



SYNOPSIS

A roundup of some diverse medical research

Canine olfactory diagnosis of human bladder cancer

The *BMJ* reports that a study was conducted to determine whether dogs could be trained to identify people with bladder cancer on the basis of urine odour (2004; **329**: 712-715). In this experimental study, 6 dogs were trained to discriminate between urine from patients with bladder cancer and urine from diseased and healthy controls. A total of 144 subjects were chosen (36 with new or recurrent transitional cell carcinoma of the bladder and 108 diseased and healthy controls); of the 108 control samples 54 were used for training and 54 for testing.

The outcome was that the dogs correctly selected urine from bladder cancer patients on 22 out of 54 occasions. This mean success rate of 41% compared well with the 14% expected by chance alone. This suggests that tumour-related volatile compounds are present in urine, giving a characteristic odour distinct from those associated with secondary effects of the tumour such as bleeding, inflammation and infection.

In 1 case, a dog persistently indicated a particular sample as positive, although the patient was one of the control group. Further examination revealed a transitional cell carcinoma of the kidney.

Underuse of medication for financial reasons

With the new legislation on prescription medication in South Africa, many patients are complaining that instead of bringing the cost of their medication down, it has indeed escalated. The publication of a survey in the *Archives of Internal Medicine* (2004; **164**: 1749-1755) is therefore apt in this scenario.

Many chronically ill and financially hard-pressed patients tend to underuse prescription medications, but little is known about their discussions with clinicians about their concerns. A US nationwide survey of 660 older adults with chronic illnesses who reported underusing medications because of cost, investigated the reasons why some patients did not talk to their clinicians about the problem, how clinicians responded when the issue was raised and how helpful patients perceived clinicians to be.

About two-thirds of the subjects never told their clinicians about their planned underuse of medications, and 35% never discussed the issue at all. Of all of those, 66% reported that nobody asked them about their ability to pay for their prescriptions. When the patients did discuss the problem with their clinicians, 72% found the clinicians helpful. However, 31% said that their medications were not changed to a generic or less costly alternative.

The authors conclude: 'Clinicians should take a more proactive role in identifying and assisting patients who have problems paying for prescription drugs.'

A new medication for rheumatoid arthritis

Etanercept (ENC – not yet registered in South Africa) is an injectable tumour necrosis factor alpha (TNF alpha) inhibitor. Two recent studies investigated its efficacy.

The first, published in the *Cochrane Database of Systematic Reviews* (2003; (4): CD004525) asked the question: Is etanercept effective for reducing symptoms and disease activity in patients with rheumatoid arthritis (RA)? This systematic review of 3 randomised control trials (RCTs) involving 955 patients showed that ENC injected twice weekly reduced symptoms and disease activity.

A later study in the *Lancet* (2004; **363**: 675-681) compared ENC, given alone, with methotrexate (MTX) alone or ENC in combination with MTX in reducing symptoms and disease activity. A total of 682 patients who had diagnosed adult-onset RA were enrolled in the study. They were randomly allocated to ENC (25 mg twice weekly) ($N = 223$), MTX oral capsules once weekly ($N = 228$) or ENC plus MTX ($N = 231$). The trial lasted for 24 weeks, at which time cumulative improvement in symptoms and disease activity was found to be greater in the combination group than in either of the monotherapy groups.

Stanford Shoor, MD, of the Permanente Medical Group, Santa Clara, California, writing in the *ACP Journal Club* (2004; **141**: 42) says, 'Two questions, however, need to be asked: Are they cost effective and, both being immunomodulators, will their long-term use increase the risk for lymphoma? Until these questions are answered, clinicians are advised to try and detect RA early, and quickly refer the patient to a rheumatologist for consideration of either MTX or TNF inhibitors. If the patient does not respond to MTX alone, TNF inhibitors should be added.'

Liposuction and cardiac risk factors

Abdominal fat deposition is regarded as a major predictor of cardiac events, so it would seem likely that liposuction to remove visceral fat deposits could have an effect on cardiac risk factor profiles. A report in the *New England Journal of Medicine* (2004; **350**: 2549-2557) describes a trial which included 15 women who had an average of 7.5 kg of fat removed from the abdomen. Cardiac risk factors (blood pressure, lipid levels, plasma glucose and plasma insulin) were measured postoperatively and no significant improvement was found. While the number of subjects was small, the study was still powerful enough to find a statistically significant change in the outcomes reported. The authors contend that diet and exercise are a better idea.

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