Human papillomavirus types	Cervical intraepithelial neoplasia grade				Invasive carcinoma	Total
	None	I	II	III		
None	22	18	12	7		59
6/11		1				1
6/11, 16			1	1		2
6/11, 16, 18	1					1
16	5	4	10	24	2	45
16, 18		1	1	1		3
16, 31				2		2
16, 33				1		1
18	4	3	1	3		11
18, 31			1			1
18, 33		2				2
31			4	3		7
31, 33			1	1		2
33	2		1	2		5
Unknown		3	7	4	1	15
Total	34	32	39	49	3	157

neoplasia in biopsy samples probably had a false negative diagnosis because their cervical smears remained abnormal. They were subsequently diagnosed with cervical intraepithelial neoplasia grade II or III. These three patients harboured human papillomavirus type 16 or 33. When we corrected the calculations for these apparent misdiagnoses the probability of cervical intraepithelial neoplasia grade II or worse was estimated to be 54/62 (87.1%) if human papillomavirus type 16, 31, or 33 was detected.

When human papillomavirus type 18 was detected the probability of cervical intraepithelial neoplasia grade II or worse was 4/11 (36.4%). Cervical intraepithelial neoplasia grade II or worse was found

significantly less often in human papillomavirus type 18 positive women than in type 16 positive women (4/11 versus 36/45; $P=0.008$ (Fisher's exact test)). Other investigators reported that human papillomavirus type 18 was equally distributed over low grade and high grade intraepithelial neoplastic lesions.⁴ In a study on the morphology of lesions and observer variability type 18 associated lesions were preferentially classified as low grade.⁵

We conclude that our findings endorse the appropriateness of the phylogenetic classification. In women with two mildly or moderately dyskaryotic cervical smears the detection of human papillomavirus type 16, 31, or 33 (but not type 18) will help to reduce overtreatment if it is hospital policy to perform loop electrosection of the transformation zone without biopsy.

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Long term effects of guar gum on lipid metabolism after carotid endarterectomy

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Open studies in hypercholesterolaemia with guar gum, a dietary fibre obtained from *Cyamopsis tetragonolobus*, have shown 10% to 15% reductions in serum concentration of total cholesterol and 10% to 20% in serum concentration of low density lipoprotein cholesterol after short term treatment. The results from long term studies have been conflicting. To assess long term efficacy of guar gum we treated 40 patients with moderate hypercholesterolaemia for 24 months.

Patients, methods, and results

This randomised double blind, placebo controlled trial with two parallel groups was approved by the university's ethics committee, and subjects' consent was obtained.

Between August 1987 and November 1989, 40 consecutive patients without diabetes were operated on for a haemodynamically measurable carotid stenosis. Both groups comprised 16 men and four women, whose mean age was 63 years (range 49 to 81) and mean body weight 75.8 kg (55.0 to 97.0). There were no group differences in age, sex, or body weight. Serum lipid concentrations were equal, but triglyceride concentrations tended to be higher in the group allocated to treatment with guar gum (see table). After operation

aspirin (250 mg/day) alone or with dipyridamole (225 mg/day) was used. None had drug treatment for hypercholesterolaemia. Thirty seven patients completed the trial. Follow up in both groups was from 24 to 29 months (mean 24.6 months).

Postoperatively patients received 5 g granulated guar gum (Guarem, Orion-Farmos, Espoo, Finland) or placebo three times a day, but otherwise they maintained their usual dietary habits and physical activity. All received dietary advice before treatment. Adverse events and compliance with treatment were monitored at 1, 3, 6, 12, and 24 months. Venous blood (20 ml) was drawn after an overnight fast to measure lipid concentrations before operation and at 12 and 24 months of follow up.

Multiple analysis of variance was performed for each serum lipid and lipoprotein concentration. Measurements at 12 and 24 months were used as dependent variables and pretreatment values as covariates. Differences between treatments were tested with Wilk's lambda. Further comparisons at 12 and 24 months were made by a *t* test, and 95% confidence intervals were calculated for differences between treatments adjusted to values before treatment.

Significant differences between treatments were found in concentrations of both total and low density lipoprotein cholesterol. The adjusted differences were 0.69 mmol/l ($P=0.014$) at 12 months and 1.07 mmol/l ($P=0.0003$) at 24 months for total cholesterol concentration and 0.75 mmol/l ($P=0.0048$) and 1.10 mmol/l ($P=0.00005$) for concentration of low density lipoprotein cholesterol. The concentrations of other lipids and lipoproteins remained virtually unchanged in both groups (table).

There was no reduction in body weight in either group; the final mean weight was 74.9 kg (range 52.0-

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Measurement	Guar gum group			Placebo group			Adjusted difference (95% confidence interval)	
	Before treatment (n=20)	At 12 months (n=18)	At 24 months (n=18)	Before treatment (n=20)	At 12 months (n=19)	At 24 months (n=19)	At 12 months (n=37)	At 24 months (n=37)
Total cholesterol (mmol/l)	6.3 (0.24)	5.8 (0.24)	5.4 (0.20)	6.2 (0.23)	6.4 (0.25)	6.4 (0.24)	0.69 (0.15 to 1.23)*	1.07 (0.62 to 1.52)†
High density lipoprotein cholesterol (mmol/l)	1.0 (0.07)	1.0 (0.08)	1.0 (0.10)	1.1 (0.08)	1.1 (0.08)	1.1 (0.08)	0.04 (-0.15 to 0.23)	0.08 (-0.10 to 0.26)
Low density lipoprotein cholesterol (mmol/l)	4.3 (0.23)	3.9 (0.25)	3.5 (0.20)	4.3 (0.18)	4.7 (0.23)	4.6 (0.22)	0.75 (0.25 to 1.26)‡	1.10 (0.62 to 1.58)§
Apolipoprotein A I (mg/l)	1270 (50)	1160 (40)	1190 (40)	1250 (50)	1140 (30)	1240 (40)	-10 (-100 to 80)	50 (-30 to 120)
Apolipoprotein B (mg/l)	1350 (90)	1060 (70)	1060 (80)	1200 (60)	990 (50)	1100 (50)	10 (-110 to 130)	120 (-20 to 270)
Lp (a) lipoprotein (mg/l)	388 (86)	400 (91)	427 (97)	315 (78)	382 (92)	401 (104)	64 (-31 to 159)	85 (6 to 164)
Triglycerides (mmol/l)	2.29 (0.31)	2.08 (0.32)	2.14 (0.39)	1.62 (0.14)	1.39 (0.10)	1.44 (0.11)	-0.29 (-0.81 to 0.24)	-0.18 (-0.79 to 0.43)

*P=0.014. †P=0.00003. ‡P=0.0048. §P=0.00005.

95.0). Two patients in the guar group withdrew, the first because of flatulence and diarrhoea, the other because of inability to follow the protocol. One patient in the placebo group withdrew because of diarrhoea.

Comment

Previous trials of guar gum have been criticised for being short, uncontrolled, and small.¹ Among the numerous long term trials known to us our study of 24 months was the first to be double blind and placebo controlled.

Secondary prevention of atherosclerosis is indicated after vascular procedures. The rate of carotid stenosis is 10-20%² and is strongly associated with hypercholesterolaemia.³ Lipid concentrations after diets are often moderate but unacceptable in patients with vascular disease, and some adjunct is clearly desirable.

Our results confirm previous findings on the effects of guar gum on lipid metabolism during long term treatment.⁴ Response to guar seems not to depend on the initial total serum cholesterol concentration; the reduction in serum total cholesterol concentration was 17% and, in low density lipoprotein cholesterol was 26%. We observed no attenuation of the lipid lowering effect such as described elsewhere.⁵

Previous doses of guar gum have varied from 15 g to

30 g. Here 15 g a day proved effective. In keeping with earlier reports, body weight was unaltered.

The adverse effects of guar gum may vary according to dose, formulation, and method of administration. Tolerant of granulated guar gum with meals was good; only one patient interrupted treatment because of gastrointestinal complaints. This contrasts with results from earlier studies.

We conclude that 15 g guar gum daily considerably reduces serum concentrations of total and low density lipoprotein cholesterol without attenuation over two years of treatment.

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SOUND BITES

Sour notes

A teenage patient recently made a formal request to read her casenotes, a demand which now has legal force. In the event all went well: the notes were full and frank but, she agreed, were clear and largely accurate. We probably ended up with a more open relationship than before, but it made me think again about medical records.

Working in the Scottish Hospital Advisory Service, which visits all NHS services for psychiatric, geriatric, mentally handicapped, and younger physically disabled patients, I was upset by the overall standard of record keeping. I tried to foster the notion that medical casenotes should enable a new doctor to obtain a clear picture of the patient's history and recent medical problems within a quarter of an hour. Not many folders came near to doing this.

There is, of course, a danger in writing notes as an empty routine, but it is not rare to find patients in long stay hospitals who have no written evidence of having been viewed by a doctor for several years. It seems reasonable that there should be some machinery for bringing the most self effacing patient to medical attention on a regular basis and recording the fact. Even then you face the problem that many casenotes cannot be read without great difficulty—a fact that ensures that they are not read at all. In the long term the pressures of communication and litigation must make typescript the norm, something which the better psychiatric hospitals have already achieved.

I was a late convert to problem oriented records but

after the initial difficulties found them an admirable way of caring for patients, especially in the long term. A problem list simplifies and focuses review yet provides an aide memoire which, for instance, may prevent you from forgetting that your elderly patient with weight loss was treated for tuberculosis in 1949. I had minimal success in converting my medical colleagues to a method now in everyday use in the nursing process system.

There are few topics in medicine that arouse more emotion, provoke more vociferous protest, and stimulate more specious argument than the issue of order of filing. The storytellers (of whom I am one) believe that a clinical record should read like a book, a story beginning at the first page and recording the excitements of today on the last. The opposition is adamant that the most recent events should be instantly accessible on the top page. No agreement or compromise seems possible.

Perhaps we shall find the wishes and demands of patients deciding the shape of what we have always thought of as being "our" notes. Some, like the old lady with heart disease whom I looked after in my earliest student days, will have little opportunity to influence their content. One morning I came down to the ward and she was no longer there, her passing recorded only by a probationer's entry in the nursing report.

With the unsophisticated accuracy of the young it said: "Patient had a quiet night, died 3 am."—TONY DRUMMOND is a retired psychiatrist in Pathhead, Midlothian