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**Transient global amnesia: a genetic disease?**

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The pathogenesis of transient global amnesia (TGA) is still unknown. We describe a family of eight siblings, with a clinical episode of transient global amnesia in four of them.

Cases: The oldest sister (67 years) planned to go to the beach by bike because she wanted to swim in the sea. She has amnesia for the whole trip by bike and her visit to the beach.

The brother (62 years) was gardening when he suddenly couldn't remember what he was doing. He didn't know why he was wearing working clothes. During this episode he repeatedly asked the same questions, within 24 hours he completely recovered.

The second sister (58 years) arrived at the airport, confused and had an ongoing amnesia for hours. Five years later she had a similar episode of isolated transient amnesia.

The third sister (55 years) was in a health club and started to feel strange. She cannot remember what happened next, but friends witnessed she couldn't recall any new information.

The mother (75 years) of these children felt strange the day after her 75-th birthday, and couldn't remember how she got all the flowers in her house. Next morning she was healthy.

Discussion: All cases in this family had a clinical episode of TGA. They had no relevant medical history and no other explanation of the transient amnesia was found. Incidence of TGA is 5 to 11 per 100.000 persons a year, with risk of recurrency of 3-26%. Therefore, it is unlikely this family all had a TGA by co-incidence.

Pathogenesis of TGA is speculative. A Vasalva manoeuvre is suggested to cause venous congestion, which leads to temporary ischemia in the hippocampus. Indeed Vasalva manoeuvre like exercise, coughing, cold or emotions starts the TGA in more than half of all cases. If a Vasalva manoeuvre triggers a TGA the low rate of recurrency is surprising. Other possible mechanisms include an underlying cortical spreading depression, analogue of migraine.

Only a few case reports describe familiar TGA, i.e. in siblings. Our family suggests a genetic predisposition of TGA.

TGA is relatively rare, the personal impact of a TGA is high, and we assume almost all people seek medical attention. We therefore believe this high TGA-frequency in one family is no coincidence. Further genetic research in TGA patients is warranted.