



CAN ATRIAL FIBRILLATION BE A PREDICTOR OF OUTCOME IN STROKE PATIENTS TREATED WITH INTRAVENOUS THROMBOLYSIS? ONE STROKE CENTER EXPERIENCE

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INTRODUCTION

Patients with atrial fibrillation (AF) have about 3- to 5-fold higher elevated risk of stroke [1]. A causal association of AF and stroke is probably due to the resulting stasis of blood that increase risk for thromboembolic event [2]. AF may also be associated with other factors that cause stroke (age, male sex, hypertension, diabetes mellitus, valvular heart disease, heart failure...) [3–4].

The aim of our study was to evaluate whether the presence of atrial fibrillation could be the predictor of early outcome in stroke patients treated with intravenous thrombolytic therapy (tissue plasminogen activator, tPA).

METHODS

We performed a ten year retrospective hospital-based cohort study of 567 patients (272 women and 295 men, mean age 68.49 ± 9.27) with acute ischemic stroke treated in our hospital with tPA.

We analyzed the early outcome in terms of age, gender, existing stroke risk factors (especially atrial fibrillation, AF), severity of stroke and complications of tPA. According to the initial NIHSS, 18% had mild (NIHSS ≤ 8), 46% had moderate (NIHSS=9-15) and 36% had severe (NIHSS ≥ 16) stroke.

According to the modified Rankin Scale (mRS), we classified outcomes at the time of hospital discharge as: i) favorable (mRS 0-2); ii) poor (mRS 3-5); and iii) death (mRS 6).

RESULTS

Favorable outcome had 34% of patients. These patients were of younger age (65.16 ± 8.95 vs. 70.24 ± 8.99 , $p < 0.001$) and male gender (42% males vs. 26% females, $p = 0.016$).

Logistic regression model showed that factors affected the outcome were severity of stroke (40.6% patients with mild stroke had favorable outcome, $p < 0.001$) and occurrence of hemorrhagic transformation during tPA (21.4% had poor outcome, $p = 0.009$). AF was more common in females (44.8% vs 21.1%, $p = 0.0004$) and patients with $75 \geq y$ age (42.8% vs 28.5%, $p = 0.05$).

Regarding the AF and the outcome we found statistically less favorable outcome only in subgroup of female patients (16.3% with AF vs. 33.9% without AF, $p = 0.049$). Analyzing the whole cohort, we did not find the difference regarding the presence of AF and the outcome (favorable outcome had 37.8% patients without AF and 27.7% with AF, $p = 0.1599$).

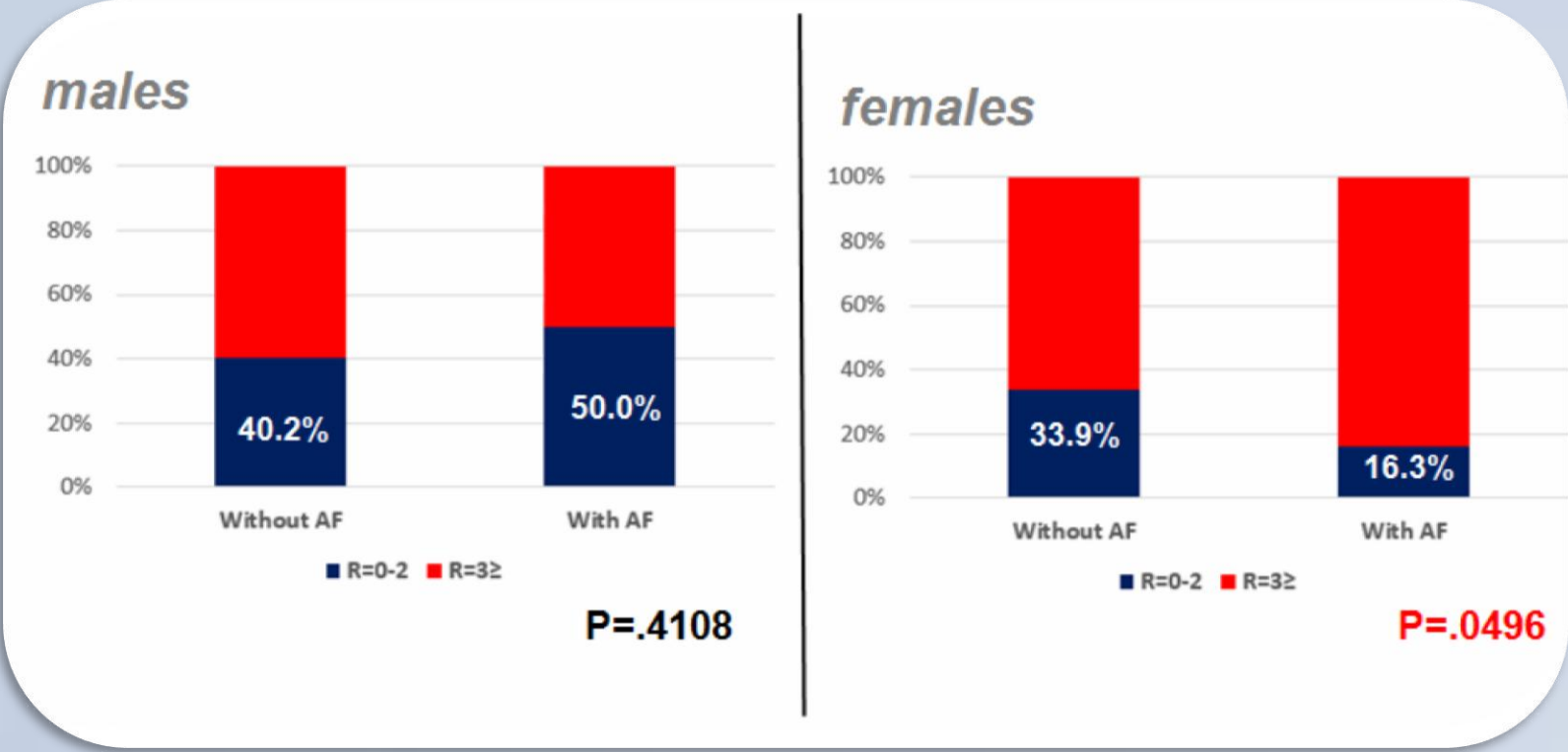
Factors that affect the stroke outcome

Logistic regression model			95% C.I. for EXP(B)		
	df	Sig.	Exp(B)	Lower	Upper
NIHSS	1	<0.001	4.655	2.681	8.082
HEM T	1	.009	4.873	1.479	16.061
Age	1	<0.001	1.078	1.035	1.123
Constant	1	.000	.000		

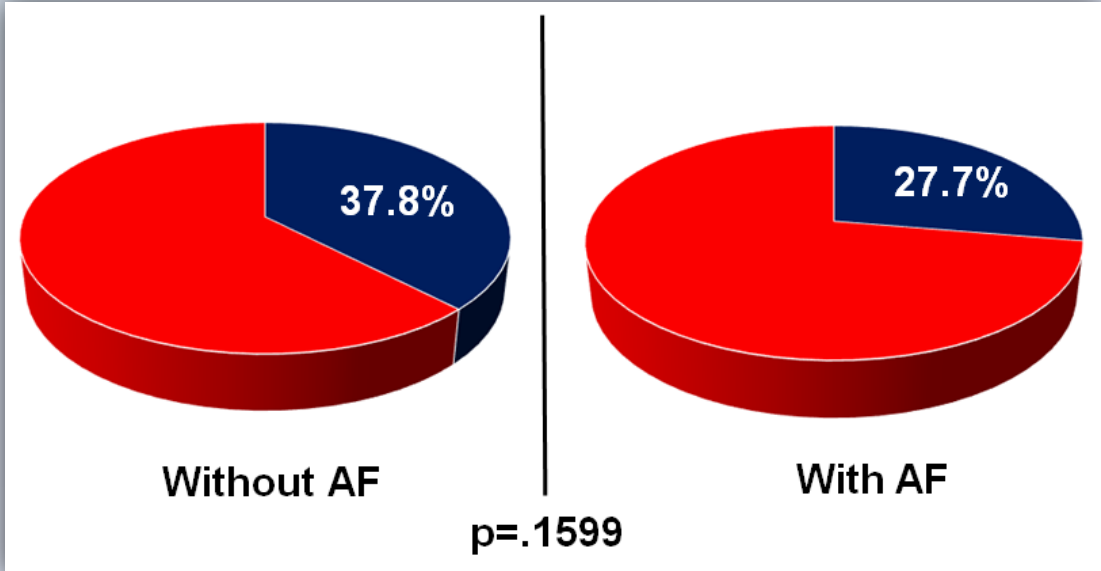
CONCLUSIONS

We found that presence of AF could be the predictor for less favorable stroke outcome after intravenous thrombolysis only in subgroup of female patients.

Less favourable outcome is in females with AF



AF and (favorable*) outcome



*mRS=0-2

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