Diagnostic modelling in General Practice

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Prof. John Murtagh is the author of several internationally adopted textbooks including General Practice, Practice Tips, Patient Education *and* Cautionary Tales. *Murtagh's* General Practice *has been translated into eleven languages and has been adopted by the Russian and Chinese Ministries of Health. In 1995, he was awarded the Member of the Order of Australia for services to medical education, research and publishing. He practices part-time in General Practice and currently has teaching responsibilities at three universities in addition to conducting national workshops for registrars in the General Practice Training Program.*

Introduction

All facets of the great profession of medicine are fascinating and that is basically the reason why I pursued a career in General Practice. It provides the opportunity to diagnose and manage diseases from A-Z (acne to zoonoses). Practising in a rural community, with the luxury of managing the local hospital, was the ideal environment for my interests and consequently I entered rural practice in partnership with my wife, Dr Jill Rosenblatt in 1969. As the only practitioners in the community of Neerim South we enjoyed considerable responsibility especially with the management of emergencies. The discipline of General Practice, however, is one of the most difficult and challenging of all the healing arts. General Practitioners are at the front line of patient care and have to manage presenting problems as they appear at any time and place.

The patient with multiple vague symptoms

One ever presenting challenging characteristic is the patient presenting with a 'potpourri' of presenting problems that does not fit the classic textbook presentation of a specific disease or disorder. Our patients may present with a 'shopping list' of seemingly unconnected complaints or vague symptoms that we may well term 'the undifferentiated illness syndrome.' The challenge is to have a system or protocol that helps to arrive at the diagnosis, be it organic, psychosocial or both. The following case history illustrates this condition.

The patient

Mrs PT, aged 43, housewife and mother of two children.

Presenting problem

Four months of tiredness and fatigue.

Other problems list

- Generalised aches and pains
- Headache (vague tension pattern)
- Anxiety
- Irritable mood
- Anorexia
- Heartburn
- Constipation
- Sleep disorder
- Weight loss (minor)

Physical examination

The general appearance and systems examination were normal. Pulse, blood pressure, temperature, respiration and urine dipstick were all normal.

Discussion

The case of Mrs PT is a very common scenario in General Practice. Such a history can make our heads spin as we reflect on the diagnosis and management. The question is: "Are we dealing with a genuine, perhaps very serious, organic problem or somatisation or similar functional disorder?" Of course we should have reviewed the past history, the family history, the psychiatric history, and the drug history – all of which would be background knowledge to the family doctor. For the situation where the provisional diagnosis is not obvious after this process the writer has developed a diagnostic strategy model to act as an aide memoir to move forward.

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The 'Murtagh' diagnostic model

The strategy of the model is to ask five self-posed questions about this particular presenting problem:

- What is the probable diagnosis?
- What serious disorder/s must not be missed?
- What conditions can be missed in this situation?
- Could the patient have one of the 'masquerades' commonly encountered?
- Is the patient trying to tell me something? (Look for 'yellow flags.')

Not to be missed conditions?

The life threatening disorders can be classified simply as VIM: vascular, infection (severe) and malignancy. Another classification is: infection, infarction, malignancy and metabolic. This leads us to consider 'red flags' or 'alarm symptoms' which make us think of a possible serious condition. Examples are age >50, history of cancer, weight loss, fever, travel to tropical areas, vomiting, pallor, collapse at toilet, neurological deficit and altered consciousness or cognition.

A good history should include at least six key general questions to pin-point 'red flags.'

- Tell me about your general health? Tiredness, fatigue or weakness?
- Do you have a fever or night sweats?
- Have you lost any (unplanned) weight?
- Have you noticed any unusual lumps?
- Do you have persistent pain anywhere?
- Have you noticed any unusual bleeding?

The masquerades

After many years of practice and feedback from these patients the writer has identified that there are some disorders that can present as a masquerade (disguise or pretender) for these undifferentiated illnesses. They have been divided into two groups of seven first-line (or more common) and second-line masquerades. I have a checklist of these on the wall behind the patient!

The seven first-line masquerades are:

- Depression
- Diabetes
- Drugs – iatrogenic, over-the-counter, or self-abuse
- Anaemia
- Thyroid and other endocrine disorders – especially Addison's disease
- Spinal dysfunction – pain syndromes
- Urinary tract infection

The seven second-line masquerades are:

- Baffling bacterial infections (e.g. tuberculosis, endocarditis and zoonoses)
- Baffling viral and protozoal infections (e.g. Epstein-Barr virus, dengue, malaria and influenza)
- HIV/AIDS
- Malignant disease (e.g. ovary, colon, lung, lymphoma, leukaemia or myeloma)
- Chronic renal failure
- Connective tissue disorders (e.g. rheumatoid arthritis, systemic lupus erythematosus or giant cell arteritis)
- Neurological disorders

The case of Mrs PT

This patient did in fact have a depressive illness without a specific known precipitating cause. It is extremely common in medical practice and demands early recognition as the ramifications of untreated depression are profound. Depression has been estimated to be prevalent in 5% of the Australian community in any one year. The lifetime risk of being treated for depression is approximately 12% for men and 25% for women.

A useful working rule is to consider depression as an illness that seriously dampens the five basic activities of humans, namely:

- Energy for activity
- Appetite
- Sex drive
- Sleep
- Ability to cope with life

Mrs PT did exhibit some of the 'yellow flags,' namely deterioration in work performance, inability to cope with family commitments and marital disharmony. She was treated with support and psychotherapy and did respond to this basic conservative therapy. If she had failed to respond adequately she would have been prescribed medication – one of the selective serotonin reuptake inhibitors (SSRIs).