increased diagnostic or treatment costs. Alleviating this limitation should be aimed with medical progress.² Many attentions should be paid for overall considerations, like nursery, education, charity or drug development.¹⁶⁻²¹ To propaganda these information and knowledge, therapeutic and financial improvements should be aimed. Data sharing should be built in institutions, industry and regulation.¹⁹

Ethical conflicts

Ethical agreement is the priority of biomedical studies in human beings. Basically, medical investigations and evaluation in children should be agreed by children themselves. However, children in these ages are unable to make right decisions. The financial conditions of parents will be the main reasons for scientific exploration. This matter should be noticed in the future.

Conclusion

A lot of different pathways can promote diagnosis and treatments of kids. Experience exchange, knowledge accumulation and global conference can be ways of promoting child disease treatments.

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Conflicts of interest

The authors declared that there are no conflicts of interest.

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