EDITORIAL

Neuroprotective effectiveness

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GARCÍA-PASTOR and colleagues herein report the results of a small, single-center, prospective, randomized, double-blind, placebo-controlled study of dapsone in patients presenting within 5 days of Fisher grade 3 and 4 aneurysmal subarachnoid hemorrhage (SAH).¹ A priori, the authors defined a minimal relevant effect of treatment with this anti-inflammatory, glutamate receptor-antagonist antibiotic to be a decrease of 35% in the incidence of delayed cerebral ischemia (DCI).

Ultimately, 48 of the 81 patients eligible for the study were assigned to either dapsone or placebo, with an average interval of 3.8 days between SAH and the first dose. Overall mortality was 17%. Intra-arterial vasodilator therapy was needed in three times as many placebo-treated patients (45.5% vs 15.4%, $p = 0.029$), and DCI was witnessed in one-third as many dapsone-treated patients (26.9% vs 63.6%, $p = 0.011$). Perhaps more importantly, in the dapsone group, the irreversible DCI incidence tended to be lower (11.5% vs 54.5%, $p = 0.12$) and favorable modified Rankin Scale scores were improved at both discharge and 3 months after (76.9% vs 36.4%, $p = 0.005$ and 80% vs 38.9%, $p = 0.019$, respectively), with reductions in the incidence of brain infarction (19.12% vs 63.6%, $p = 0.001$).

While it would not be unreasonable to proceed with a larger, multicenter study to probe these interesting re-

sults, it should be noted that the rates of DCI, irreversible DCI, and brain infarction in the control group are quite high, and a larger study should take this into account when performing sample-size calculations. It is also curious that the authors are only submitting this for publication now, given that the patients were recruited 13 to 14 years ago. Advances in care since that time may impact efficacy.

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References

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Disclosures

The authors report no conflict of interest.

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