Cognitive Function, Mental Health and Quality of Life in Patients with Haemophilia

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INTRODUCTION

Haemophilia is a rare but life-threatening bleeding disorder. Moderate and severe forms of haemophilia usually happen early during infancy and are commonly characterized by breakthrough haemorrhage and muscular haemorrhage. However, microbleed is often asymptomatic and difficult to detect, especially in the central nervous system. The cerebral microbleed may impair patient’s neurocognitive function, resulting in mental problems and poorer quality of life.

OBJECTIVES

1) To evaluate the cognitive functioning, health-related quality of life, and mental health of Chinese patients with haemophilia
2) To explore the associations among the psychometric properties of cognitive outcomes, quality of life and mental health

METHODOLOGY

In this prospective cross-sectional study, male Chinese patients with haemophilia A or B in absence of known neuropsychological illness/trauma reported their health-related quality of life and mental health using validated questionnaires and computerized test for assessing their attention.

Ethical Approval has been obtained from the Joint Chinese University of Hong Kong New Territories East Cluster Clinical Research Ethics Committee (The Joint CUHK-NTEC CREC)

OUTCOME ASSESSMENTS

Four assessment tools shown below

1. Demographic questionnaire
   • Patient’s sex, age, diagnosis, severity, concomitant medication, past medical history and socio-economic information

2. Conners’ Continuous Performance Test III (CPT-III)
   • Computerized assessment to examine patient’s attention, impulsivity, and perseveration

3. Depression, Anxiety and Stress Scales – Traditional Chinese version (DASS-21-TC)
   • A 21-item self-report questionnaire to evaluate the severity of anxiety, depression, and stress level

4. Haemo-QOL for Children (aged 6 to 16) and Haemo-A-QOL for Adults (aged 17 and above)
   • A disease-specific psychometric assessment for evaluating the quality of life of children and adults with haemophilia respectively

The current sample includes 14 paediatric patients (mean age =12.13, SD = 3.49 years) and 27 adult patients (mean age = 36.60, SD = 12.56 years). Distribution of disease severity by diagnosis is shown below.

Mental Health in patients with Haemophilia A by disease severity is also shown in the following graph.

RESULTS

In the Correlation test showed below

• Adult’s self-efficacy on dealing with haemophilia was negatively correlated with depression (r =.496, p =.009), anxiety (r =-.550, p =.003) and stress (r =-.564, p =.002).
• Adult’s self-perception was negatively associated with depression (r =-.519, p =.006), anxiety (r =-.516, p =.006) and stress (r =-.531, p =.004).
• Adult’s physical health and expectation on future were negatively associated with depression (r =.477, p =.012; r =-.544, p =.003), anxiety (r =-.542, p =.004; r =-.601, p =.001) and stress (r =-.534, p =.004; r =-.548, p =.003) respectively.

CONCLUSIONS

1. Higher prevalence rate of depression and anxiety were noted in patients with moderate or severe haemophilia A, as compared with the prevalence of depression (22.2%) and anxiety (24.2%) in the general population as examined by the Hong Kong Mental Morbidity Survey (HKMMS).
2. Moreover, patients with poorer mental health reported significantly worse physical and social well-being.
3. A trend of poorer inattentiveness and impulsivity were observed across the level of disease severity.
4. Further investigation will be performed for examining the association of cerebral structural changes by neuroimaging, with neuropsychological and mental health outcomes in patients with haemophilia.

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REFERENCES

3. 10.1111/hae.13398.