book reviews

Philosophy for medicine: applications in a clinical context

Edited by Martyn Evans, Pekka Louhiala and Raimo Puustinen. Radcliffe Medical Press, Oxford 2004. 157pp. £21.95.

The message of this book is that those who teach medicine and those who treat patients should examine their own preconceptions, philosophy and, in particular, attitudes. Do we give sufficient importance to interpersonal relationships? Are we sufficiently aware of the cultural assumptions or the feelings of guilt or shame that may influence a patient's reactions? In this technological age, are we sensitive enough to questions of ethics or morality – or philosophy – that arise in our approach to modern dilemmas concerning abortion, cloning, informed consent, involuntary treatment, surrogate motherhood, euthanasia, and even rationing?

The editors begin with Socrates' comment that 'the unexamined life is not worth living'. Clinical examination, they say, is not enough without some insight into the life of the doctor and the patient and, indeed, into life itself. Medicine cannot confine itself to science alone, because the relationship between patient and doctor – and the doctor's approach to diagnosis and treatment – can have a powerful influence on the outcome. A surgeon or an intensivist may view a patient's body as a biological object but there is a philosophical difference between a technician searching for a cure and a doctor aiming at personal healing and recovery. A surgeon's target could be a patient's herniated intervertebral disc, but a psychiatrist dealing with the associated back pain might be more concerned with the anxiety and depression that it provokes.

The older physician's immediate response might well be that these aspects already form an important part of a medical student's training. It must be admitted however that we live at a time when trust in doctors has fallen and the number of people who turn to alternative forms of medicine has increased dramatically. There must therefore be doubts, either about the educational process or about the way medicine is practised. Why do so many members of the public look for alternatives? Is it that alternative forms of treatment such as homoeopathy and reflexology provide the time and the opportunity to develop relationships, confidence, trust and mutual understanding? While a general practitioner may have less than ten minutes for a patient, a homoeopathist may consider that a first interview should take an hour or more. Is this an area in which conventional doctors find it hard to compete? Are these considerations taught adequately in our medical schools, and are such problems remediable within the pressurised constraints of our health service? Is a receptive attitude and the time given to the patient a key factor that helps to explain the popularity of so many, very disparate forms of alternative medicine?

The authors – coming as they do from Wales, Finland, South Korea and America – raise a further point. This is that it cannot be enough to adopt the cultural assumptions common in Europe and America, that medicine is a 'good science'. Indeed, cultural differences which loomed large in the traditions of medical philosophy in the ancient world still continue in our world today. A rational, scientific, and for that matter a wholly personal approach may be superior in many respects to the influence of intuition and the more collective culture found in other parts of the world, but the fears and anxieties that people entertain also need to be respected, not only in the interest of good doctoring but because there are religious and other ill-defined influences from culture, whether from Confucianism, Taoism, Buddhism, shamanism or yin/yang dualism, which can affect a patient's confidence and resilience.

As so often in medicine, it is easier to identify a problem than to find a solution. Defining the problem is, however, a good start. This book does not claim to be a philosophical textbook but it does contribute to the discussion.

MAURICE LESSOF
Emeritus Professor of Medicine,
Guy's and St Thomas' Hospital, London

The life and death of smallpox

By Ian and Jenifer Glynn. Profile Books, London 2004. 288pp. £17.99.

Despite the huge amounts written about smallpox it is surprisingly difficult to gain an overall view. Many accounts are partisan – either hagiographies of Jenner or attacks on him – and others treat of only one or other aspect of the subject. What was needed was a well-balanced account doing full justice to both scientific and historical aspects of a complex story. Here it is at last.

After reviewing evidence from myths and mummies, with the usual baffling difficulty of deciding what diseases, in our terms, ancient authors were describing, we come to Rhazes, the Persian physician and philosopher who famously distinguished smallpox from measles. His treatment included detailed instructions about diet, reminiscent of articles written by enthusiastic herbalists in the Sunday supplements today. One of the most persistent of the early attempts to treat smallpox was the 'red treatment', the belief that the disease could be alleviated by the use of red objects such as clothing or bed hangings, and by food and drink with red ingredients. The red treatment spread round the world and, astonishingly, only faded from view at the beginning of the twentieth century.

The age of exploration saw smallpox revealed in its full horror in the New World, to which it had been introduced, but also in the Old World where it was already endemic. Its ravages in England are well documented, with whole families wiped out and royal successions changed. Then came inoculation, what we now call variolation. This had long been employed by folk practitioners in many parts of the world, and the Royal Society was receiving reports about it early

in the eighteenth century, but it was the enthusiasm of Lady Mary Wortley Montagu which made it well known especially when, after judicious safety trials on condemned criminals and charity children, it was used in the royal family.

The bitter arguments to be heard in the nineteenth century about the risk-benefit ratio (as we would now put it) of vaccination echoed those of the previous century about variolation. There was no doubt that variolation provided, as does smallpox itself, lifelong protection, and the practice, although often causing a brisk attack of smallpox, was rarely severe or fatal. Much more contentious was the risk of spread from inoculated subjects to unprotected contacts, perhaps even initiating new outbreaks. A careful piece of epidemiology by Jurin, secretary of the Royal Society, using imperfect but the best available data, concluded that benefit outweighed risk. This was no doubt a valid conclusion at a time when smallpox was estimated to cause the death of 7% of the population, but much less so at times of low prevalence. What Jurin wrote about 'People [who] do not easily come into a Practice in which they apprehend any Hazard, unless they are frightened into it by a greater danger' was equally true of the vaccine controversies in the next century, and of the pertussis and MMR disputes in our own time.

Did variolation actually control smallpox? It seems pretty convincing that, used wholeheartedly in defined communities, it could do so, and Peter Razzell has made a vigorous case for inoculation as a major pre-Jennerian control measure.

So we come to Jenner. His work, and the subsequent disputes, are accurately described. One problem was Jenner's insistence that vaccination gives lifelong protection, which is not the case. Another major problem was the early use of vaccine in the smallpox hospital. What then was actually being used for vaccination? What caused the adverse effects and occasional disasters?

The work continued, however. Especially ingenious were the methods used to achieve widespread vaccination before glycerol, freeze drying or refrigeration. The only way was to ensure a chain of arm-to-arm vaccinations. One of the most vivid episodes described is the way in which the whole of Spanish South America was eventually covered after an expedition mounted in 1803 (note how quickly the Jennerian revolution spread) shipped 22 Spanish orphans as vaccine sources. When they arrived in Caracas only one had a visible pustule, but this was enough to start the chain of vaccinations. We are comforted to learn that the orphans were settled and educated in Mexico, and eventually adopted.

Clearly vaccination can protect individuals and control outbreaks, and its impact on the burden of smallpox is beyond doubt. But despite the widespread use of vaccination the disease continued to exact an enormous toll throughout the nineteenth and a large part of the twentieth century. There were, for example, huge outbreaks in Europe in the aftermath of the Franco-Prussian war, with perhaps half a million deaths. The lesson, which we know so well from more recent vaccine campaigns, is that many infections can only be effectively controlled if a very high proportion of susceptibles is protected and if this high level of protection is maintained.

So to the amazing triumph of eradication, described here in perhaps more political and administrative detail than many readers will want, but valuable none the less in showing how the established public health measures had to be adapted to the different situations in different countries. A fascinating chapter on the virology precedes the account of eradication and shows that, although the orthopox viruses have been sequenced, some old puzzles are still unsolved. On the phylogeny of the smallpox virus itself, it appears more closely related to camelpox than, as might have been supposed, to monkeypox. But the age-old problem of the origin of the vaccinia virus remains elusive. It has long been known that cowpox, vaccinia and smallpox are all different; the possible explanations are all judiciously discussed, but the jury is still out.

The final chapter is one of light and dark. The dark is the shadow of biological weapons and bioterrorism and the quite recent revelations of the smallpox production programme of the former Soviet Union, breathtaking both in its scale and in the mendacity with which it was conducted. The light is the possibility of using selected strains of vaccinia virus as vectors for genes coding for other protective antigens; such as components of rabies or hepatitis B.

The book is a good read, well balanced and well referenced. The authors are unafraid to include fascinating historical vignettes, some directly relevant to the smallpox story, others less so. Would you like to read about the duel between Dr Mead and Dr Woodward, or delightful mini-biographies of Sloane, or Lettsom, or Dover, or do you care to know how the dissolute Roman Emperor Commodus met his end? No, it wasn't smallpox.

One small addition. They rightly say that a portrait of Blossom, the cow from which Sarah Nelmes caught cowpox, is to be seen in the Jenner museum. In loyalty to my former place of work, I have to point out that Blossom herself, or more precisely her skin, adorns the library wall at St George's Hospital Medical School, since it was at St George's that Jenner studied with John Hunter.

The collaboration of scientist and historian has, however, produced an excellent book on an enthralling and instructive piece of medical history.

HAROLD LAMBERT
Emeritus Professor of Microbial Diseases,
St George's Hospital Medical School, London