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Correlation of age at time of aneurysmal subarachnoid hemorrhage within families

Dear Editor,

The optimal preventive screening strategy for intracranial aneurysms in first-degree relatives (FDRs) of patients with aneurysmal subarachnoid hemorrhage (aSAH) remains unclear. We evaluated the correlation of age at time of aSAH in FDRs to assess whether age at time of aSAH may be a factor to consider in determining the optimal screening strategy.

We included 87 Dutch, 43 Finnish, and 16 French families with ≥2 FDRs with definite or probable aSAH (Table 1).[1] We calculated intraclass correlation coefficients (ICCs) for age at time of aSAH and age differences at time of aSAH between FDRs. We performed subanalyses on (1) FDRs with definite aSAH, (2) siblings, and (3) Dutch and French families as different patient characteristics are reported for the Finnish.[2]

The ICC for age at time of aSAH in all 146 families was 0.21 ($p < 0.01$). The correlation remained essentially the same in the subanalyses. An age difference at time of aSAH of 20 years or less was observed in 84% of all FDRs (Figure 1). This age difference remained comparable in the subanalyses.

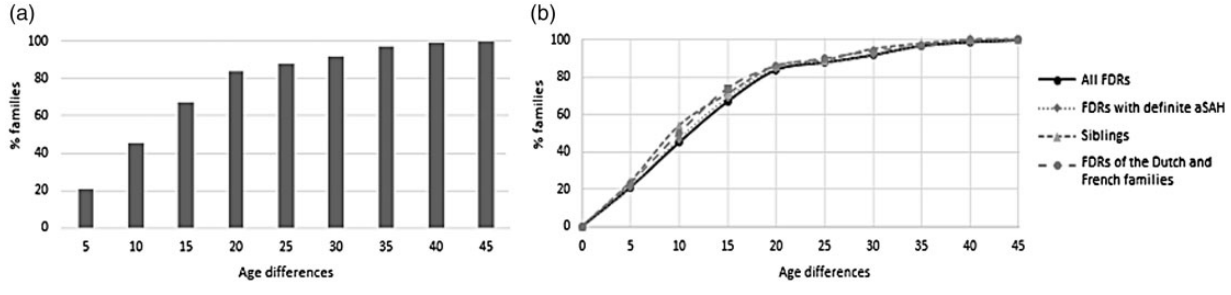
In conclusion, our study showed a poor correlation of age at time of aSAH in FDRs. Therefore, we did not find evidence that age at time of aSAH is a contributing

Table 1. Baseline characteristics.

Characteristic	All FDRs (n = 319)	Dutch FDRs (n = 196)	Finnish FDRs (n = 87)	French FDRs (n = 36)
Women, n (%)	192 (60)	130 (66)	44 (51)	19 (53)
Definite aSAH, n (%)	278 (87)	155 (79)	87 (100)	36 (100)
Mean age at time of aSAH, years (SD)	48.4 (12.7)	49.9 (12.7)	46.6 (12.6)	44.8 (11.7)

FDR: first-degree relative; aSAH: aneurysmal subarachnoid hemorrhage; SD: standard deviation.

Figure 1. Cumulative percentage of families per difference of age at time of aSAH. Results for all FDRs (a) and for subanalyses (b). FDR: first-degree relative; aSAH: aneurysmal subarachnoid hemorrhage.



factor in determining the optimal screening strategy for intracranial aneurysm.

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