



Contemporary diagnostic accuracy of silent lacunar infarct cases in Chinese adult – Authors' reply

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Our report on the diagnostic accuracy of ischaemic stroke types in the China Kadoorie Biobank (CKB)¹ demonstrated that the proportion of ischaemic stroke cases due to silent lacunar infarct (LACI) increased from 7.1% in 2004-2008 to 18.2% in 2016-2018. Dr. Fuyikawa asked if the increased detection of silent LACI was explained by a greater proportional use of magnetic resonance imaging (MRI) rather than computed tomography (CT) by calendar year of follow-up in these cases. The attached table shows the brain imaging results for all 4134 silent LACI cases studied in CKB² stratified by the type of brain imaging used for diagnosis and calendar year of diagnosis (Table 1).

The results demonstrate an increasing use of both MRI with or without CT or CT only during follow-up in CKB, but only one-third of silent LACI cases had MRI. Importantly, there was no significant trend for a greater proportional use of MRI than CT by calendar year of follow-up. We agree that detection of silent LACI may have been underestimated in CKB by the relatively low proportional use of MRI rather than CT in cases with silent LACI. However, cases with silent LACI vs symptomatic LACI in CKB had comparable 5-year risks of recurrent stroke (38% vs 43%) and all-cause mortality (11% vs 14%), respectively. Hence, increased awareness of silent LACI in high-risk individuals with atypical neurological symptoms in the absence of stroke is important for stroke prevention.²

Contributors

Data Collection: IT, RC, YC Analysis: IT, Data interpretation: IT, RC, YC Writing: IT, RC, YC.

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Year	MRI with or without CT	CT only
2005 – 2006	9 (31%)	20 (69%)
2007	16 (25%)	49 (75%)
2008	27 (23%)	91 (77%)
2009	53 (30%)	122 (70%)
2010	122 (46%)	144 (54%)
2011	92 (31%)	201 (69%)
2012	150 (33%)	301 (67%)
2013	180 (32%)	384 (68%)
2014	179 (32%)	376 (68%)
2015	245 (35%)	456 (65%)
2016 – 2017	272 (30%)	645 (70%)
Total	2,789 (67%)	1,345 (33%)

Table 1: Distribution of brain imaging for silent lacunar infarct cases, by calendar year.
LACI = lacunar infarct; CT = computed tomography; MRI = magnetic resonance imaging.

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Declaration of interests

None.

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