Category : **Brain: cerebro-vascular accidents**

A118 - *Influence of patient characteristics on quality indicators of stroke treatment: a retrospective single centre analysis over four years.*

A Lesenne [1] ; L Ernon [2] ; K Bekelaar [2] ; L Stockx [3] ; T De Beule [3] ; P Vanelderen [4] ; M Vander Laenen [4] ; D Mesotten [4] ; S Ordies [4]

[1]*Ghent University Hospital, Department of Anesthesiology and Perioperative Medicine, Ghent, Belgium,* [2]*Ziekenhuis Oost-Limburg Genk, Department of Neurology, Genk, Belgium,* [3]*Ziekenhuis Oost-Limburg Genk, Department of Medical Imaging, Genk, Belgium,* [4]*Ziekenhuis Oost-Limburg Genk, Department of Critical Care Services, Genk, Belgium*

Introduction:
Worldwide, ischemic stroke is a major cause of death and morbidity. Important target times to improve patient outcome are door-to-CT time, door-to-needle time (DNT) and door-to-groin time (DGT). Since 2017 stroke data was prospectively collected in the framework of stroke centre accreditation in ZOL Genk, Belgium. We hypothesized that this would improve target times and enlarge the proportion of treated patients.

Methods:
All patients admitted for stroke or TIA at ZOL stroke centre, Genk, Belgium, between 2017 and 2020 were included. Quality indicators were proportion of treated patients, door-to-CT time, DNT and DGT. A structured data collection and a stroke working flow template was created to enhance and harmonize stroke diagnostics and treatment in 2019. As of 2020, intravenous thrombolysis was administered immediately at the CT scan.

Results:
In total 1255 patients were included. The number of patients registered with stroke and TIA increased by 80% over 4 years (p<0.0001). Median age differed over time: 78 years in 2017 vs. 74 years in 2020 (p=0.03). NIHSS at admission decreased over the last two years (p<0.0001). In addition, onset-to-door time, door-to-CT time and DNT were different (p<0.0001, p=0.0005, p<0.0001). DGT was similar between consecutive years (p=0.54). The proportion of conservatively treated patients increased over time by 15% (p=0.0001) (Table 1).

Conclusion:
Patients were younger and presented with milder strokes in comparison with earlier years. Increased detection of stroke patients was probably due to underreporting of milder strokes in the past. The higher proportion of conservatively treated patients hereby may have affected target times such as a prolonged door-to-CT time. The sudden drop of DNT in 2020 can be explained by administration of thrombolysis already at the CT scan. Increased awareness and training among staff probably led to increased diagnoses of acute cerebrovascular accidents in our stroke centre and may help to further reduce target times.

Table:

	2017 (n = 241)	2018 (n = 274)	2019 (n = 305)	2020 (n = 435) (p-value)
Age, years, median (IQR)	78 (68 – 84)	74 (63 – 83)	76 (66 – 83)	74 (64 – 82) (0.03)
NIHSS, median (IQR) (n)	6 (3 – 15) (227)	6 (3 – 14) (269)	3 (1 – 10) (305)	3 (1 – 7) (434) (<0.0001)
Onset to door time, hours, median (IQR) (n)	1.87 (0.89 – 3.66) (164)	1.62 (0.94 – 3.79) (185)	2.93 (1.13 – 9.82) (270)	7.55 (1.63 – 19.16) (422) (<0.0001)
Door to CT time, minutes, median (IQR) (n)	27 (16 – 52) (235)	34 (20 – 71) (250)	39 (22 – 63) (289)	37 (21 – 68) (371) (0.0005)
Door to needle time, minutes, median (IQR) (n)	35 (27 – 58) (31)	47 (34 – 70) (61)	48 (36 – 69) (51)	29 (20 – 49) (75) (<0.0001)

Door to groin time, minutes, median (IQR) (n)	70 (39 – 102) (54)	72 (53 – 94) (51)	82 (47 – 104) (46)	81 (52 – 106) (55) (0.54)
Proportion conservative treatment, n (%)	144 (60)	168 (61)	219 (72)	328 (75) (0.0001)

Patient demographics and treatment per year.