Letters to the Editor

EVOLUTION

Sir, The editorial in the July 1999 edition of the Journal assumes that evolution is a proven fact. On the contrary, the macro-evolution which is mainly discussed in the article remains a popular theory for the origin of human life. No one doubts the occurrence of micro-evolution such as the development of antibiotic resistance described, but to accept the evolution of man from unicellular organisms by natural selection as fact and not theory is scientifically incorrect. The majority of the scientific community may believe that the theory is true, but this by itself does not make it true. The majority in science have been wrong in the past and until a theory is proven it should not be accepted as fact. This is detrimental to the pursuit of knowledge and truth.

Unfortunately popular opinion has been influenced by the persistent stating of the theory of evolution as if it were fact. In these days of evidence based medicine we in the medical profession should be more questioning of accepted dogma and take care with terminology. Not all doctors accept that the theory of evolution is the best way of interpreting the available data.

David Todd, Faculty of Medicine, Jordan University of Science & Technology

Reply from the Editor

Dr Todd differentiates between micro-evolution and macro-evolution. I agree that few, if any of us, doubt the reality of micro-evolution. Furthermore, few, if any of us, would doubt the reality of macro-evolution - dog breeding shows that environments (in this case humans) can cause new species to evolve, and Darwin's finches are apparently continuing to evolve.

Dr Todd's point is that the evolution of man from unicellular organisms is a theory and not a fact. It was never stated as a fact that man evolved from unicellular organisms. The editorial outlined the advantages that multi-cellularity conferred above unicellularity. However, *in the absence of a better explanation* (which Dr Todd does not offer), it can certainly be hypothesised that multicellularity did evolve from unicellularity. There is no evidence available (unicellular organisms leave no fossils) but such an evolution cannot be difficult to envisage. After all, development of multicellular organisms from single cells is common - each one of us developed from a single cell. John Maddox in his book *What Remains to be Discovered* suggests that aggregations of (unicellular) marine algae or similar organisms may have developed the ability of enabling different cells to acquire complementary and mutually beneficial functions (and thus become multicellular organisms), and that the principles behind this are now understood and that the details will be gathered rapidly in the next few years.[1] Science will be able to describe *how* such developments could have happened but probably will never be able to prove that it did actually happen exactly in such a manner.

Welsby in his paper in the previous edition of *Proceedings* explains the differences 1) between beliefs without a scientific basis and beliefs that may have a scientifically sustainable basis, and 2) between beliefs that may have a scientific basis and scientific facts and makes the point that differentiating lines between each concept are not unbroken.[2] Both Dr Todd and the writer will no doubt agree on this.

Editor, *Proc R Coll Physicians Edinb*

REFERENCES

1 Maddox J. *What Remains to be Discovered*. London: MacMillan; 1999. ISBN 0 333 65009 3.

2 Welsby PD. Alternative Medicine - Fundamental Questions of Belief and Logic. *Proc R Coll Physicians Edinb* 1999; 29:16-19.

ATRIAL FIBRILATION

Sir, The masterly review by Dr Lip has brought much needed focus to the risk stratification of patients with atrial fibrillation (AF).[1] Over and above the points made by the author, features of the clinical history worth eliciting include symptoms of coexisting sinus node disease, such as falls, syncope, or near syncope, because, with increasing age, there is increasing likelihood that AF might be a manifestation of degenerative disease of the conduction system, which can also be exemplified by high grade atrioventricular block, giving rise to a slow ventricular rate in the absence of anti-arrhythmic therapy. The use of echocardiography for risk stratification is now more strongly justified than ever before, following the documentation of increased left ventricular mass as an independent risk factor for new thromboelic stroke in patients aged >60 with atrial fibrillation, contributing to their increased susceptibility to this complication.[2]

OMP Jolobe, Consultant Physician

REFERENCES

1 Lip GYH. How would I manage a 60-year-old woman presenting with atrial fibrillation? *Proc R Coll of Physicians Edinb* 1999; 29:301-6.

2 Aronow WS, Ahn C, Kronzon I *et al.* Association of left ventricular hypertrophy and chronic atrial fibrillation with the incidence of new thromboembolic stroke in 2,384 older persons. *Am J Cardiol* 1999; 84:468-9.

Sir, Dr Jolobe's letter (Vol. 29 p. 357) reflects my personal sentiments with regard to long-term anticoagulants exactly and I wish to stay in sinus rhythm for as long as possible.

I have had paroxysmal atrial fibrillation for about 15 years gradually worsening, and latterly two or three times a

week and lasting four to eight hours or longer (sometimes 24). This was poorly responsive to plain ß-blockers, Sotalol, Flecainide and Amiodarone used singly.

My cardiology colleague and I decided to try combining the latter two with gratifying results and I have been virtually free from attacks for nearly six months.

Unfortunately alcohol, even in amounts of one unit, will still precipitate attacks.

CDR Pengelly, Consultant Physician

REMEMBERING DR REG PASSMORE

Sir, Many readers of *Proceedings* will have fond memories of Dr Reg Passmore, my inspiring tutor in the Physiology (honours) class in 1974/75. His style was light and humorous, yet incisive. In my 6,000 word essay on circadian rhythms I whinged that many of the scientific papers were highly mathematical and beyond comprehension. Dr Passmore's comment was: 'if you could have condensed your 6,000 words into a single mathematical formula, I would have been most grateful!' We met and corresponded sporadically over the next 25 years. On taking up my post in Edinburgh University this year, I visited Dr Passmore after a gap of 18 years. He was as mentally agile as ever, and was eager to discuss two papers he was planning on public health issues. He gave me a dose of his daily medicine (a tot of malt whisky). I looked forward to more medicine and conversation - alas, that hope will be replaced by fond memories.

Professor Raj Bhopal, Bruce and John Usher Chair of Public Health

TWO HATS ONE HEAD

Sir, In his excellent Sir Stanley Davidson lecture in Preston Sir Netar Mallick touched on a non-renal topic of great importance: that of doctors having to sit in judgement on the availability of treatment. This results from the apparently inevitable limitation of funds and the clever abrogation of responsibility by governments by handing out impressive sums of money to trusts and health authorities, and primary care groups, telling them to pay for the necessary services, and then passing the blame to them if needs cannot be met; a failure which in part may be due to the inevitable inefficiency of a mammoth organisation which cannot afford always to attract the best organisers in the community, but which also results not from overspend but from underfund.

It is appropriate that doctors be involved in the distribution of care, but how can we be ethically so involved?

Surely there are two principles which are of help: that we always do the best we can for the patient sitting with us at the desk, and that we tell the truth? We wear two major hats - doctor and manager. With the manager's hat we may sit on the drugs and therapeutics committee and decide that the hospital cannot afford to allow prescription of an expensive drug except to a certain minority; that is a financial and ethical decision guided by evidence and accepting that it may deprive some patients who may benefit. This decision should be made public and the committee must be prepared to justify their decision in terms of necessary rationing. The second hat, worn facing a patient, may be harder to wear. We must be prepared to tell our patient the truth. We must be able to say not that what we recommend is the right treatment but that it is the best we can offer in our hospital, and that something else may be better but that it is not available. We don't like to do this because it holds out unattainable hope. It is, however, arrogant and insulting to suggest that the general public would be unable to cope with this, although I accept that in some circumstances kindness may need to come before frankness.

The use of statins in preventing vascular disease is a good example of the problem.

Guidelines have been issued identifying patients with a 30% or more chance of developing vascular problems over ten years. Accepting that it is impossible to devise guidelines to take into account all risk factors and that they are at best a pointer in any individual case, nevertheless it is recommended that only these patients should be considered for statin therapy, but, and here is the clue that these are not purely medical guidelines, that later perhaps people with a lesser risk could be considered. When confronted by a real patient they are frequently unhelpful, as I am sure those who worked hard and thoughtfully over them would agree. A woman of 45 smoking 40 cigarettes a day whose six brothers had all developed coronary disease at an early age would not be considered. Nevertheless there are those who use these guidelines as if they came from the burning bush. There are two ethical approaches to these guidelines: the medical: i.e. that we do not know the long-term effects of these drugs and they may produce, long-term, more risk than benefit; or the financial: i.e. that given our limited funds these are the only patients we can afford to treat. It should be made crystal clear to the profession and to the public which of the two is the guiding factor.

Discussing this over lunch today it was suggested that this approach would produce only a localised and limited storm in a teacup, perhaps with a limited redistribution of funds to the disadvantage of another more pliable department. This may be true, and yet only when the voters realise what they are missing, and why, will a true democratic solution be achieved. Let the politicians take back the responsibilities for which they are elected and let their careers stand or fall on their results.

Dr Richard A Best, Consultant Cardiologist, Burnley

MEDICAL TREATMENT OF CHRONIC HEART FAILURE

Sir, Monitoring of body weight, recommended as a guide to titration of diuretic dose[1] and monitoring of blood pressure, can each provide important insights into response to treatment of heart failure. During the decompensated phase of heart failure, a fall in daily weight does indeed indicate that fluid overload is responding to diuretic medication. It is worth noting in this context that adjunctive treatment with spironolactone can powerfully potentiate the diuretic action of frusemide in patients already receiving angiotensin converting enzyme inhibitors.[2,3] In decompensated patients, it is also true that an increase in body weight signifies worsening fluid overload. However when the patient enters the compensated phase, through optimisation of anti-failure treatment, an increase in body weight can occur, mediated not by fluid overload, but by a shift from the catabolic state of 'cardiac cachexia' (the latter probably being an outcome of the activity of cytokines

such as tumour necrosis factor)[4] to an anabolic state. Due to an increased general well-being, the patient also has a better appetite, and some (in my own experience) also subsequently become overweight.

Blood pressure (BP) may also have a paradoxical relationship to anti-failure treatment. Due to the increasing tendency of junior doctors to 'cover their backs' - instructing nursing staff to omit the angiotensin converting enzyme (ACE) inhibitor if the BP falls below a specified level, many patients are permanently deprived of this potential therapeutic benefit through a lack of appreciation that the fall in BP which occurs beyond the phase of 'first dose' hypotension may be transient, as in other instances of medication with vasoactive drugs,[5] and that subsequent drug-related improvement in cardiac performance may result in a corresponding increase in systolic BP, indicating an upward titration of the ACE inhibitor dose. This phenomenon has been documented more precisely in a study comparing metoprolol CR/XL with placebo as 'add on' therapy in patients already co-prescribed ACE inhibitors and diuretics. Systolic BP decreased less in the metoprolol CR/XL group than in the placebo group (-2.1 vs 3.5 mm Hg, $p = 0.03$).[6] The paradoxical increase in systolic BP after 'add-on' therapy with metoprolol was also a feature in a smaller study testing the hypothesis that a systolic BP of <100 mm Hg was not a contraindication to this form of treatment.[7] Unfortunately, this was an aspect of responsiveness to anti-failure therapy which was not commented on in a study showing an improvement in exercise capacity in heart failure patients through addition of losartan to optimised co-prescription of ACE inhibitors and loop diuretics.[8]

OMP Jolobe, Consultant Physician

REFERENCES

1 Gates L, MacLead MJ, McLay J. Medical treatment of chronic heart failure. *Proc R Coll Physicians Edinb* 1999; 29:216-9.

2 Ikram H, Webster MWI, Nicholls MG *et al*. Combined spironolactone and converting enzyme inhibitor therapy for refractory heart failure. *Aust N Z J Med* 1986; 16:61-3.

3 van Vliet AA, Hackeng WH, Donker AJM *et al.* Efficacy of low-dose captopril in addition to fursemode and spironolactone in patients with decompensated liver disease during blunted diuresis. *J Hepatol* 1992; 15:40-7.

4 Levine B, Kalman J, Mayer L *et al.* Elevated levels of tumour necrosis factor in congestive heart failure. *N Eng J Med* 1990; 323:236-41.

5 MERIT-HF study group. Effect of metoprolol CR/XL in chronic heart failure: metoprolol CR/XL randomised intervention trial in congestive heart failure (MERIT-HF). *Lancet* 1999; 353:2001-7.

6 Gabbarini F. A 61 year old man with Holme's heart. *Lancet* 1999; 353:640.

7 Kalman J, Levy DK, Mannino MM *et al.* Should low blood pressure preclude initiation of beta blocker therapy in congestive heart failure? *J Am Coll Cardiol* 1997. 29 (supplemen A):284A.

8 Hamroff G, Katz SD, Mancini D *et al.* Addition of angiotensin II receptor blockade to maximal angiotensin-converting enzyme inhibition improves exercise capacity in patients with severe congestive heart failure. *Circulation* 1999; 99:990-2.

HYPERTENSION IN THE ELDERLY: AN OPPORTUNITY TO IMPROVE HEALTH

This paper was a long overdue reassertion of the pivotal role of antihypertensive medication in primary prevention of the disorders enumerated by the author,[1] as well as primary prevention of atrial fibrillation (AF), the latter being an aspect of management perhaps warranting much more than the passing comment it received in the final consensus statement.[2] The Framingham study showed that hypertension is a risk factor for atrial fibrillation, not only in its own right, but also by predisposing to ischaemic heart disease and cardiac failure, both of which, in turn, increase the susceptibility to AF.[3] Rapid atrial activation (mediated by AF itself), in turn, 'begets atrial fibrillation' through 'electrical remodelling',[4,5] and it has now also been shown how heart failure 'begets' AF, the mechanism being induction of interstitial fibrosis that interferes with local conduction.[6] The challenge now is to determine whether hypertension-related AF is mediated as a consequence of myocardial pathological condition.

OMP Jolobe, Consultant Physician

REFERENCES

1 Smith WCS. Hypertension in the elderly: an opportunity to improve health. *Proc R Coll Physicians Edinb* 1999; 29:211-3.

2 Consensus Panel. Final Consensus Statement: Consensus Conference on Atrial Fibrillation. *Proc R Coll Physicians Edin* 1999; 29 (Supplement 6):2-3.

3 Kannel WB, Wolf PA. Epidemiology of atrial fibrillation. In Falk RH, Podrid JP (eds.) *Atrial fibrillation, mechanisms and management*. New York: Raven Press; 1992. 81-92.

4 Wijfells MC, Kirchof CJ, Dorland R *et al*. Atrial fibrillation begets atrial fibrillation: a study in awake chronically instrumented goats. *Circulation* 1995; 92:1954-68.

5 Goette A, Honeycutt C, Langberg JL. Electrical remodelling in atrial fibrillation: time course and mechanisms. *Circulation* 1996; 94:2968-74.

6 Li D, Fareh S, Leung TK *et al*. Promotion of atrial fibrillation by heart failure in dogs. Atrial modelling of a different sort. *Circulation* 1999; 100:87-95.

CORRIGENDUM

Page 353, paragraph 1, line 7 of *Letter from Australia* in *Proceedings* (Volume 29, Number 4): the nationality should read Austrians, not Australians. Reference 2 attached to the letter should read: Ekersly R (ed.). *Measuring progress-is life getting better?* CSIRO Publishing 1998.

LETTERS TO THE EDITOR

Letters are welcome providing they do not exceed 300 words in length. The Editor reserves the right to edit correspondence.