Abstracts

Googling for a diagnosis

For many years now patients have arrived in the doctor's office complete with printouts from the Internet, hoping that they have already made their own diagnosis, or at least worked out how the doctor should be treating them. I have also used the Internet extensively over my years as a medical editor and writer, but for information, not for diagnosis.

Now an enterprising pair of physicians, one pulmonologist and one rheumatologist, have looked at the use of the Internet, and specifically the search engine Google, to see if it can help doctors diagnose using their patients' symptoms as search terms.

The authors cite a report in the *New England Journal of Medicine* in which a physician came to the difficult diagnosis of IPEX (immunodeficiency, polyendocrinopathy, enteropathy, X-linked) syndrome. Apparently the diagnosis 'popped right up' after she entered the salient terms in Google.

The authors selected a convenient sample of 1 year's (2005) diagnostic cases in the case records of the *New England Journal of Medicine*, excluding management cases. They selected 3 - 5 search terms from each case record. They then did a Google search using these terms, while blind to the actual diagnosis in each case. In other words, they did not read the diagnosis and management before entering the search terms. They then selected and recorded the 3 most prominent diagnoses that seemed to fit the symptoms and signs and compared the results with the correct diagnoses as published in the case records.

They identified 26 cases from the case records. Google searches found the correct diagnosis in 15 cases (58%). In some cases Google gave the correct diagnosis (extrinsic allergic alveolitis), but the authors felt that it was not specific enough to be considered correct (extrinsic allergic alveolitis caused by *Mycobacterium avium*, also known as 'hot tub lung').

The authors concluded that, where Internet access is readily available, it could be a useful aid in diagnosis. They also point out that clinical decision support programmes have been reported to be valuable aids in diagnosing difficult cases. However, they suspect that Google will be most useful in conditions with unique symptoms and signs that can be used as search terms and that searches are less likely to be successful in complex diseases with nonspecific symptoms.

They also think that searches done by doctors will have a better yield than similar searches done by patients, because Google is particularly good at finding documents with co-occurrence of the signs/symptoms used as search terms and human experts are efficient in selecting relevant documents. Furthermore, doctors in training would find the Google searches educational and useful in formulating a differential diagnosis.

Tang H, Ng JHK. *BMJ* 2006; 333: 1143-1145.

Intimate partner violence in South Africa

A recent paper in the *Lancet* points out that intimate partner violence and HIV/AIDS are major public health challenges in southern Africa. In South Africa alone, almost 30% of women who visited public antenatal clinics in 2004 were HIV-positive. National prevalence surveys show that girls and women make up 55% of all infections. On top of this, 1 in 4 South African women report having been in an abusive relationship and violence has been identified as an independent risk factor for HIV infection. Underdevelopment, lack of economic opportunities for both sexes, and entrenched inequalities in the distribution of power, resources, and responsibilities between men and women (gender inequalities) create a risk environment that supports high levels of both HIV infection and intimate partner violence.

Possible intervention in developing countries is difficult and has not really been looked at in detail. The authors of this paper aimed to look at the effect of a structural intervention that combined a microfinance programme with a gender and HIV training curriculum – the Intervention with Microfinance for AIDS and Gender Equity (IMAGE) study.
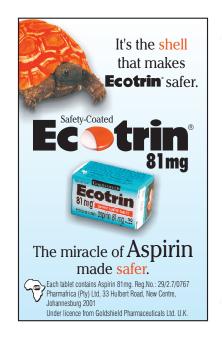
The authors used pair-matched villages in rural Limpopo which were randomly allocated to receive the intervention at the start of the study or, as a comparison group, 3 years later. Loans were provided to poor women who enrolled in the intervention group. A participatory learning and action curriculum was integrated into the loan meetings, which were every 2 weeks. Both arms of the trial were divided into 3 groups: direct programme participants or matched controls (cohort 1), randomly selected 14 - 35-year-olds living together (cohort 2), and randomly selected community members (cohort 3). The authors looked at experience of intimate partner violence – physical or sexual – in the past 12 months by a spouse or other intimate partner, unprotected sexual intercourse with someone other than a spouse in the past 12 months and HIV incidence.

In cohort 1, experience of intimate partner violence was reduced by 55%. However, the intervention did not affect the rate of unprotected sexual intercourse with a partner other than a spouse in cohort 2, and there was no effect on the HIV incidence in cohort 3.

The authors concluded that a combined microfinance and training intervention can lead to reductions in levels of intimate partner violence in people participating in the programme. This suggests that social and economic development interventions have the potential to alter the risk environments for HIV and intimate partner violence in southern Africa.

Pronyk PM, *et al. Lancet* 2006; 368: 1973-1983.

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