

Supplemental table 1- Baseline Characteristics and outcome of ischemic stroke patients admitted with small vessel disease etiology

| Characteristic or Investigation | Total (n= 3182) | Low Normal (n=883, 27.7%) | High Normal (n=1018, 32.0%) | Borderline High (537, 16.9%) | High (n=744, 23.4%) | P- Value |
|--|--------------------|---------------------------------|-----------------------------------|------------------------------------|---------------------------|-------------|
| Age, Mean, years | 55.4 ±12.1 | 57.2 ±13.4 | 55.7 ±11.9 | 53.5 ±10.9 | 55.4 ±12.1 | <0.001 |
| Male Sex | 2643 (83.1) | 711 (80.5) | 845 (83.0) | 451 (84.0) | 636 (85.5) | 0.06 |
| Diabetes | 1857 (58.4) | 433 (49.0) | 576 (56.6) | 346 (64.4) | 502 (67.5) | <0.001 |
| Hypertension | 2541 (79.9) | 681 (77.1) | 831 (81.6) | 436 (81.2) | 593 (79.7) | 0.08 |
| Prior Stroke | 373 (11.7) | 117 (13.3) | 110 (10.8) | 64 (11.9) | 82 (11.0) | 0.36 |
| Atrial Fibrillation | 109 (3.4) | 47 (5.3) | 34 (3.3) | 16 (3.0) | 12 (1.6) | <0.001 |
| Coronary Artery Disease | 297 (9.3) | 88 (10.0) | 87 (8.5) | 50 (9.3) | 72 (9.7) | 0.74 |
| Active Smoking | 966 (30.4) | 212 (24.0) | 309 (30.4) | 170 (31.7) | 275 (37.0) | <0.001 |
| Obesity (BMI ≥ 30 kg/m ²) | 802 (25.2) | 173 (19.6) | 257 (25.2) | 160 (29.8) | 212 (28.5) | <0.001 |
| NIHSS on admission | 3.5 ±3.3 | 3.8 ±3.8 | 3.5 ±3.2 | 3.4 ±3.1 | 3.1 ±2.7 | <0.001 |
| NIHSS Severity | | | | | | |
| Mild (NIHSS 0-4) | 2370 (74.5) | 651 (73.7) | 758 (74.5) | 398 (74.1) | 563 (75.7) | 0.002 |
| Moderate (NIHSS 5-10) | 693 (21.8) | 180 (20.4) | 222 (21.8) | 124 (23.1) | 167 (22.4) | |
| Severe (NIHSS >10) | 119 (3.7) | 52 (5.9) | 38 (3.7) | 15 (2.8) | 14 (1.9) | |
| IV Thrombolysis given | 208 (6.5) | 46 (5.2) | 63 (6.2) | 45 (8.4) | 54 (7.3) | 0.09 |
| Complications during admission | 73 (2.3) | 34 (3.9) | 23 (2.3) | 9 (1.7) | 7 (0.9) | <0.001 |
| Prognosis 90-Days (n= 2458) | | | | | | |
| Good (mRS 0-2) | 1920 (78.1) | 501 (73.1) | 620 (79.3) | 336 (81.2) | 463 (80.2) | 0.003 |
| Poor (mRS 3-6) | 538 (21.9) | 184 (26.9) | 162 (20.7) | 78 (18.8) | 114 (19.8) | |
| Mortality at 90-Days | 40 (1.6) | 22 (3.2) | 11 (1.4) | 2 (0.5) | 5 (0.9) | <0.001 |
| One Year Outcome | | | | | | |
| Recurrent Stroke (Ischemic or Hemorrhagic) | 60 (2.4) | 14 (2.0) | 18 (2.3) | 10 (2.5) | 18 (3.0) | 0.70 |
| Myocardial Infarction (fatal or non-fatal) | 14 (0.6) | 3 (0.4) | 6 (0.8) | 2 (0.5) | 3 (0.5) | 0.84 |
| All-Cause Mortality | 56 (2.3) | 27 (3.9) | 16 (2.0) | 7 (1.7) | 6 (1.0) | 0.003 |
| Cardiac Arrest | 10 (0.4) | 5 (0.7) | 2 (0.3) | 2 (0.5) | 1 (0.2) | 0.37 |
| Cardiac Revascularization (CABG or PCI) | 15 (0.6) | 6 (0.9) | 6 (0.8) | 1 (0.2) | 2 (0.3) | 0.43 |
| Total MACE at one year | 135 (4.2) | 48 (5.4) | 41 (4.0) | 19 (3.5) | 27 (3.6) | 0.21 |

Triglyceride values – Low normal – 1.1 mmol/L or less, High normal- 1.2-1.7 mmol/L, Borderline High- 1.8-2.2 mmol/L, and High levels- 2.3 mmol/L or more.
 IV- intravenous, NIHSS- National Institute of Health Stroke Scale, RBS – Random blood sugar, HDL- High density lipoprotein, LDL Low density lipoprotein, BMI- Body Mass Index, mRS- Modified Rankin Score, CABG- Coronary artery bypass Graft, PCI- Percutaneous Coronary Intervention, MACE- Major Cardiac Adverse Event

Supplemental table 2- Baseline Characteristics and outcome of non-Diabetic ischemic stroke patients.

| Characteristic or Investigation | Total (n= 2870) | Low Normal (n=1086, 37.8%) | High Normal (n=947, 33.0%) | Borderline High (397, 13.8%) | High (n=440, 15.3%) | P- Value |
|--|--------------------|----------------------------------|----------------------------------|------------------------------------|---------------------------|-------------|
| Age, Mean, years | 50.5 ±13.1 | 52.2 ±14.9 | 50.2 ±12.3 | 48.9 ±11.6 | 48.1 ±10.4 | <0.001 |
| Male Sex | 2436 (84.9) | 860 (79.2) | 814 (86.0) | 354 (89.2) | 408 (92.7) | <0.001 |
| Hypertension | 1834 (63.9) | 666 (61.3) | 631 (66.6) | 253 (63.7) | 284 (64.5) | 0.09 |
| Prior Stroke | 191 (6.7) | 94 (8.7) | 60 (6.3) | 18 (4.5) | 19 (4.3) | 0.003 |
| Atrial Fibrillation | 203 (7.1) | 107 (9.9) | 64 (6.8) | 20 (5.0) | 12 (2.7) | <0.001 |
| Coronary Artery Disease | 183 (6.4) | 79 (7.3) | 53 (5.6) | 26 (6.5) | 25 (5.7) | 0.42 |
| Active Smoking | 889 (31.0) | 253 (23.3) | 311 (32.8) | 143 (36.0) | 182 (41.4) | <0.001 |
| Obesity (BMI ≥ 30 kg/m ²) | 614 (21.4) | 204 (18.8) | 206 (21.8) | 92 (23.8) | 112 (25.5) | 0.02 |
| NIHSS on admission | 5.2 ±5.5 | 5.8 ±6.1 | 5.0 ±5.3 | 4.6 ±4.9 | 4.4 ±4.8 | <0.001 |
| NIHSS Severity | | | | | | |
| Mild (NIHSS 0-4) | 1808 (63.0) | 646 (59.5) | 604 (63.8) | 264 (66.5) | 294 (66.8) | 0.002 |
| Moderate (NIHSS 5-10) | 643 (22.4) | 243 (22.4) | 214 (22.6) | 89 (22.4) | 97 (22.0) | |
| Severe (NIHSS >10) | 419 (14.6) | 197 (18.1) | 129 (13.6) | 44 (11.1) | 49 (11.1) | |
| IV Thrombolysis given | 396 (13.8) | 151 (13.9) | 122 (12.9) | 59 (14.9) | 64 (14.5) | 0.74 |
| Complications during admission | 155 (5.4) | 80 (7.4) | 42 (4.4) | 17 (4.3) | 16 (3.6) | 0.004 |
| TOAST Classification | | | | | | |
| Small Vessel Disease | 1325 (46.2) | 450 (41.4) | 442 (46.7) | 191 (48.1) | 242 (55.0) | <0.001 |
| Large Vessel Disease | 561 (19.5) | 207 (19.1) | 193 (20.4) | 83 (20.9) | 78 (17.7) | |
| Cardioembolic | 561 (19.5) | 252 (23.2) | 179 (18.9) | 69 (17.4) | 61 (13.9) | |
| Stroke of Determined Origin | 250 (8.7) | 108 (9.9) | 82 (8.7) | 25 (6.3) | 35 (8.0) | |
| Stroke of Undetermined Origin | 173 (6.0) | 69 (6.4) | 51 (5.4) | 29 (7.3) | 24 (5.5) | |
| Prognosis 90-Days (n= 2160) | | | | | | |
| Good (mRS 0-2) | 1642 (76.0) | 586 (70.5) | 554 (78.5) | 240 (78.9) | 262 (82.1) | <0.001 |
| Poor (mRS 3-6) | 518 (24.0) | 245 (29.5) | 152 (21.5) | 64 (21.1) | 57 (17.9) | |
| Mortality at 90-Days | 56 (2.6) | 26 (3.1) | 18 (2.5) | 5 (1.6) | 7 (2.2) | 0.52 |
| One Year Outcome | | | | | | |
| Recurrent Stroke (Ischemic or Hemorrhagic) | 43 (2.0) | 22 (2.7) | 8 (1.1) | 6 (2.0) | 7 (2.1) | 0.19 |
| Myocardial Infarction (fatal or non-fatal) | 8 (0.4) | 2 (0.2) | 3 (0.4) | 2 (0.7) | 1 (0.3) | 0.76 |
| All-Cause Mortality | 67 (3.1) | 32 (4.0) | 22 (3.2) | 6 (2.0) | 7 (2.1) | 0.24 |
| Cardiac Arrest | 11 (0.5) | 5 (0.6) | 4 (0.6) | 0 | 2 (0.6) | 0.62 |
| Cardiac Revascularization (CABG or PCI) | 9 (0.4) | 2 (0.2) | 3 (0.4) | 3 (1.0) | 1 (0.3) | 0.36 |
| Total MACE at one year | 119 (4.1) | 56 (5.2) | 34 (3.6) | 14 (3.5) | 15 (3.4) | 0.21 |

Triglyceride values – Low normal – 1.1 mmol/L or less, High normal- 1.2-1.7 mmol/L, Borderline High- 1.8-2.2 mmol/L, and High levels- 2.3 mmol/L or more.
IV- intravenous, NIHSS- National Institute of Health Stroke Scale, RBS – Random blood sugar, HDL- High density lipoprotein, LDL Low density lipoprotein, BMI- Body Mass Index, mRS- Modified Rankin Score, CABG- Coronary artery bypass Graft, PCI- Percutaneous Coronary Intervention, MACE- Major Cardiac Adverse Event

Supplementary Table 3: Multivariate logistic regression analysis showing factors associated ischemic strokes of small vessel disease etiology .

| Variable | Adjusted Odds Ratio | 95.0% CI | | P -value |
|-------------------------|---------------------|----------|-------|----------|
| | | Lower | Upper | |
| Age (Years) | 1.02 | 1.01 | 1.02 | <0.001 |
| Gender | 1.18 | 1.03 | 1.36 | 0.02 |
| NIHSS on admission | 0.88 | 0.87 | 0.89 | <0.001 |
| Hypertension | 1.74 | 1.52 | 1.96 | <0.001 |
| Coronary Artery Disease | 0.54 | 0.45 | 0.63 | <0.001 |
| Atrial Fibrillation | 0.31 | 0.24 | 0.39 | <0.001 |
| Hypertriglyceridemia | 1.09 | 1.05 | 1.15 | <0.001 |
| | | | | |

Results were adjusted to diabetes, dyslipidemia, obesity and prior stroke variables.

Multivariate logistic regression analysis where hypertriglyceridemia was taken as continuous variable for small vessel disease demonstrated that hypertriglyceridemia was independently associated with small vessel disease after adjusting other important independent variables such as diabetes, dyslipidemia, obesity and prior stroke as well as age, sex, HTN, NIHSS on admission, coronary artery disease, and atrial fibrillation (Supplementary table).