

Saint's Triad, Occam's Razor and Hickam's Dictum

A colleague came in to see me recently, as a patient, complaining of left sided abdominal pain, loss of appetite and episodes of vomiting. She has a family history of diverticulitis and she was tender over the descending colon. I said that I thought that she had diverticulitis but the vomiting did not quite fit in with this single diagnosis and that she might have Saint's triad. The problem then was that neither of us could remember what Saint's triad was so I had to look it up.

Charlie Saint established the first department of surgery at Grootte Schuur in Cape Town. His triad proposes that diverticulosis, gall bladder disease and hiatus hernia may occur together in the same patient. He emphasised the importance of considering the possibilities of more than one diagnosis in a patient. This is particularly relevant to general practice in this modern day due to the ageing populations and their multiple organ failures as well as the many medications that we have to juggle with each day. In the past it has been proposed that these three conditions may occasionally occur together because of lack of fibre in the diet or a connective tissue disorder or even obesity, which may be a common denominator although these causal theories would need further scientific scrutiny.

One could almost make up one's own triads. I like the idea of Ellis's Triad of tension headache, irritable bowel syndrome and lumbar backache. In the tangled web of general practice one can also throw in a troubled life, the gene pool and the rand-dollar exchange rate.

In this complexity of human relationships and uniqueness, one could apply the same reasoning to our interpretations of the patient's histories and stories. This fallacy of accepting a one-dimensional view of the patient is fittingly called "The Danger of the Single Story" by the author Chimamanda Ngozi Adichie. We may stereotype the patient into one incomplete category according to his or her origin, religion or gender.

This also appears to fit in with the current experience of psychiatric illness in general practice in that single diagnoses rarely fit an individual patient's circuitry. Perhaps every diagnosis in psychiatry should have after it "spectrum disorder" despite the DSM V trying to put every human behaviour into boxes.

The opposing view to this complexity theory comes partly under the aphorism "common diseases occur commonly" and one should look for the simple explanation first. Enter a 14th century Franciscan friar called William from the village of Ockham in Surrey, England. His theory was called Occam's Razor because he advised us to "shave away" with a razor

unnecessary or less common diagnoses or assumptions and stick to less complex alternatives. This involves quite complicated philosophical arguments and is difficult to reduce into compact statements but the gist of the argument may be expressed as "if you have two theories that both explain the observed facts, then you should use the simplest until more evidence comes along". This is also known as the Principle of Economy referring to both clinical reasoning and the cost of excessive investigations looking for rarer causes of presentations.

Now enter, stage right, John Hickam, who was a professor of medicine at Indiana University in the United States of America. He came in on the side of Charlie Saint with the counterargument that doctors should not assume or look for a single diagnosis for multiple symptoms, but that "a man can have as many diseases as he damn well pleases".

We are thus left with two counterbalancing principles. On the one hand there is Occam's Razor. This is adapted in medicine into what is called diagnostic parsimony which asks us to accept the simplest explanations as well as not accepting all the additional assumptions to cover all the symptoms or signs. We should strive for the fewest possible causes that will account for all the symptoms. On the other hand, Hickam's Dictum indicates that a patient is more likely to have several common diseases rather than a single rarer disease that may explain the multiple symptoms.

I find that many more diagnoses have become available to us in the last few decades and I am presented with a list of diagnoses for a patient from diabetes, hypertension, dyslipidaemia, hypothyroidism through to osteoporosis and general anxiety disorder (both mine and the patient's). One of the other problems is the prioritization of these modern medical conditions and their treatment, which is a conversation for another day.

Now that I have confused myself with complex alternatives, single assumptions and competing hypotheses, I will retire to the tea room and indulge myself in a higher intellectual activity – watching the cricket on the telly.

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50 of his previous columns have now been put into book form called:

Peripheralia. Digressions from Medical Practice.

It is available online at www.amazon.com ebooks.

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