Motherhood and schizophrenic illness: a case report

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Introduction:

Schizophrenia (SCZ) is known to have a highly heritable component. Children of mothers with SCZ are at risk for psychiatric disorders.

Objectives:

We propose to study, through a case presentation and a review of the literature, the mechanisms of transmission of risk to children from mothers with SCZ.

Materials and Methods:

- We report the case of two patients: a mother diagnosed with SCZ and her daughter with schizoaffective disorder(SZA).
- A review of the literature using the databases “PubMed” and “ScienceDirect” and the keywords: “schizophrenia”, “mother”, “transmission”, “psychopathology”.

Results:

- Mrs L.O is 61 years old, married, mother of 3 children
- Psychiatric history:** SCZ since the age of 27. At the age of 31 → first pregnancy → relapse of her disease → atypical neuroleptic
- She gave birth to her oldest daughter A.O
- Lost of sight **from 1988 to 2007**
- 2007:** 19years after being exposed to maternal schizophrenic symptoms, Mrs A.O was hospitalized in our service →The diagnosis of SZA seemed the most suitable.

Discussion:

Mental illness in children from mothers with SCZ may result from a variety of mechanisms:

Genetic factors:

- A risk region on Xq28 → encoding a protein in the **methyl-CpG-binding domain** → modification of gene expression in the brain
- A variant within the **SMARCA1 gene** on the X chromosome → risk of SCZ

Behavioural factors:

- Impact of psychotic symptoms of SCZ on mother-infant dyad**

Positive symptoms	→ involvement of the infant in delusions, hallucinations → regarded as a source of persecution or as a potential victim of persecution → potential risks of infanticide, neglect and abuse → Excessive behaviours
Negative symptoms	→ Affective flattening, avolition and apathy,anhedonia → unsecure attachement
Disorganization	→ Behavioural disorganization, abnormal expresions of emotion; blunted or perplexed affect → reduced eye contact, lack of stimulation, difficulty to pick up cues

Disorganized infant experience:

Psychotic symptoms of SCZ → frightening/ confused caregiver → relational trap: the infant's defence system motivates him to flee from the frightening caregiver, while at the same time, influenced by separation fear, to approach him → infant disorganized attachment

Biological factors:

- Mothers with SCZ → higher baseline cortisol levels/ non-normative cortisol release pattern following stress → increased stress sensitivity
- Association between severe maternal mental illness and higher infant cortisol levels
- Unsecure/ disorganized attachement → greatest elevation and slowest return to baseline cortisol level

➡ Mental illness in children from mothers with SCZ may result not only from a simple shared genetic risk, but also from developmental factors interacting with environmental stressors

Conclusion:

Psychopathology of transmission risk from mothers with SCZ to children is multifactorial. Given the evidence that maternal SCZ is linked to increased risk of mental illness in children, there is a clear need for further research exploring the biopsychosocial mechanisms of risk. Furthermore, The education of these mothers seems to be crucial considering their double patient/mother role.

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