Conclusion This findings of this study supports the use of PESI scoring systems in predicting early mortality. Study data suggests that sPESI has non-inferior predictive properties compared to the PESI, and therefore may prove of higher utility in day-to-day clinical practice. These tools may be reliably used to consider outpatient management of patients with PE, which includes imaging up to 72 hours after A&E attendance.

Abstract P174 Table 1

	Day 1	Day 3	Day 7	Day 30	Day 90
PESI					
Class I (%)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Class II (%)	0 (0)	0 (0)	1 (1.8)	1 (1.8)	2 (3.5)
Class III (%)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Class IV (%)	0 (0)	0 (0)	2 (4.3)	3 (6.4)	5 (10.6)
Class V (%)	1 (1.8)	3 (5.3)	7 (12.3)	14 (24.6)	15 (26.3)
<i>p</i> value	0.735	0.024	0.001	<0.001	<0.001
sPESI					
Low risk	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
High risk	1 (0.5)	3 (1.6)	10 (3.5)	18 (9.7)	22 (11.8)
<i>p</i> value	0.648	0.271	0.012	<0.001	<0.001
PESI					
AUROC	0.9	0.9	0.82	0.86	0.84
sPESI					
AUROC	0.9	0.89	0.86	0.9	0.88

% – Percentage of mortality within the PESI class. AUROC – area under receiver operating characteristic

P175 BURDEN OF CEREBRAL INFARCTS IDENTIFIED BY SCREENING CEREBRAL MRI SCANS IN PATIENTS WITH PULMONARY ARTERIOVENOUS MALFORMATIONS

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Introduction In a recent UK study, 61/497 (12.3%) of consecutive patients with pulmonary arteriovenous malformations (PAVMs) had experienced a clinical ischaemic stroke at median 46 (range 16–82) years.¹ Conventional stroke management included antiplatelet agents, but since many PAVM patients have underlying hereditary haemorrhagic telangiectasia (HHT), there has not been a blanket recommendation to treat all PAVM patients with such agents if residual PAVMs remain after maximal treatment. The goal of this study was to evaluate evidence of silent ischemia in patients with PAVMs.

Methods Between 20/04/2009 and 02/12/2016, 43 individuals (20 males; 23 females) with known or suspected HHT underwent a cerebral MRI scan performed for the purpose of HHT cerebral AVM screening. All available scans were analysed by two independent neuroradiologists, blinded to patient demographics/PAVM status. Data were subsequently categorised and analysed using STATA IC v13 (Statacorp, Texas).

Results Patient ages ranged from 17–74 (mean 42.2) years. Twenty-two (51.1%) were known to have PAVMs demonstrable by thoracic CT scan, and 21 had PAVMs excluded by CT scan. There was no age difference between the PAVM and

non-PAVM cohorts (mean 43.3 [range 16–73] versus 41 [21–65] years respectively, $p=0.46$). No scan demonstrated a cerebral AVM, none provided evidence of prior cerebral haemorrhage, but only 22 (51.2%) of scans were reported as normal. 17 (81%) of patients without PAVMs had a normal scan, compared to 5 (22.7%) PAVM patients ($p=0.0002$). 15/21 (68.2%) PAVM patients had at least one infarct, and 6/21 (27.3%) had microangiopathic changes. The mean number of infarcts per PAVM patient was 1.58 compared to 0.14 in non-PAVM patients ($p<0.0001$). Intriguingly, while the rates of anterior circulation territory infarcts did not differ between PAVM and non-PAVM groups (patient means 0.36 and 0.14, $p=0.18$), the PAVM patients had more infarcts in posterior circulation territories (means 1.21 and 0, $p<0.0001$).

Conclusions The findings identify high rates of silent cerebral ischaemic changes in patients with PAVMs, and raise the question whether all patients with persistent PAVMs after treatment should have pharmacological stroke prevention therapy, in the absence of a clinical stroke.

REFERENCE

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P176 INVESTIGATING ENVIRONMENTAL FACTORS ASSOCIATED WITH CEREBRAL ABSCESES IN PATIENTS WITH PULMONARY ARTERIOVENOUS MALFORMATIONS VIA AN INTERNATIONAL ONLINE QUESTIONNAIRE

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Introduction and objectives Patients with pulmonary arteriovenous malformations (PAVMs) are at high risk of cerebral abscess with life-changing morbidity and mortality. These patients often concurrently have hereditary haemorrhagic telangiectasia (HHT). A recent study of patients with PAVMs/HHT at a single institution suggested several environmental associations with cerebral abscess, particularly dental care, higher iron intake, and long-haul flights.¹ For example, 4/37 (10.8%) cerebral abscess patients reported their abscess occurred after long-distance travel.

Methods In order to capture data on wider exposure of this population to such risk factors, an online questionnaire was developed using Survey Monkey. In total, 139 non-biased questions gathered data online about an individual's HHT and/or PAVM phenotype, and environmental factors of relevance to cerebral abscess and other study foci in our group. With ethical approval (16/LO/1909), participants were recruited following advertisement through global HHT support networks.

Results The survey opened on 31 st May 2017. Within 7 weeks, 449 patients with self-reported HHT had completed the questionnaire. The majority ($\geq 60\%$) were North Americans, with Europeans constituting the second largest group. 229 (51%) had PAVMs, usually diagnosed in their twenties to fifties. 89/229 (38.9%) had been treated by PAVM embolization and 13 (5.7%) by surgery. 17 (7.42%) had experienced a cerebral abscess and 46 gave a family history of cerebral abscess. Preliminary analysis of long-distance travel data revealed most patients rarely travelled for ≥ 3 hours. 266 participants reported the number of flights they had taken in their lifetime of durations <4 hours, 4–8 hours and ≥ 8 hours.