

How difference are transient atrial fibrillation and pre-existing atrial fibrillation in mortality

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Background/Aims: Atrial fibrillation(AF) often complicates ischemic heart disease(IHD) and show poor prognosis. **Methods:** From January, 2007 to April, 2019, total 441 consecutive patients who had IHD with underwent percutaneous coronary intervention(PCI) were enrolled retrospectively. The medical data of IHD with AF and IHD without AF patients were analyzed. We divided AF according to the occurrence point as existence before PCI, transient during hospitalization and occur during follow up period. The data was analyzed of association of death, major bleeding and stroke or transient ischemic attack(TIA). Transient AF was defined as new onset AF found during IHD hospital period and was restored to sinus rhythm before discharge. Pre-existing AF was defined as AF appeared before IHD hospitalization. **Results:** According to the presence of transient AF, study patients were divided two group, one was transient AF($n=63$) and the other was non-transient AF(pre-existing AF and AF occurred during follow up period, $n=145$). Transient AF group had faster heart rate(96.7 ± 35.2 beats/min vs 77.1 ± 23.2 beats/min, $p<0.001$), higher incidence of acute myocardial infarction(55.6% vs 33.8% , $p=0.01$), shock(23.8% vs 6.9% , $p<0.001$), more severe systolic and diastolic dysfunction(EF: $49.3\pm 13.9\%$ vs $59.8\pm 13.0\%$, $p<0.001$, E/E': 14.0 ± 6.3 vs 11.7 ± 5.7 , $p=0.02$) and showed lower stroke incidence(9.5% vs 28.3% , $p=0.003$), but major bleeding incidence(7.9% vs 13.8% , $p=0.23$) and mortality rate(11.1% vs 14.5% , $p=0.051$) were not different between two groups. Compared to pre-existing AF, transient AF showed frequent shock(25.8% vs 6.1% , O.R. 5.5, 95% C I: 2.0~14.8, $p<0.001$), AMI incidence(57.8% vs 29.3% , O.R. 3.4, 95% C I: 1.8~3.0, $p<0.001$), multiple vessel disease(66.7% vs 44.4% , O.R. 2.6, 95% C I: 1.4~4.9, $p=0.003$), smaller left atrial diameter (39.4 ± 6.2 mm vs 43.3 ± 6.8 mm, $p<0.001$), more paroxysmal feature (77.3% vs 26.3% , O.R. 9.8, 95% C I: 4.7~20.3, $p<0.001$), tendency of long term DAPT usage(89.4% vs 76.8% , $p=0.02$), but no significant differences in major bleeding rate(9.1% vs 19.2% , $p=0.09$) and stroke incidence (4.5% vs 11.1% , $p=0.15$). **Conclusions:** Transient AF have similar burden of mortality, major bleeding and stroke or TIA compared to pre-existing AF.

Table 1. Baseline characteristics of patients in study

	Transient AF (n=66)	Pre-existing (n=101)	P value
Age	72.4±11.2	74.1±9.5	0.29
Male	40 (60.6%)	65 (64.4%)	0.62
BMI	23.7±3.7	24.3±4.1	0.40
FU duration (day)	1139.6±944.3	1566.4±1243.6	0.01
AMI (vs Angina)	38 (57.8%)	29 (29.3%)	0.000
STEMI (vs NSTEMI)	23 (34.8%)	15 (15.7%)	0.55
Multiple vessel disease	44 (66.7%)	44 (44.4%)	0.003
Initial Heart rate (rate/min)	99.1±35.5	79.7±24.8	0.000
Initial shock	17 (25.8%)	6 (6.1%)	0.000
Medical history			
Heart failure	27 (40.9%)	22 (22.2%)	0.01
HTN	46 (69.7%)	83 (83.8%)	0.06
DM	25 (37.9%)	38 (38.4%)	0.97
Dyslipidemia	20 (30.3%)	27 (27.3%)	0.62
Previous CVA or TIA	8 (12.1%)	15 (15.2%)	0.62
Previous vascular disease	30 (45.5%)	39 (39.4%)	0.38
CHADS2-VASc score	3.4±1.8	3.3±1.7	0.89
AF diagnosis age	70.7±11.4	67.7±10.0	0.07
EF (%)	49.2±13.9	58.0±12.7	0.000
Left atrial diameter (mm)	39.4±6.2	43.3±6.8	0.000
More than moderate valve disease	43 (65.2%)	68 (68.7%)	0.70
E	0.82±0.26	0.78±0.28	0.39
E'	0.06±0.02	0.08±0.08	0.06
E/E'	13.9±6.2	11.7±5.7	0.03
Paroxysmal AF	51 (77.3%)	26 (26.3%)	0.000
AF recurrence	16 (24.2%)	22 (22.2%)	0.75
Long term DAPT use	59 (89.4%)	76 (76.8%)	0.02
Death during FU	7 (10.6%)	12 (12.1%)	0.8
Cardiac death	4	7	
TE death	0	1	
Stroke, TIA, systemic TE during FU	3 (4.5%)	11 (11.1%)	0.15
Major bleeding during FU	6 (9.1%)	19 (19.2%)	0.09

