Late Onset Psychosis and Beta-thalassemia: is There a Connection?

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Introduction

Beta-thalassemia is a monogenic disease caused by mutations in the beta chain of the haemoglobin molecule. It is widespread in many areas of the world and has a large prevalence among Mediterranean populations[1-2]. Furthermore, many studies recently suggested that a gene situated on chromosome 11, proximal to the genes involved in beta-thalassemia, could induce psychosis in predisposed individuals [3]. Several studies have revealed, through the sequencing of chromosome 11, that a possible genetic susceptibility for schizophrenia could be located on the short arm of this chromosome near the gene involved in beta-thalassemia [4-5-6].

Aims

In our case report, we describe a late onset of psychosis disorder in a man suffering from beta-thalassemia.

Methods

Mr. A. is a 35 years old man with a history of major beta-thalassemia treated with transfusion therapy, he is HCV positive. No family history of psychiatric disorders. He has never suffered from any psychiatric disorder until January 2014, when he revealed a psychotic episode characterized by persecution delusions, religious hallucinations, remarkable aggressiveness and absent insight. He was so administrered with Paliperidone Palmitate 100 mg 1 fl 1.m./month, obtaining clinical remission after 5 months.

Conclusion

Several studies have assessed the prevalence of depression and axiety in patients with beta thalassemia. Rather few studies have been conducted to assess the comorbidity of psychosis among beta-thalassemia. We have described one rare case in literature that highlights this possible genetic link between these two pathologies. Further studies are needed to better clarify this association.

References

1. **Depression in subjects with beta-thalassemia minor.** Keskek S.O, Kirim S, Turhan A, Turhan FG.Ann Hematol. 2013 Dec;92(12):1611-5. doi: 10.1007/s00277-013-1851-9. Epub 2013 Jul 28

2. Prevalence of psychiatric disorders, depression, and suicidal behavior in child and adolescent with thalassemia major. Ghanizadeh A, Khajavian S, Ashkani H. J Pediatr Hematol Oncol. 2006 Dec;28(12):781-4.

3. Analysis of the DISC1 translocation partner (11q14.3) in genetic risk of schizophrenia. Debono R, Topless R, Markie D, Black MA, Merriman TR.Genes Brain Behav. 2012 Oct;11(7):859-63. doi: 10.1111/j.1601-183X.2012.00832.x. Epub 2012 Sep 4.

4. Schizophrenia and beta-thalassemia: a genetic link?. Borras L, Huguelet P. Psychiatry Res. 2008 Mar 15;158(2):260-1. doi: 10.1016/j.psychres.2007.11.001. Epub 2008 Jan 24.

5. A case of psychosis in a patient affected by beta thalassemia major: a genetic link? Ranieri R, Demartini B, Mormandi G, Scarone S. European psichiatry. 2013 Vol 28, Suppl.1

6. Curious cases: The curious case of a man with schizophrenia and excessive aggression.van Dijk DA, Enterman JH. Schizophr Bull. 2012 Nov;38(6):1128-9. doi: 10.1093/schbul/sbs057. Epub 2012 Apr 3.