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Letter to the editor

Obstetric complications, genetics and schizophrenia

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Obstetric complications (OCs) are conceived as any somatic complication occurring during pregnancy, during labour or in the neonatal period with some potential direct relevance on the physical well-being of the offspring. Many studies support the hypothesis that OCs contribute to the risk of schizophrenia. Epidemiological studies indicate that in about 20–25% of the samples of patients diagnosed with schizophrenia, the symptoms of the disorder might be a consequence of OCs [1,4].

The risk of severe OCs, which may result in persistent brain lesions, is often under genetic control. Past studies, indeed, found that the genetic-controlled conditions increasing the risk of OCs are also associated to a higher risk of schizophrenia, for example in the case of Rh-incompatibility [2,3].

A study by Walshe et al. [5] adds to a series of evidence pointing to an important link between genetically-based OCs and the risk of schizophrenia [4]. They found that OCs tend to recur within families, clustering in families that also show a higher representation of subjects diagnosed with schizophrenia. Walshe et al., however, were too ready to discount the hypothesis of a link between OCs and genetic susceptibility to schizophrenia. They are right when they assume OCs as an epiphenomenal manifestation of a yet-to-be-discovered genetic susceptibility to schizophrenia. However, they are wrong for the hypothesis that genetic susceptibility to OCs coincides with the risk of schizophrenia. In this case, only those who really experienced an OC severe enough to cause brain damage in the cerebral area(s) putatively implied in the genesis of schizophrenic symptoms would develop the disorder. Unaffected siblings are expected to report a sensibly lower rate of OCs than their affected relatives.

The true test for this hypothesis is to ascertain the prevalence of schizophrenia cases among families with a family risk for OCs: Walshe et al., indeed, found an appreciably higher representation of cases of schizophrenia among those families where a higher number of subjects were reported having experienced specific OCs.

Undoubtedly, the links between OCs and schizophrenia are manifold and a competitive overlapping of putatively favouring, protective and aggravating genes is likely to be in cause. Protective factors would prevent the worst outcome of an unfavourable course of pregnancy, whereas aggravating ones would produce negative outcomes even in case of slight insults.

As a matter of fact, the data in the study by Walshe et al. point to a slight reduction of the risk of OCs among the unaffected siblings of schizophrenic patients belonging to families with a clustering of OCs, with percentages that are lower than those found among the unaffected siblings of patients belonging to families with sporadic schizophrenia: 18% versus 26%.

It is therefore premature to deny any relevance to the hypothesis that schizophrenia is associated with the genetic susceptibility to experiencing OCs.

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Antonio Preti
Department of Psychology, University of Cagliari, Cagliari, Italy
Genneruxi Medical Centre, via Costantinopoli 42, I-09129 Cagliari, Italy
E-mail address: apreti@tin.it (A. Preti).

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