ONLINE SUPPLEMENTAL MATERIALS

Aetiological subtypes of TIA and ischaemic stroke in chronic kidney disease: population-based Study

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TOAST for OXVASC

Patient Name:          Event Date:          
OXVASC ID:            Event Type:          
Age at event:         

Risk factor profile (for all patients; please circle)

Cardioembolic-related:

- Diagnosed AF (including atrial flutter) prior to the index event: Yes / No
- Mechanical prosthetic / Bioprosthetic cardiac valve prior to the index event: Yes / No

- If yes to either → Treatment: anticoagulation / antiplatelet / none
- INR (if on warfarin) ______

- Recent MI (<4 weeks): Yes / No

Atherosclerotic risk factors:

- Hypertension / DM / hyperlipidaemia / myocardial infarction / PVD / stroke / TIA / smoking
  (ex/ current).

Other risk factors:

- None / Migraine with aura / Migraine without aura / Autoimmune disease / Active cancer

Clinical syndrome (for all patients; please circle)

NINDS criteria (PMR): Positive / Negative

Clinical syndrome according to the OXVASC classification (PMR):

- OCSP: PACI / LACI / TACI / POCI

Vascular territory: LACA / LMCA / LPCA / RACA / RMCA / RPCA / VB/ uncertain

Investigations (ONLY for prob/def patients; please circle)

Brain imaging CT / MRI / Both

- Acute lesion Yes / No If Yes, please circle the appropriate description below:
  - Single: L / R, Size _____ mm, Carotid / VB, Cortical / Subcortical lacunar infarct Yes / No
  - Multiple: L / R / Both; Anterior / Posterior / Both

- Old lesion Yes / No If Yes, please describe ______________________________________

Vascular imaging Carotid Doppler only

- Normal Yes / No
- Dissection Yes / No, if Yes, please describe ______________________________________
- Stenosis Yes / No If Yes, please circle the appropriate description below:
  - Symptomatic / asymptomatic / Both
    - If symptomatic, please choose the location below:
      - Extracranial / Intracranial I / Both, Carotid / VB / Both
  - Severity (≥ 50%) Yes / No
- Known stenosis from previous scans (Doppler/CTA/MRA/DSA)? No / Yes, please specify____
- Bubble TCD R-L shunt Yes / No
Cardiac investigation

**ECG:** SR / AF (including atrial flutter) / sick-sinus syndrome / other: _____________

**Echo:** EF _____ %
- Left ventricular or Left atrial / atrial appendage thrombus: Yes / No
- Akinetic / hypokinetic left ventricular segment: Yes / No
- Mitral stenosis: Yes / No
- Mitral valve prolapse: Yes / No
- Infective / non-bacterial thrombotic endocarditis: Yes / No
- PFO / Atrial septum aneurysm: Yes / No
- Myxoma: Yes / No

R-test/HOLTER: AF>30s: Yes / No

Other investigation results: ____________________________________________
(e.g. thrombophilia screen, CADASIL genetics)

**TOAST (ONLY for prob/def patients; please circle)**

LAD / CE / SVD / UDE / UNK / MULT: _____________ / Other: _____________

**OXCODE (for all patients)**

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**Supplementary Table I:** Associations of eGFR categories and TOAST subtypes, adjusted for age, sex, and hypertension.

| TIA/Stroke TOAST Subtype† | GFR Categories (ml/min/1.73m²) | Crude OR | P value | Model 1 OR | P value | Model 2 OR | P value |
|--------------------------|--------------------------------|---------|---------|-----------|---------|------------|---------|
| Cardioembolic             |                                |         |         |           |         |            |         |
| Crude OR                 | 1.00 (ref)                     | <0.001  | 3.08 (2.28-4.15) | <0.001  | 5.50 (3.38-8.96) | <0.001  |
| Model 1 OR*              | 1.00 (ref)                     | 0.58    | 0.93 (0.62-1.41) | 0.74    | 2.61 (1.33-5.10) | 0.01    |
| Model 2 OR**             | 1.00 (ref)                     | 0.60    | 0.91 (0.60-1.38) | 0.67    | 2.54 (1.30-4.97) | 0.01    |
| Large artery disease     |                                |         |         |           |         |            |         |
| Crude OR                 | 1.00 (ref)                     | 0.32    | 1.39 (0.96-2.03) | 0.08    | 1.19 (0.59-2.42) | 0.63    |
| Model 1 OR               | 1.00 (ref)                     | 0.67    | 1.76 (1.03-3.01) | 0.04    | 0.85 (0.33-2.15) | 0.73    |
| Model 2 OR               | 1.00 (ref)                     | 0.70    | 1.62 (0.95-2.77) | 0.08    | 0.83 (0.33-2.11) | 0.70    |
| Small vessel disease     |                                |         |         |           |         |            |         |
| Crude OR                 | 1.00 (ref)                     | 0.07    | 0.57 (0.41-0.79) | 0.001   | 0.32 (0.14-0.77) | 0.01    |
| Model 1 OR               | 1.00 (ref)                     | 0.73    | 1.15 (0.70-1.88) | 0.59    | 0.47 (0.17-1.29) | 0.15    |
| Model 2 OR               | 1.00 (ref)                     | 0.73    | 1.18 (0.72-1.93) | 0.53    | 0.46 (0.17-1.26) | 0.13    |
| Undetermined             |                                |         |         |           |         |            |         |
| Crude OR                 | 1.00 (ref)                     | 0.02    | 0.51 (0.40-0.65) | <0.001  | 0.32 (0.19-0.54) | <0.001  |
| Model 1 OR               | 1.00 (ref)                     | 0.46    | 0.81 (0.57-1.15) | 0.23    | 0.38 (0.20-0.72) | 0.003   |
| Model 2 OR               | 1.00 (ref)                     | 0.47    | 0.84 (0.59-1.20) | 0.33    | 0.39 (0.21-0.76) | 0.01    |
| Multiple                 |                                |         |         |           |         |            |         |
| Crude OR                 | 1.00 (ref)                     | 0.29    | 2.33 (1.13-4.81) | 0.02    | 3.04 (1.05-8.76) | 0.04    |
| Model 1 OR               | 1.00 (ref)                     | 0.29    | 0.59 (0.23-1.55) | 0.26    | 0.90 (0.19-4.18) | 0.89    |
| Model 2 OR               | 1.00 (ref)                     | 0.29    | 0.58 (0.22-1.50) | 0.26    | 0.87 (0.19-3.99) | 0.86    |
| Other                    |                                |         |         |           |         |            |         |
| Crude OR                 | 1.00 (ref)                     | 0.06    | 0.21 (0.10-0.44) | <0.001  | 0.19 (0.03-1.42) | 0.11    |
| Model 1 OR               | 1.00 (ref)                     | 0.15    | 0.97 (0.34-2.77) | 0.95    | 0.89 (0.10-8.11) | 0.91    |
| Model 2 OR               | 1.00 (ref)                     | 0.15    | 0.95 (0.33-2.74) | 0.93    | 0.92 (0.10-8.47) | 0.94    |

*Crude OR indicates estimated glomerular filtration rate; OR, odds ratio.
†Events of unknown aetiology were excluded.
*Model 1 adjusted for age and sex.
**Model 2 adjusted for variables in model 1 and hypertension.
**Supplementary Table II: Baseline characteristics of all patients with ICH, and stratified according to the presence of CKD**

| Characteristics* | All patients | No CKD | CKD present | P value |
|------------------|--------------|--------|-------------|---------|
|                  | n = 209      | n = 138| n = 70      |         |
| Age years, median (IQR) | 76 (61.5-83.0) | 71 (56.8-80.3) | 81 (75.0-88.0) | <0.001 |
| Male sex | 103 (49.3) | 71 (51.4) | 32 (45.7) | 0.53 |
| Black race | 3 (1.4) | 3 (2.2) | 0 (0) | 0.53 |
| eGFR (ml/min/1.73m²), median (IQR) | 72.3 (53.1-87.4) | 83.4 (72.2-93.1) | 47.5 (39.7-53.3) | <0.001 |
| Hypertension | 110 (52.6) | 60 (43.5) | 50 (71.4) | <0.001 |
| Diabetes mellitus | 24 (11.5) | 12 (8.7) | 12 (17.1) | 0.12 |
| Previous history of hyperlipidaemia | 43 (20.6) | 26 (18.8) | 17 (24.3) | 0.46 |
| Previous history of MI | 5 (2.4) | 4 (2.9) | 1 (1.4) | 0.86 |
| Previous history of PAD | 9 (4.3) | 5 (3.6) | 4 (5.7) | 0.73 |
| Previous history of atrial fibrillation | 28 (13.4) | 13 (9.4) | 15 (21.4) | 0.03 |
| Current or history of smoking | 99 (49) | 70 (52.2) | 29 (43.3) | 0.30 |

*Numbers are n (%) unless otherwise stated.

CCF indicates congestive cardiac failure; CKD, chronic kidney disease (defined as eGFR<60 mL/min per 1.73 m²); eGFR, estimated glomerular filtration rate; ICH indicates intracerebral haemorrhage; IQR indicates interquartile range; MI, myocardial infarction; NIHSS, National Institutes of Health Stroke Scale; PAD, peripheral artery disease; TIA, transient ischaemic attack; VHD, valvular heart disease;