ONLINE SUPPLEMENTARY DOCUMENT

Measures of intracranial compartments in acute intracerebral haemorrhage: data from the Rapid Intervention with Glyceryl Trinitrate in Hypertensive Stroke-2 Trial (RIGHT-2)

Supplemental Table I. Comparison of intracranial volume and intracerebral haemorrhage volume measures on CT scans (n=133). Data are mean (standard deviation), difference (Δ) in volume.

Measure		Difference (Δ)	p value
Intracranial volume (ICV) (cm^3)			
SAS	1419.64 (197.07)	62.21	p<0.0001
XYZ/2	1357.42 (219.97)		
Haemorrhage volume (ICHV) (cm^3)			
SAS	46.07 (41.98)	0.07	0.94
ABC/2	45.99 (42.72)		

Supplemental Table II. Inter-observer comparison, ICC (n=10) for two observers of intracranial volume by semi-automated segmentation (cm^3), cerebral parenchymal volume (cm^3), cerebrospinal fluid volume (cm^3), intracranial area (cm^2), intercaudate distance (mm) and sylvian fissure ratio (mm). Data are mean (standard deviation) and mean difference (Δ).

			Difference (Δ)	ICC
Observer	1	2		
Measure				
Intracranial volume	1340.80 (114.90)	1341.00 (126.59)	-0.20 (21.55)	0.99
Cerebral parenchymal volume	1153.40 (143.84)	1168.39 (121.92)	-14.99 (45.01)	0.92
Cerebrospinal fluid volume	187.39 (180.45)	172.60 (148.65)	14.79 (40.90)	0.92
Intercaudate distance	15.66 (4.40)	22.95 (9.88)	-7.49 (5.48)	0.69
Sylvian fissure ratio	0.05 (0.01)	0.05 (0.02)	*	0.72

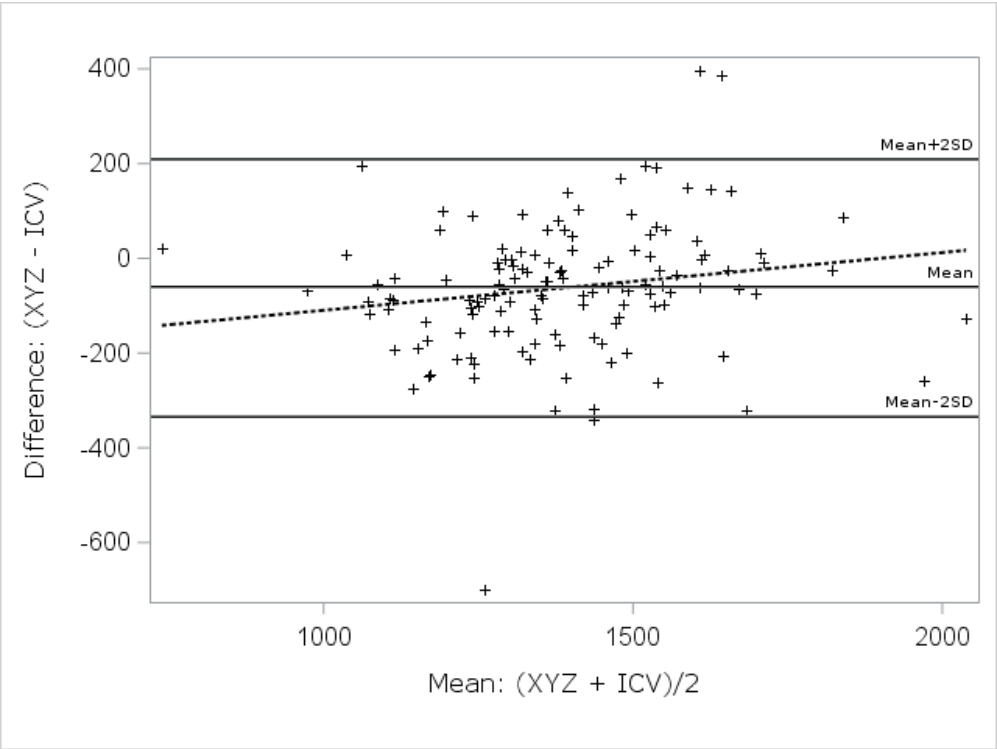
Supplemental Table III. Intra-observer comparison, ICC for two observers (n=10), of intracranial volume by semi-automated segmentation (cm^3), cerebral parenchymal volume (cm^3), cerebrospinal fluid volume (cm^3), intracranial area (cm^2), intercaudate distance (mm) and sylvian fissure ratio (mm).

			Difference (Δ)	ICC			Difference (Δ)	ICC
Observer	1				2			
Measure	1	2			1	2		
Intracranial volume	1379.80 (124.90)	1391.17 (143.98)	-12.17 (18.08)	0.95	1393.50 (153.18)	1394.20 (156.78)	-0.70 (12.34)	0.99
Cerebral parenchymal volume	1269 (189.91)	1251 (171.28)	18.00 (18.73)	0.92	1212.79 (177.65)	1244.51 (175.70)	31.72 (46.65)	0.98
Cerebrospinal fluid volume	181.39 (80.41)	183.65 (84.29)	-2.06 (3.38)	0.92	180.71 (83.15)	149.69 (71.25)	31.02 (49.48)	0.88
Intercaudate distance	18.29 (3.73)	17.26 (2.19)	1.03 (1.53)	0.83	17.96 (4.78)	18.31 (5.54)	-0.35 (2.26)	0.95
Sylvian fissure ratio	0.06 (0.01)	0.05 (0.04)	0.01	0.73	0.06 (0.02)	0.06 (0.02)	0.00	0.92

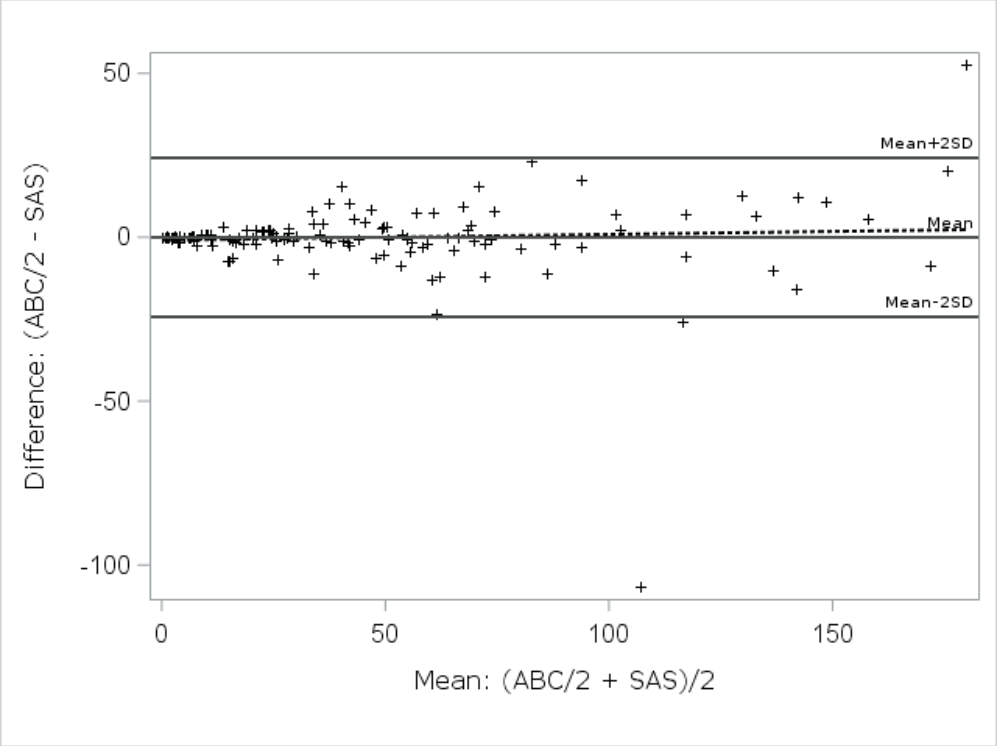
Supplemental Table IV. Intra and inter-observer comparisons (ICC) of visual assessment of small vessel disease using the Van Swieten score and severity of hydrocephalus using the cistern score.

	ICC		
Observer	1	2	1 vs 2
van Swieten score	0.83	0.95	0.98
Cistern score	0.96	1.00	0.94

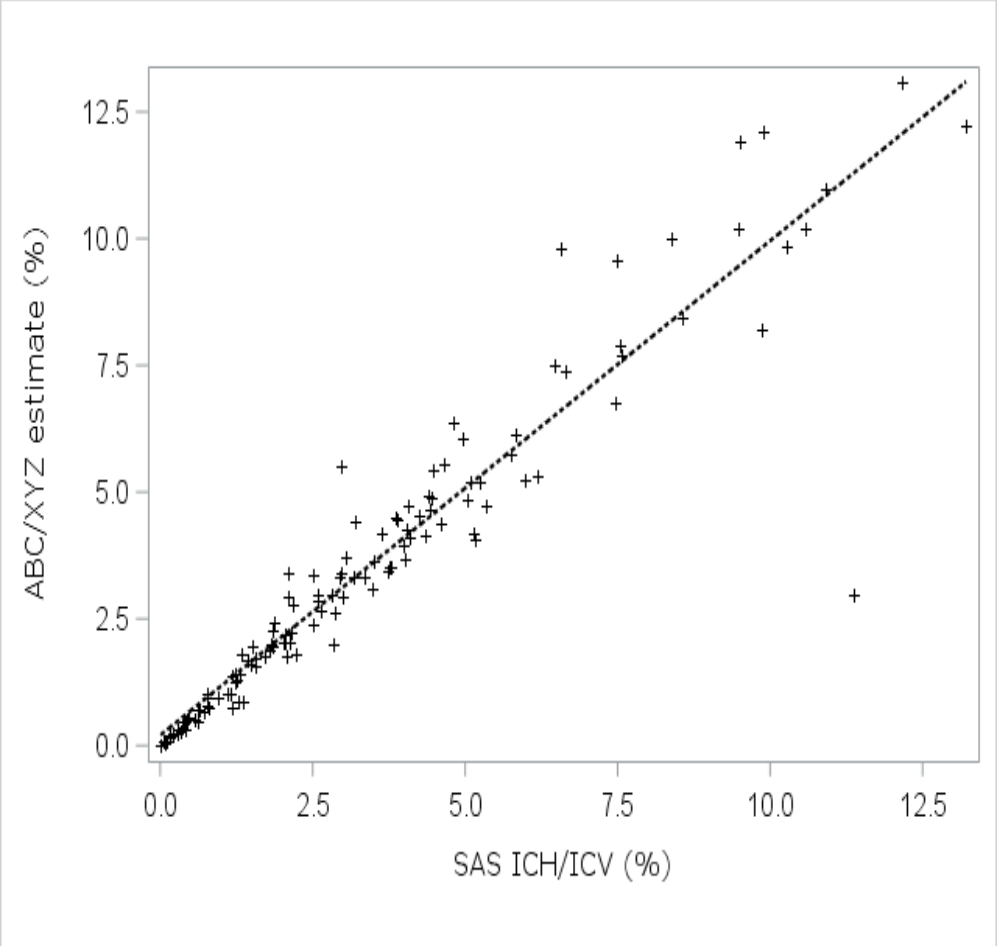
Supplemental Figure I. Bland-Altman plot for assessment of variation in estimating intracranial volume between XYZ/2 and semi-automated segmentation methods (n=133) (r^2 =0.78, p<0.0001). The continuous and dotted lines represent the regression lines. The slope of the best-fit regression line was 0.12 (p=0.042). Mean intracranial volume was 1419.64 (197.07) mL by SAS and 1357.42 (219.97) mL by XYZ/2 with a mean difference of 62.21 mL; p<0.001



Supplemental Figure II. The Bland-Altman plot for assessment of variation in estimating intracerebral haemorrhage volume between ABC/2 and semi-automatic segmentation (r^2 =0.97, p<0.0001). The continuous and dotted lines represent the regression lines. The slope of the best-fit regression line was 0.018 (p=0.42). Mean intracerebral haemorrhage volume was 46.07 (41.98) mL by SAS and 45.99 (42.72) mL with mean difference of 0.07 mL; p=0.94.



Supplemental Figure III. Regression line between ABC/XYZ (%) and ICH volume as a percentage of intracranial volume using semi-automated segmentation (SAS). The slope of the best-fit regression line was 0.98 and the intercept 0.20 (p<0.0001).



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