Abstract P35 Table 1 A list of the bacterial organisms that were cultured from cerebral abscesses in the 2005–2016 cohort

Bacterial organisms from cerebral abscesses in PAVM patients
Actinomycosis spp
Alpha haemolytic streptococci
Staphylococcus Intermedius
Streptococcus Milleri
Streptococcus Anginosus
Actinomycosis Israelii
Streptococcus Constellatus
Non-haemolytic streptococci
Non specified *streptococcal* spp
Non specified anaerobic species

REFERENCE

1 Shovlin C, *et al*. Post-NICE 2008: Antibiotic prophylaxis prior to dental procedures for patients with pulmonary arteriovenous malformations (PAVMs) and hereditary haemorrhagic telangiectasia. *Br Dent J* 2008; **205**(10):531–3.

P36 INJECTIONS OF INTRAVENOUS CONTRAST FOR COMPUTERISED TOMOGRAPHY SCANS PRECIPITATE MIGRAINES IN HEREDITARY HAEMORRHAGIC TELANGIECTASIA SUBJECTS AT RISK OF PARADOXICAL EMBOLI: IMPLICATIONS FOR RIGHT-TO-LEFT SHUNT RISKS

[1]T Patel, [2]A Elphick, [3]JE Jackson, [2]CL Shovlin. [1]*St George's Hospital, London, UK;* [2]*Imperial College London, London, UK;* [3]*Imperial College Healthcare NHS Trust, London, UK*

10.1136/thoraxjnl-2016-209333.179

Introduction and objectives Migraine headaches commonly affect people with pulmonary arteriovenous malformations (PAVMs) that provide right-to-left shunts. The majority of PAVMs are due to underlying hereditary haemorrhagic telangiectasia (HHT). In our clinical practice, patients occasionally reported acute precipitation of migraine headaches following injection of technetium-labelled albumin macroaggregates for nuclear medicine scans. Our goal was to evaluate if injection of intravenous particles may provoke migraines in the cohort.

Methods Self-reported migraine features and exacerbations were examined in HHT subjects with and without pulmonary AVMs, for a series of noninvasive and invasive investigations, using an unbiased online survey. With ethical approval, the study recruited between August 2013–April 2015. Data were downloaded in December 2015 for analysis using STATA IC v12 and GraphPad Prism. Two group comparisons were performed using Mann Whitney or Fisher's exact test (for proportions). Multiple groups were compared using Kruskal Wallis with Dunn's multiple comparison test.

Results 166 subjects were classified as having both HHT and migraines. HHT subjects with migraines were more likely to have pulmonary AVMs ($p < 0.0001$). Pulse oximetry, x-rays, ultrasound and computerised tomography (CT) scans without intravenous contrast medium rarely, if ever, provoked migraines, but unenhanced magnetic resonance imaging (MRI) was reported to exacerbate migraines by 14/124 (11.2%) subjects. 114 had both enhanced and unenhanced CT examinations: studies with contrast media were more commonly reported to start (9/114 [7.8%]), and/or worsen migraines (18/114 [15.7%]) compared to those undertaken without contrast medium ($p < 0.01$), or after simple blood tests ($p < 0.05$). Additionally, migraine exacerbation was reported by 9/90 (10%) after contrast echocardiography, 2/44 (4.5%) after nuclear medicine scans, and 10/154 (6.5%) after blood tests.

Conclusions In this population, MRI studies, blood tests, contrast echocardiograms, and intravenous injection of iodinated contrast medium associated with CT examinations were reported to provoke or exacerbate migraines. Since air emboli are recognised to complicate intravenous injections, particularly following pressurised pump injections of CT scan contrast, evaluation of migraines as a potential read-out for paradoxical emboli is recommended. In the meantime, for people with HHT and migraines, pre-test counselling may helpfully include advice to bring migraine preventers or treatments to help alleviate symptoms promptly.

Imaginative Imaging in Lung Disease

P37 PRELIMINARY NORMAL VALUES FOR STRUCTURED LIGHT PLETHYSMOGRAPHY TIDAL BREATHING PARAMETERS AND AGE AND GENDER DIFFERENCES

[1]S Fakhr, [2]L O'Reilly, [1]R Wilson, [2]B Cooper, [3]R Iles. [1]*PneumaCare Limited, Ely, UK;* [2]*Queen Elizabeth Hospital, Birmingham, UK;* [3]*Evelina Children's Hospital, London, UK*

10.1136/thoraxjnl-2016-209333.180

Introduction This is the first report from an ongoing study to define normal values for Structured Light Plethysmography (SLP) tidal breathing parameters in adults. Structured Light Plethysmography (SLP) is a non-contact, non-invasive respiratory measurement technology that utilises the movement of thoraco-abdominal (TA) wall to measure a range of tidal breathing parameters. Various studies have been using SLP but lack of normative values can make any clinical judgement difficult.

Abstract P37 Table 1 SLP Tidal Breathing Parameters for adult male and female normals aged 18–69 years

Parameter	Males 18–39 yrs (n = 32) Mean±SD	Males 40–69 yrs (n = 25) Mean ± SD	Young vs older males, t (p)	Females 18–39 (n = 21) Mean ± SD	Females 40–69 yrs (n = 29) Mean ± SD	Young vs older Females, t (p)	Males vs. Females (all ages), t (p)
TAA	5.7 ± 23.3	4.75 ± 2.69	1.18 (0.24)	4.85 ± 2.45	4.8 ± 1.83	0.08 (0.94)	0.92 (0.36)
LRHTA	2.24 ± 2.13	2.39 ± 1.64	−0.298 (0.77)	1.58 ± 0.69	2.04 ± 1.43	−1.36 (0.18)	1.47 (0.14)
%RC	45.87 ± 13.07	56.29 ± 11.03	**−3.2(<0.01)**	60.23 ± 8.55	61.31 ± 10.33	−0.39 (0.70)	**−4.62(<0.001)**
IE50	1.34 ± 0.27	1.25 ± 0.18	1.48 (0.14)	1.37 ± 0.2	1.42 ± 0.29	−0.64 (0.52)	−1.94 (0.06)
tPTEF/tE	0.34 ± 0.09	0.26 ± 0.07	**3.67(<0.001)**	0.32 ± 0.09	0.26 ± 0.06	**2.62(<0.05)**	0.91 (0.36)
tPTIF/tI	0.49 ± 0.09	0.55 ± 0.09	**−2.69(<0.01)**	0.5 ± 0.08	0.52 ± 0.07	0.88 (0.38)	−1.13 (0.26)

TAA: Thoraco-abdominal asynchrony (TAA), LRHTA:left vs Right Hemi-thoracic asynchrony, IE50:Inspiratory to expiratory flow at 50% of tidal volume calculated from thoraco-abdominal wall displacement, tPTEF/tE: normalised time to reach peak tidal expiratory flow, tPTIF/tI: normalised time to reach peak tidal inspiratory flow