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Carotid stenting — current caution

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TO THE EDITOR: Carotid stenting is a new application of endovascular therapy. Its efficacy in preventing strokes is yet to be established, by contrast with the proven Level 1 evidence of benefit from carotid endarterectomy.

The risks of implanting carotid stents at present appear greater than the risks of carotid endarterectomy. An overview of carotid endarterectomies in Australia is maintained by vascular surgeons, through audits such as the ongoing Melbourne Vascular Surgeons Association Audit and the New South Wales Carotid Endarterectomy Audit. The technique of carotid stenting, the stents themselves and the brain-protective devices used during the implanting of stents are expensive and still evolving. The long-term durability of stents is unknown.

Australian vascular surgeons, neuroradiologists and neurologists are awaiting the outcome of two major international randomised trials of carotid stenting versus endarterectomy (the US Carotid Revascularization Endarterectomy versus Stent Trial and the European International

Carotid Stenting Study). These seek Level 1 evidence of the comparative risks and success of the new stenting procedures in stroke prevention and aim to document the late outcome of stenting, particularly the incidence of restenosis, which is a significant problem in other arteries after stenting.

While these definitive trials are in progress, vascular surgeons of the Royal Australasian College of Surgeons wish to add their note of caution to the reservations expressed in the NHMRC guidelines on stroke prevention¹ and the recommendations of the Australian Association of Neurologists.² A recent commentary by Spence and Eliasziw³ illustrates the disparate nature and the limitations of existing studies of carotid stenting.

We consider carotid stenting is not yet appropriate for widespread use in Australia. Experienced endovascular and neurology teams should continue to evaluate the new procedure. Stenting of symptomatic carotid atheroma should only be conducted with the consent of patients who are fully informed about stenting's known hazards and unproven status and who understand that the established treatment is carotid endarterectomy.⁴ Clinicians should audit closely the immediate outcome and long-term complications of any carotid stenting they perform.

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Content of isoflavone-containing preparations

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TO THE EDITOR: Preparations containing isoflavone phytoestrogens are widely used as an alternative therapy for treating symptoms of the menopause. Although Australian government regulations strictly control the components of alternative therapies, adherence to the stated amounts of the components in alternative therapies is not routinely assessed. Isoflavones exist in two forms — aglycone (the free form) and glycosylated or glycone (the conjugated form) — the relative proportions of which vary between preparations. As glycosylation contributes considerably to the mass of isoflavone molecules, it is relevant to consider the total amount of potentially available isoflavone in alternative therapy preparations.

Isoflavone-containing preparations which had a recommended daily dose on their labels were purchased at random from pharmacies around Sydney during September 1999. Where possible, products from more than one manufacturing batch were purchased and all products were well within their stated shelf life. The tablets, capsules or powder were removed from their packaging to conceal their identity and randomly allocated to numbered plastic bags by the hospital pharmacy department. The samples were then sent to PhytoChem Technologies Inc (Chelmsford, Mass,

Actual and stated isoflavone content of commercially available preparations

Manufacturer	Product	No. of batches assayed	Stated isoflavone content (mg) in recommended daily maximum dose of product	Actual total isoflavone content per daily dose (mg)	Estimated aglycone isoflavone content per daily dose (mg)
Blackmores	Phytolife one a day	5	40	41.02 ± 6.12	25.75 ± 6.04
Bioglan	Soy powder plus	4	68	48.75 ± 1.42	30.44 ± 0.86
Earths Own	Soy + calcium	1	68	42.52	25.67
Health Direction	Femme phase	1	235 mg soy protein*	0.29	0.20
Herron	Phyto source	1	22.5	16.27	9.93
Natural Nutrition	Menopause	1	60	0.56	0.51
Natural Nutrition	Phytobalance	3	90	58.12 ± 6.26	34.96 ± 3.79
Novogen	Promensil	4	40	40.12 ± 1.98	38.38 ± 1.20
Pretorius	Maxi soy plus red clover wild yam and calcium	4	68	50.36 ± 1.64	31.24 ± 1.13
Wagner Probiotics	Femme soy plus with red clover	2	27	30.76 ± 0.12	19.65 ± 0.05

* Soy protein has a high isoflavone content.

Values are the mean ± standard deviation. Total isoflavones = glycone plus aglycone. Estimated available aglycone isoflavones = weight of aglycone isoflavones plus weight of glycone isoflavones corrected for glycone content.

USA), an independent reference laboratory for the assay of isoflavones. There, isoflavones were extracted within four months of purchase (and before their stated use-by date) from 500 mg of each specimen after dissolution in 70% methanol. Glycosylated and free isoflavones were assayed in duplicate by gradient high-pressure liquid chromatography, with detection of isoflavones at 254 nm using a Waters 996 series photodiode detector with a limit of detection of 0.2 µg/mL. The identity of chromatogram peaks was confirmed by UV-V spectral analysis, and by comparison with standards. The mobile phase was acetonitrile, and adequate peak separation, linearity, accuracy and reproducibility were demonstrated. The total amount of available aglycone isoflavones in each sample was estimated (see Table).

Only two products (Phytolife and Promensil) had total isoflavone contents close to the stated amount, and the content of the Phytolife product was variable. Estimated aglycone contents of preparations demonstrated that glycosylated isoflavones contributed substantially to the stated content of the product. A previous study of isoflavone-containing preparations marketed in the United States produced similar results to ours.¹ Consumers may wish to consider not only whether an alternative therapy is of use, but also whether the product they purchase contains what they expect.

1. Satchell KDR, Brown NM, Desai P, et al. Bioavailability of pure isoflavones in healthy humans and analysis of commercial soy isoflavone supplements. *J Nutr* 2001; 131: 1362S-1375S. □

Screening for gestational diabetes: the time of day is important

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TO THE EDITOR: The 50 g glucose challenge test (GCT) is widely recommended as a screening test for gestational diabetes (GD).¹ The test consists of a 50 g oral glucose load given at any time of the day, followed one hour later by the measurement of the plasma glucose concentration.² This test is recognised as imperfect for screening, as sensitivity and specificity are not 100%.^{2,3} It is known that glucose tolerance deteriorates in the afternoon,⁴ which raises the question of

Screening for gestational diabetes (GD): the effect of screening time

	Time	
	Morning (0930–1200)	Afternoon (1205–1710)
Number screened	176	470
Age in years (mean ± SD)	31.2 ± 4.7	31.7 ± 5.0
Weight (mean ± SD)	59.4 kg ± 10.5 kg	60.8 kg ± 12.9 kg
Family history of diabetes	27	24
Past history of gestational diabetes	1	3
% White/Asian/Middle Eastern	62.6/28.0/9.0	67.5/25.9/5.8
Positive result, 50 g glucose challenge test	30 (17.0%)	146* (31.1%)
Abnormal result, 75 g glucose tolerance test	12 (6.8%)†	46‡ (9.8%)†

* $P < 0.001$, χ^2 . †% Of number screened. ‡ $P = 0.15$, χ^2 .

whether time of day influences the response to the 50 g GCT.

At Royal North Shore Hospital, screening for GD is performed at the 26–28-week visit by means of the 50 g GCT. In 2000, screening for GD was introduced into a morning midwives antenatal clinic, whereas previously it had only been performed in the afternoon. The population attending the clinic at the 26–28-week visit includes many women receiving shared care, and is regarded as being at low obstetric risk.

The Table shows the results of screening at the morning clinic compared with screening in the afternoon over the same time period. The two groups were identical in terms of age, weight, ethnicity, and family history of diabetes or past history of GD. The percentage of women with a positive screening test result during the morning clinic (17.0%) was significantly lower than that during the afternoon clinic (31.1%). Positive screening results were followed up with a diagnostic 75 g glucose tolerance test, and GD was diagnosed according to the Australian Diabetes in Pregnancy Society criteria.⁵ Women with a positive screening test result confirmed with a 75 g glucose tolerance test in the afternoon were less likely to have GD than those with a positive test in the morning (31.5% v 40.0%). Despite the fact that a smaller percentage of women who screened positive in the afternoon had GD, a greater percentage of the total number screened in the afternoon had GD than in the morning group. In this cohort, the difference (9.8% v 6.8%) was not significant (Table; $P = 0.15$).

These results are consistent with the hypothesis that a 50 g GCT test performed in the afternoon results in a greater number of positive results, a greater number of women undergoing diagnostic testing and a greater number of women identified with

GD. The morning GCT appears to increase specificity, with an associated decrease in sensitivity.

These results need to be taken into consideration when designing or implementing a screening program.

1. The Expert Committee on the Diagnosis and Classification of Diabetes Mellitus. Report of the Expert Committee on the Diagnosis and Classification of Diabetes Mellitus. *Diabetes Care* 1997; 20: 1183-1197.
2. American Diabetes Association. Gestational diabetes mellitus. *Diabetes Care* 2001; 24 Suppl 1: S77-S79.
3. McElduff A, Goldring J, Gordon P, Wyndham L. A direct comparison of the measurement of a random plasma glucose and a post-50g glucose load glucose in the detection of gestational diabetes. *Aust N Z J Obstet Gynaecol* 1994; 34: 28-30.
4. Campbell IT, Jarrett RJ, Keen H. Diurnal and seasonal variation in oral glucose tolerance. Studies in the Antarctic. *Diabetologia* 1975; 11: 139-145.
5. Hoffman L, Nolan C, Wilson JD, et al. Gestational diabetes — management guidelines. The Australasian Diabetes in Pregnancy Society. *Med J Aust* 1998; 169: 93-97. □

Changing demographics of cervical carcinoma

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TO THE EDITOR: We have recently noticed changes in the incidence of invasive cervical carcinoma in the Gippsland Health Region and would like to know whether other regions have noticed similar demographic changes.

During 24 months in 1999–2000, 19 women (median age, 59 years; range, 33–88 years) with squamous carcinoma were registered in our pathology practice. Based on information from the Victorian Cervical Cytology Register, almost half (10 women) had no previous cervical smear history whatsoever, while three had had smears, but at irregular intervals up to 14 years apart. The remaining six women had had regular Pap smears, with 1–3 negative