

conversations with Charles

Toy balloons and longevity: watch for the wrinkles!

I recently read in a journal that facial appearance is an unanticipatedly good predictor of survival and mentioned this to Charles over lunch.

‘So the older you look the older you are!’ Charles summarised, adding with a smile, **‘As we all know, Coe!’**

‘But biologically as well as chronologically, Charles!’ *I emphasised.*

‘You sound surprised, Coe! Have you never blown up a balloon?’ Seeing that *I was taken aback*, he added **‘Even in your younger days, Coe?’**

‘Come off it Charles, I do have grandchildren to amuse!’

‘And as they get older you will be able to encourage them to look at blowing up balloons as an interesting scientific experiment!’

‘Particularly when they go bang!’ *I said, thinking of my three-year-old grandson whose favourite pastime is shooting people dead with imaginary guns.*

‘That’s not the point, Coe, though on reflection it just occasionally might be!’

‘Come on Charles get to the nub of the matter! I thought we were talking about peoples’ faces?’

‘And how they reflect their insides? I seem to remember you told me two things, indeed one might regard them as your hobby horses.’

‘What are they, Charles?’

‘The first is that not only is FEV1 [forced expiratory volume in one second] a far better predictor than mean blood pressure of overall survival, but it is also just as good as the latter at predicting cardiovascular mortality. You have several suggested reasons for this which might be summarised as you need good lungs as much as a good heart, but a bad heart needs good lungs even more.’

‘And the second is that whatever measurement of blood pressure might be best for long-term prognosis; pulse pressure is the best surrogate for actual chronic cardiovascular disease?’

‘Yes!’ *and going back to the original point*, he added, **‘You may have noticed something else about faces. If you see people at the appropriate intervals, they change very little for years until their faces seem to age rapidly, only to remain the same again for a long time.’**

‘Yes, I have noticed that too, Charles!’ *I was beginning to see what he was driving at*, adding, ‘A colleague of mine was recently involved in a respiratory study in which he saw several hundred subjects. He is now convinced that chronic obstructive pulmonary disease, particularly when predominately emphysematous, really does deteriorate in deep steps. Previously he had accepted the conventional explanations for apparent sudden deterioration in what was said to be, in reality, slow decline. The first is that that critical performance levels are necessarily lost stepwise, and the second that underlying decline prevents recovery to the previous level after a prolonged acute exacerbation.’

‘To return to your hobby horses my suggestion is that a common cause as well as interaction explains the predictive value of deterioration in FEV1 for cardiovascular mortality. Failure of elastic function is better reflected by FEV1, in being more consistent than blood pressure and so the better proxy.’

‘So elastic failure is the key to all; pulse pressure, FEV1, and facial appearance on the one hand and life expectancy and the spent toy balloon on the other.’

‘And by its very nature accounts for the rapid global, and occasionally catastrophic, deterioration observed, even though the decline in the cellular infrastructure itself might be slow,’ Charles concluded.

As Charles himself might have put it when the wrinkly suddenly finds that he cannot make the balloon wrinkly he should indeed put his affairs in order.

Coemgenus