By Dr Jeremy Lim, Editorial Board Member

The Evidence Base of Medicine

Do we know what constitutes good medicine?

The recent furore over the Ministry of Health's 'ban' of unproven beauty treatment and the resulting public indignation towards some doctors placing financial interest above patient well-being is well-placed. However, central to the outrage is the premise that there is a clear and straightforward dichotomy between 'good' medicine and 'bad' medicine and the evidence is compelling one way or another in all instances. Are these assumptions which are so critical in this ongoing debate well-founded?

Modern medicine has a relatively short history and it was not even 200 years ago that Ignaz Semmelweis demonstrated the dangers of physicians not washing their hands before attending to women in labour. His seminal findings presented in 1847, however, were not well-received by his peers whose mental paradigm then was the theory of dyscrasias, or an imbalance of the 'four humours' in the body. It was not until 1865 when Joseph Lister in England put forward the principles of antisepsis that the medical world started to pay serious attention. Ironically, it was also in 1865 that Semmelweis, after years of frustration at his colleagues' indifference to his discovery and denouncement of them as 'irresponsible murderers', was committed to an asylum and died shortly after a broken man.

Such accounts from the medical archives are re-told with different characters even today and the story of Australia's Barry Marshall ("Everyone was against me, but I knew I was right") and his drinking of a petri dish of Helicobacter pylori to show the bacterium's causative relationship with peptic ulcer disease is a famous case in point.

The term evidence-based medicine may sound firmly rooted but even experts may disagree on what constitutes evidence of best practices. Just six weeks ago, the intensive glycaemic control arm of the ACCORD trial studying the effect of glycaemic control on cardiovascular disease was prematurely terminated after researchers found a higher incidence of mortality compared to the less-intensive glycaemic control arm. One week later, researchers involved in a similar study, ADVANCE, published interim results which did not show a similar increase in mortality with stringent glycaemic control. Think about the controversy over hormone replacement therapy. Which studies should we believe and base our practice on?

We may wish that the world of medicine is a stark black and white one, but it is not. There is so much we do not know and so much we do not know we do not know, and it would be arrogant to declare otherwise.

In the world of oncology, some oncologists proudly relate tales of off-label use of chemotherapeutic agents with sometimes 'miraculous' cures. They are clearly not practising evidence-based medicine but they may offer the only hope of survival to patients determined to try anything and everything and for whom money is no object. Are these doctors unethical? What about surgeons who operate on patients with cancers which other equally eminent surgeons have declared 'inoperable'?

We may wish that the world of medicine is a stark black and white one, but it is not. There is so much we do not know and so much we do not know we do not know, and it would be arrogant to declare otherwise. The first tenet of medical ethics is "Do no harm", and that together with respect for patients' autonomy should perhaps be our guiding principles in these uncertain times. Provide our patients with the best clinical data we have available, gently and patiently explain the options and associated costs, the strengths of the 'evidence' and our experience with the different options. Then decide on a course of action with them and for them. "Not pride of knowledge, but humility of wisdom." ■

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