

The elderly with unrecognised chronic disease: do they provide clues to good health?

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I had been to a conference and listened to a presentation about disease in the elderly. It was noted that undiagnosed disease in the elderly is quite often severe. I wondered whether Charles might have any ideas about why this might be the case.

'Charles,' I said, 'I was at a conference today and a senior lecturer in geriatrics described how she'd found quite a lot of undiagnosed moderate to severe chronic disease by looking at all the patients on the lists of some general practices. Does that surprise you?' I asked.

'I'd like to know a bit more, Coe,' he replied. 'Had the proper measurements been made on previous occasions?'

'In many cases, no,' I replied. 'But that's not really the point. She said this type of finding didn't apply only to the particular condition that she was describing. It's a general observation that when unrecognised disease is uncovered in general practice surveys, it's quite often moderate to severe.'

'Was much milder disease unveiled as well?' he asked

'No,' I said. 'Somewhat surprisingly there appeared to be more moderate or severe than mild disease.'

'Is there is a clear cut-off between normality and the disease concerned?'

'No,' I replied. 'Like many of these chronic diseases, diagnosis is made on scientifically based criteria, but nevertheless the cut-off point is arbitrary. Even in hospital practice, certainly in younger patients, one is aware that there is much more mild than moderate or severe chronic disease. Asthma and epilepsy are good examples of this in both respects, and in the sixth and seventh decades small abnormalities in the objective measurements for chronic obstructive pulmonary disease and diabetes are more prevalent.'

'Your description suggests the expected skewed normal distribution implying a single population where it's difficult to distinguish between normality and abnormality at the mild end of the scale. But you say that in the elderly there were disproportionate numbers of moderate to severely affected individuals?'

'Yes, there were more in the moderate to severe category than in the mild.'

'A bimodal distribution, Coe,' he responded. 'As you know, this shows two populations, and in this example the presence of these different groups has become more obvious with ageing.'

'Why might that be?' I asked.

'One answer is that the ageing process may make the problem worse by accelerating decline.'

'So we could look for features of ageing that might cause the decline and might present earlier in life in those who get the condition prematurely?'

'Yes, and that might apply in a few cases, but I really don't like this explanation.'

'Why not?' I asked.

'If ageing causes rapid decline then I would expect it to prove fatal, leaving little room for an increase in the proportion of

the severely affected.'

'I see,' I replied. 'What's the real answer, Charles?'

'That there's a survival of advantage in both groups, those with and without the condition.'

'But the latter are diseased,' I replied.

'I thought we agreed in a previous conversation that disease and health were not antitheses of each other. You once told me that in middle-aged men the most reliable physical sign of severe disease was the thinness of the patient's notes. Why shouldn't that apply to elderly patients? I know you doctors don't like it, but to my mind one of the measures of health is avoiding doctors. I accept that some of these people were too sick to recognise their symptoms or had been misdiagnosed despite attending, but I bet a fair proportion of them were healthy non-attenders.'

'I haven't got the data but I accept that what you say is probably true,' I replied.

'Well, let's accept, Coe, that at least a proportion of these subjects of undiagnosed disease were otherwise healthy subjects with the disease.'

'That's not unreasonable,' I said.

'This suggests to me that these elderly patients with undiagnosed moderate or severe disease are ideal subjects to study to give insights into the mechanisms of diseases, health and longevity.'

'How?' I questioned.

'Well,' he said, 'I have several suggestions. The one I like best is that, as these people are surviving and performing well despite their disease, there may well be genetic factors, which despite making them more susceptible to this condition protect them against the other hazards of life. Alternatively, there might be subtle differences in their coping mechanisms, which enable them to be healthy and avoid doctors despite their disease. This might apply to the condition in particular or potential causes of ill health in general. Am I right in thinking that the ultimate cause of death in many of these conditions is infection?'

'Yes,' I said, 'but also vascular disease, for example in diabetes and, perhaps surprisingly, in chronic obstructive pulmonary disease.'

'You might learn about protection against infection and vascular disease from these survivors.'

'The elixir of life is to be found in the elderly with unrecognised severe disease!'

Perhaps I was going a bit far, but I wonder if he has a point. Might the relatively healthy survivors with chronic diseases give a clue about the genetic advantages rather than disadvantages of the determinants of long-term disease, or about the best defence mechanisms against them? Perhaps sickle cell anaemia isn't the only example of a persistence of a disease in the population for genetic reasons, despite its obvious disadvantages.

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