

GENDER INEQUALITIES IN ISCHEMIC STROKE MANAGEMENT IN A COMPREHENSIVE ITALIAN HOSPITAL: A RETROSPECTIVE COHORT STUDY ON 9167 PATIENTS

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Conflict of interest: I have nothing to declare.

Introduction

There are several lines of evidence reporting an unequal access to Revascularization Therapies (RTs) for ischemic stroke based on **sex**^{1,2}. Women usually have significantly longer onset-to-door (ODT), onset-to-treatment, and door-to-treatment times than men². Growing evidence is also emerging about differences in stroke risks factors, onset symptoms, and prognosis between sexes³.

Study Aims

- Analyze sex differences in the **access to acute stroke treatments** and **stroke pathway at large**;
- Analyze sex differences in **comorbidities, stroke onset symptoms**, and **in-hospital mortality**.

Methods

In this retrospective cohort study, we enrolled consecutive adult patients admitted to the Emergency Department (ED) of our Polyclinic from 2015 to 2022 for suspected stroke.

Demographics, clinical data, symptoms and NIHSS at onset, mode of ED arrival, Onset to Door Time (ODT), Revascularization Treatments (RTs) were collected for each participant. Discharge diagnoses were classified as stroke, TIA, and stroke mimics.

Statistical analysis

Univariate comparisons were performed using Mann-Whitney U-test, Kruskal-Wallis and χ^2 -test. Adjusted analyses were performed by logistic regression.

Results

Overall, **9167 patients** were included in the study, of whom 4510 (49.2%) were female. Discharge diagnoses of included patients are represented in *Figure 1*. Considering the entire study population, we found that **male sex** was an independent predictor of a **lower likelihood of waiting ≥ 15 minutes in the ED** before medical evaluation (*Figure 2*) and of being classified as **non-emergency code at triage** (common OR 0.757 95%CI (0.580-0.988); $p=0.040$). Considering the 4070 patients with a discharge diagnosis of ischemic stroke, we found that **women** were significantly **older** than man ($p<0.001$) and had **higher median NIHSS** at onset ($p<0.001$), and **shorter ODTs** ($p=0.032$). No gender differences were found in onset symptoms, probability of receiving RTs (*Figure 3*), hospitalization, and in-hospital mortality.

Discussion

Even if no differences were found in the rate of RTs administered, some gender inequalities in the in-hospital stroke pathway still persist, also in developed countries.

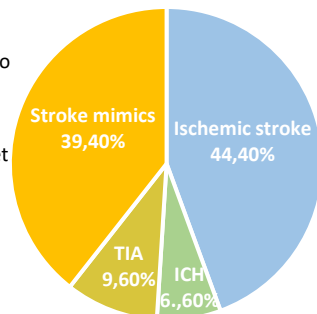


Figure 1. Patients' discharge diagnoses

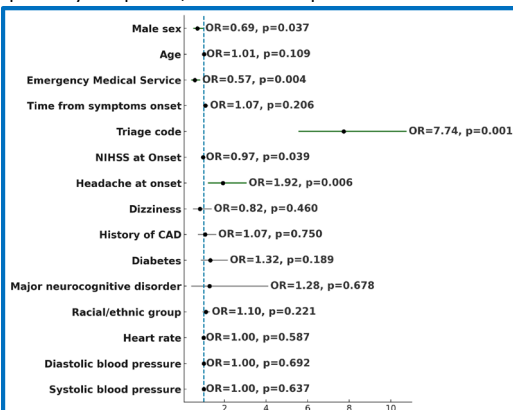


Figure 2. Forest plot of the likelihood of waiting ≥ 15 minutes in the ED

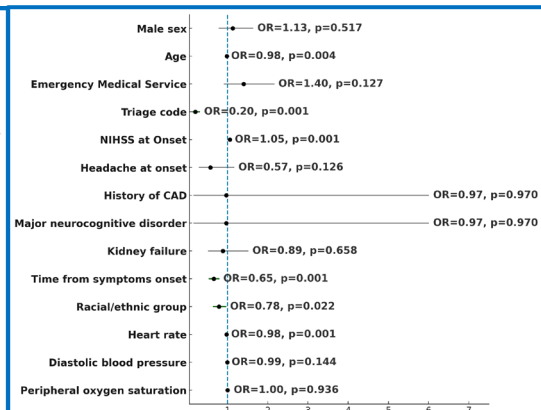


Figure 3. Forest plot of the likelihood of receiving revascularization treatments

1. Otite FO et al., *Stroke*, 2021; 2. Westphal LP et al., *Stroke*, 2024; 3. Ali M. et al., *Stroke*, 2021

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