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Medical myths are hard to detect and hard to eradicate. Some of us nevertheless succeed in doing so.

The myth busters

As doctors we confess to a scientific paradigm in which every claim must be tested rationally and empirically before it can be accepted as true. This is the ideal of our practice, but it is by no means always descriptive of it. This is because clinical realities are messy – the average patient does not exist, symptoms are difficult to interpret and treatment effects are compounded by factors that are unknown or beyond our control.

Every day, a clinician makes hundreds of decisions, both major and minor. Only a few of these are based on firm knowledge – there is a gap between strictly evidence-based practice and our daily clinical decisions. In the absence of scientific evidence, we need to rely on other knowledge that we have accumulated – knowledge that stems from our basic and specialist training as well as our clinical experience, or what we may term our clinical ballast. To a great extent, and more than we like to believe, this form of knowledge is communicated orally. It stems from lecturers, clinical teachers and supervisors, from morning rounds, specialist training courses, conference presentations and conversations with experienced colleagues. All these are important learning arenas that help us develop as doctors and clinical decision-makers. However, in these arenas knowledge tends to rest on authority rather than evidence. My old supervisor referred to this as *learning by diffusion and osmosis*. It is effective, but it can also be treacherous. Reiterated oral transmissions, repetitions and recapitulations help establish «clinical truths» that on closer inspection turn out to be medical myths with no empirical foundation.

A number of medical myths have been thoroughly refuted and have lost their credence among doctors. Some examples are that sugar makes children hyperactive, that we use only ten per cent of our brain and that more children are born when there is a full moon (1–3). However, for people in general such myths may be alive and well. Not many years ago they were also accepted as true by doctors, who had inherited them through «diffusion and osmosis» from people of authority.

Myths can be busted, but this requires courage and a critical eye on one's own practice, because it is astonishingly difficult to detect the myths that we love to cling on to. We should therefore be glad that some colleagues dare to take a closer look. This issue of the Journal of the Norwegian Medical Association provides two examples (4, 5). During our studies, we have all learned that traumatic skin wounds must be closed within 6–8 hours – those of you

who have ever heard someone cast doubt on this «truth», raise your hand! Knut Steen has made a critical review of the literature and concludes that many traumatic wounds can probably be closed later without any increased risk of infection (4). Nor does the old and stubborn belief that metronidazole should never be combined with alcohol seem to hold up in the face of available documentation, as shown by Hilde Fjeld and Guttorm Raknes (5). In another recent article in this journal Vilhjalmur Finsen showed that there is no evidence of the «old wisdom» that local anaesthetic with adrenalin can lead to necrosis in the fingers or toes (6).

In a messy and chaotic reality, myths may provide us with a needed sense of being in control. As doctors, we are trained in a tradition where our first obligation is to do no harm – *primum non nocere*. At the same time, we prescribe potent drugs and perform procedures that may be directly harmful. Simple rules of thumb – such as «never adrenalin in fingers and toes!» and «never combine metronidazole and alcohol!» – provide assurance and a sense of coping. This is perhaps the reason why medical myths that relate to avoiding serious complications seem to be especially stubborn and hard to detect.

It is fascinating to note that our modern, high-tech medical world is also replete with undocumented myths and traditions (7). We all want modern medicine to be based on empirical science, since this is what distinguishes it from alternative medicine and its penchant for myths, superstition and anecdotal evidence. Nevertheless, there is still a gap between evidence-based practice and the decisions that doctors in clinical practice need to make every single day. We need to fill this gap as best we can, but this should not stop us from being on a constant and critical quest for medical myths. There are more of them than we like to believe.

References

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