Highlights from this issue

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“Altered Images” are the theme for this month’s Airwaves – including the 1980s post-punk band, fronted by Clare Grogan, and much, much more...

ALTERED MRI IMAGES IN IDIOPATHIC PULMONARY FIBROSIS.

Patients with idiopathic pulmonary fibrosis (IPF) may develop pulmonary hypertension, out of proportion to the degree of interstitial disease. However, evolving pulmonary hypertension is often diagnosed late and therapy is therefore less effective. An imaging technique which can demonstrate regional pulmonary vascular involvement might allow pulmonary hypertension to be tackled earlier. Bring on the “altered images” of dynamic contrast-enhanced MRI (DCE-MRI) described in this month’s journal (see page 144). The technique uses differences in perfusion, demonstrated by Gadobutrol contrast. The authors created full width of half-maximum (FWHM) perfusion maps, where abnormalities correspond to areas of reticulation and honeycombing on CT (see some cracking images in figure 1). Formed in the early 80s, Altered Images (the band) did not survive to the end of the decade. DCE-MRI shows the promise of greater longevity and a practical application as a biomarker of pulmonary vascular disease progression in IPF.

GREGORY’S GIRL AND HYPERPOLARISED XENON MRI

As well as fronting “Altered Images” Clare Grogan starred in the film “Gregory’s Girl”. This follows the fortunes of Gregory—a socially inept teenager—transferred to the position of goalie in the school football team due to the arrival Dorothy, a gorgeous centre forward. Dorothy becomes the object of Gregory’s desire. Much like Gregory being transferred from the front of the football team to the back, hyper-polarised Xenon is transferred from the alveolar air space, leading to dissolution in the lung parenchyma and plasma and then into the red blood cells. In this month’s *Thorax* (see page 178), Myc and colleagues describe hyperpolarised Xenon MRI (HXeMRI) in a cohort of patients with COPD and healthy controls. They show that the HXeMRI gas transfer to red

blood cells (described above) correlated closely with carbon monoxide diffusion capacity. They conclude that HXeMRI can measure the functions of multiple microcompartments in the human lung. Similarly, on the promise of a date with Dorothy, Gregory is conveyed, via multiple friends of Dorothy’s, to a date with Susan (Clare Grogan) and a happy ending.

LUNGS TURNED BLUE

This Neil Diamond classic was re-worked by Altered Images in the 1980’s and accurately describes the lung images altered by COVID-19 compared with ‘standard’ ARDS described by Thillai and colleagues in this issue of *Thorax* (see page 182). They describe functional respiratory imaging coupled with an automated blood vessel segmentation algorithm to demonstrate that patients with COVID-19 had altered blood flow through the lungs with more flow through large blood vessels and lower flow through small blood vessels compared with controls. They suggest that the impaired oxygenation seen quite commonly in patients with severe COVID-19 may be due in part to this redistribution of oxygenation. Maybe we should all try a Song Sung Blue in these COVID-19 times because everybody knows one, and “*Funny thing, but you can sing it with a cry in your voice, And before you know, it get to feeling good, You simply got no choice!*”

AGEING ROCKERS

Memory of new wave bands such as Altered Images is a feature of age, and we apologise to our younger audience who may not immediately understand references to Gregory’s Girl or Neil Diamond, but ageing is an inevitable process which can have important consequences for the development of respiratory disease. An important emerging ageing associated lung condition is the development of interstitial lung abnormalities (ILA), which weren’t even described in the 1980’s or we are sure a song would have been sung about them! In this issue of *Thorax* (see page 152) Machahua and colleagues describe how T-cells from patients with ILA have a more proliferative phenotype and produced more IL-6 and IFN-gamma compared with T-cells from patients

without ILA associated with loss of the inhibitory receptor killer-cell lectin-like receptor G (KLRG1). Indeed the phenotype of T-cells from elderly people with ILA had commonalities with young people rather than elderly controls. Perhaps the development of ILA is the lungs equivalent of disgraceful ageing. Now isn’t that Absolutely Fabulous!

TRUE

So true, funny how it seems you knew so much and then a new analysis or bit of information is identified which makes you re-evaluate what was previously considered certain. In this issue of *Thorax* (see page 134) Chu and colleagues performed single cell sequencing analysis on matched bronchoalveolar lavage cells and peripheral blood monocytes and used supervised and unsupervised learning methods to identify a new cluster of genes ME31 which associated with different severity of disease in a way that was not distinguishable by genotype alone. “*With a thrill in my head...I want the truth to be known*”, was how Spandau Ballet put it. Little did I know as I sat down to write the next line that Clare Grogan was the inspiration for this particular 1980’s classic.

ALTERED ENDOSCOPIC IMAGES

Our teaser image this month is an endoscopic image of the trachea, altered by the a mass, partly occluding the lumen (see page 208).

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