Editorial

Human suicide, biomedical knowledge and therapeutic advances

Abstract

Suicide has a high rate of human mortality (outnumber of mortality of war and homicide-sixth place for all morbid categories). External and internal stresses are responsible risk factors for human suicide rates and fatalities. Medical knowledge and therapeutic advances of clinical suicide prediction, prevention and treatments are ever-growing for its therapeutic progress. Psychiatric intervene is a recent hotspot in this field of suicide prediction and treatments. Molecular targeting and diagnostic transition in the clinic will be a suitable pathway for suicide therapeutic management promotion against suicide-induced human mortality and economic burdens. This Article addresses this fast-growing medical area and breakthroughs.

Keywords: human suicide, neurobiology, modern technology, suicide prediction

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Introduction

Suicide has a huge human mortality (ranking sixth place for human fatality). Global suicide death is outnumbered to the total death of war and homicide nowadays.[1] However, the incidence of suicide-induced death (SID) varies in different areas and countries. Two decades ago, human suicide study was commonly not well defined in biological framework. Psychiatric analysis was the major choice for suicide persons and medication.[2,3] With the quick advances of neurobiology, human suicide and other mental diseases are associated and flourished. Facing with the boost of neurobiology, new therapeutics was designed. General picture, genetics, phenotypes, mechanisms and knowledge is depicted in early reports.[2–10] Not only defined in genetics or molecular, integrated strategies are present in diagnostics and treatments.[11] It contains strategies and methods in different biomedical and mathematical fields. Routines for diagnosis and therapeutics should be changed for serving patients with high tendency of suicide behaviors.[12]

Medical landscape

External and internal stresses are responsible risk factors for these human fatalities and economic burdens to the society. Clinical suicide prevention and treatments are ever-growing for its prediction and therapeutic progress. Psychiatric intervene of suicide prediction and treatment is a recent hotspot in this field.

Diagnostic significance

External and internal risk factors or stresses may differently affect human neuropsychiatric and suicide behaviour.[13,14] Association and evidence began to accumulate for different types of human health, diseases and well-being.[15–19] This article addresses this fast-growing medical area and breakthroughs. To promote suicide management, external stresses, neuropsychiatric axis, diagnostic tools, drug treatments or others should be focused and totally analyzed. It poses a great medical challenge or opportunity for a lot of disease pathological study and potential clinical paradigms.

Pathophysiologic evidence

Human suicide is popular.[11] This public health burden needs to be alleviated and reversed. Since identical signs are discovered between suicide and psychiatric patients, genetic alteration, molecular profiling and clinical paradigms should be focused and promoted by different biomedical approaches.[20–24] (Figure 1)

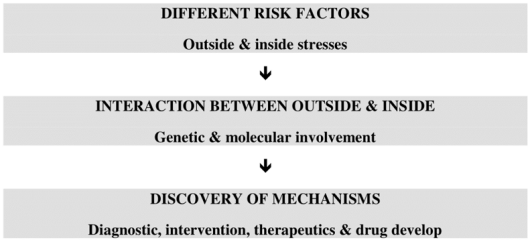

Figure 1 Potential link for suicide onset and progress.

New diagostic and therapeutic modalities

Since co-morbid of neuropsychiatric disease and suicide, major psychiatric diseases are associated with suicide, such as autism, schizophrenia, mood disorders and possibly neurodegenerative diseases. Diagnostic categories have various drug selection systems. Techniques for these diagnoses are divided (Figure 2). With the diagnostic merge and integration, more suitable diagnostic and therapeutic modalities will be popularized and updated. Figure 2 shows such diagnostic integration.

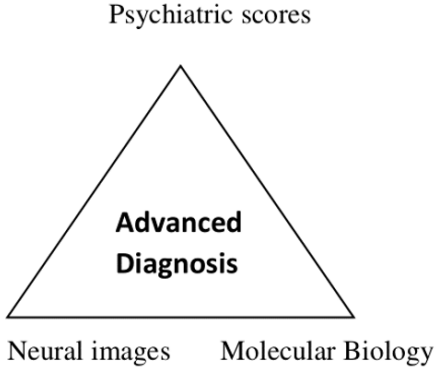

Figure 2 Different categories and advances for human suicide-related diagnosis.

Treatment studies

Clinical strategies and approaches are outlined

- Mood healthcare[13]
- Anti-psychiatric agents[23]
- Education for students, teachers or clinicians[24]
- Herbal medicine[25]
- Co-morbid treatment study[26]
- Nursery progress[27,28]

Suicide prediction and prevention needs constantly move forward.[29–32] As a result, education, diagnostic, nursery and therapeutic transition should be made.

Emotional stimulation

According to law of traditional medicine, human illness is affected by human emotion (angry, fright or depression). In the past literature, "many diseases are originated from psychiatric disease". Correspondingly, comedy, music or sports will alleviate these emotional changes and reduce human suicide possibly.

Discussion

Human biological study for suicide prevention and treatment is not new. However, there is a turning point among 2005-2008 for the size of literature expanding (four times) for human suicide study worldwide.[7] In the past, we could not well evaluate in systematical ways of genetics and molecular profiling and targeting. With the quick development of bio-techniques and animal models, many past dilemma (molecular diagnosis and clinical evaluation) have been addressed. Some breakthroughs were found. Facing with this technical progress, more research funds should be provided.

Conclusion

Human suicide has a high mortality and economic burden to the society. As an emerging therapeutic frontier and fastest evolving field, we wish new investigation can change the situation of limitation in biomedical knowledge and save the life of million worldwide.[33,34]

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Conflicts of interest

The author declared that there are no conflicts of interest.

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