What is already known on this subject

Most anal incontinence in women is thought to arise from injury to the sphincter during childbirth

Operative vaginal deliveries and high degree perineal tears have been implicated in the disruption of sphincter function, but no study to date has been designed specifically to quantify the effect of episiotomy and varying levels of spontaneous perineal trauma on symptoms of anal incontinence

What this study adds

Midline episiotomy is a risk factor for postpartum anal incontinence, independent of the procedure's association with maternal age, infant birth weight, duration of the second stage of labour, complications of labour, and obstetric instrumentation

Women with appreciable spontaneous perineal tearing are at lower risk of postpartum anal incontinence than women who have midline episiotomies

> to those with non-instrumental and uncomplicated deliveries. These strategies should limit the possibility that maternal factors or difficulties arising during delivery (that is, potential indications for episiotomy) are responsible for the observed associations.

Conclusions

Our study raises concern about the efficacy of midline episiotomy in protecting the perineum and sphincters during childbirth and, moreover, implicates this procedure in the impairment of anal continence. For most end points in this study women who were given midline episiotomies were at a significantly higher risk than women who sustained spontaneous lacerations. Restriction of midline episiotomies to certain necessary indications^{4 13 14} is reasonable in light of the procedure's documented association with high degree perineal tearing⁶ 15-18 and now evidence of a potential role in postpartum anal incontinence, independent of overt anorectal injury.

Contributors: LBS had the original idea for the study. The protocol was developed by LBS, BLH, and JTR. Data collection, medical record abstraction, day to day study management, data

entry, and data cleaning were managed by LBS and AKC. Statistical analyses were performed by LBS and BLH. All authors contributed to the interpretation of the results, as well as to the writing and editing of the manuscript. LBS and BLH are the guarantors for the paper.

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- 1 MacArthur C, Bick DE, Keighley MRB. Faecal incontinence after childbirth. Br J Obstet Gynaecol 1997;104:46-50.
- Sultan AH, Kamm MA, Hudson CN, Thomas JM, Bartram CI. Anal sphincter disruption during vaginal delivery. N Engl J Med 1993;329:
- Leigh RJ, Turnberg LA. Faecal incontinence: the unvoiced symptom. Lancet 1982;i:1349-51.
- Sultan AH, Kamm MA. Faecal incontinence after childbirth. Br J Obstet Gynaecol 1997;104:979-82.
- Isager-Sally L, Legarth J, Jacobsen B, Bostofte E. Episiotomy repair-immediate and long-term sequelae. A prospective randomised study of three different methods of repair. Br J Obstet Gynaecol 1986;93:
- Sultan AH, Kamm MA, Hudson CN, Bartram CI. Third degree obstetric anal sphincter tears: risk factors and outcome of primary repair. BMJ 1994;308:887-91.
- Nielsen MB, Hauge C, Rasmussen OO, Pedersen JF, Christiansen J. Anal endosonographic findings in the follow-up of primarily sutured sphincteric ruptures. Br J Surg 1992;79:104-6.
- Sorensen M, Tetzschner T, Rasmussen OO, Bjarnesen J, Christiansen J.
- Sphincter rupture in childbirth. *Br J Surg* 1993;80:392-4.

 Swash M. Faecal incontinence. Childbirth is responsible for most cases.
- Snooks SJ, Swash M, Mathers SE, Henry MM. Effect of vaginal delivery on the pelvic floor: a 5-year follow-up. Br J Surg 1990;77:1358-60.
 Deen KI, Kumar D, Williams JG, Olliff J, Keighley MRB. The prevalence
- of anal sphincter defects in faecal incontinence: a prospective endosonic study. *Gut* 1993;34:685-8.
- 12 Sultan AH, Kamm MA, Bartram CI, Hudson CN. Anal sphincter trauma during instrumental delivery. Int J Gynecol Obstet 1993;43:263-70.

 13 Thacker SB, Banta HD. Benefits and risks of episiotomy: an interpretive
- review of the English language literature, 1860-1980. Obstet Gynecol Surv 1983;38:322-38.
- 14 Thorp JM Jr, Bowes WA Jr. Episiotomy: can its routine use be defended? Am J Obstet Gynecol 1989;160:1027-30
- 15 Thorp JM Jr, Bowes WA Jr, Brame RG, Cefalo R. Selected use of midline episiotomy; effect on perineal trauma, Obstet Gynecol 1987;70;260-2.
- 16 Helwig JT, Thorp JM Jr, Bowes WA Jr. Does midline episiotomy increase the risk of third- and fourth-degree lacerations in operative vaginal deliveries? Obstet Gynecol 1993;82:276-9.
- 17 Walker MPR, Farine D, Rolbin SH, Ritchie JWK. Epidural anesthesia, episiotomy, and obstetric laceration. *Obstet Gynecol* 1991;77:668-71.

 18 Klein MC, Gauthier RJ, Robbins JM, Kaczorowski J, Jorgensen SH, Franco
- ED, et al. Relationship of episiotomy to perineal trauma and morbidity, sexual dysfunction, and pelvic floor relaxation. Am J Obstet Gynecol 1994; 171:591-8.
- 19 Snooks SJ, Swash M, Setchell M, Henry MM. Injury to innervation of
- pelvic floor sphincter musculature in childbirth. Lancet 1984;2:546-50.

 Burnett SJD, Spence-Jones C, Speakman CTM, Kamm MA, Hudson CN, Bartram CIB. Unsuspected sphincter damage following childbirth revealed by anal endosonography. Br J Radiol 1991;64:225-7.

 Trudinger A, Bartram CI, Spencer JAD, Kamm MA. Perineal examination
- as a predictor of underlying external anal sphincter damage. Br J Obstet Gynaecol 1997;104:1009-13.

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Bad blood? Survey of public's views on unlinked anonymous testing of blood for HIV and other diseases

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In 1989 the Department of Health set up the unlinked anonymous HIV prevalence monitoring programme for England and Wales.1 Although support for the programme in the United Kingdom has been generally widespread, concern has been voiced about testing without the individual's explicit consent, and two countries have refused to adopt non-voluntary unlinked anonymous testing programmes for HIV.2 We carried out a survey of the public's views on unlinked

anonymous testing of blood for HIV and other diseases.

Participants, methods, and results

Three questions were inserted into the March 1998 Office for National Statistics omnibus survey. Of 3000 addresses selected from the postal address file, 2635 were eligible. Face to face interviews were conducted with one randomly selected person aged 16 or over at 1845 of these addresses, a response rate of 70%. Interviews were preceded by a spoken explanation of unlinked anonymous testing of blood and its value to public health. All analyses were on weighted data.

Overall, 31.5% (95% confidence interval 29.3% to 33.7%) of participants were aware of unlinked anonymous testing of blood for HIV. Multiple logistic regression showed that awareness was strongly associated with age (P<0.001), being highest in the age group 25-44 (39%), decreasing to 19% in those aged 75 and over, and being lowest in the 16-24 age group (14%). Awareness was also significantly associated with age at leaving full time education (P=0.03) and to some extent with region (P=0.06). Awareness was highest in Wales (41%), where a promotional campaign had recently been run, and lowest in south west England (23%) (table).

Disagreement (those disagreeing or strongly disagreeing on a five point scale) with unlinked anonymous testing of blood for HIV was 26.3% (95% confidence interval 24.3% to 28.4%). Multiple logistic regression showed that disagreement was strongly associated with age (P = 0.004). It decreased from 31% in those aged 16-24 to 17% in those aged 75 and over. Disagreement was significantly associated with region (P = 0.02), being highest in the Midlands (32%) and lowest in south east England (19%), and was also associated with age at leaving education (P = 0.06) (table). Disagreement was significantly higher in respondents who were unaware of the policy (30.8%) than in those who were aware (16.7%) (P < 0.001).

The final question, about disagreement with unlinked anonymous testing of blood for other usually fatal diseases, provided results broadly similar to those for HIV.

Comment

Most respondents were unaware of unlinked anonymous testing of blood for HIV, and a substantial minority disagreed with such testing both for HIV and for other usually fatal diseases. If the British government is serious about its commitment to "rebuild confidence in the NHS as a public service, accountable to patients, open to the public and shaped by their views," then the policy needs reconsideration.

Failure to gain explicit consent was originally justified by the public health emergency of HIV.⁴ The ethical debate, however, has shifted with time. The HIV epidemic has not materialised as expected, and the balance between the social usefulness of the programme and the individual's right to determine what happens to his or her blood has changed.²

Notification of testing currently relies on patients seeing posters or leaflets. Instead, all patients should be given explanatory information sheets in settings where unlinked anonymous testing for HIV or hepatitis C virus is going on, with the opportunity for discussion and opting out. Given that disagreement with the policy was highest in those who were unaware of it, promoting openness may even engage the public and encourage greater social responsibility.⁵

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Factors associated with awareness of, and disagreement with, unlinked anonymous testing of blood for HIV*

	Awareness (n=1817)		Disagreement (n=1811)	
	No (%) of people	Odds ratio (95% CI)	No (%) of people	Odds ratio (95% CI)
Age				
16-24	39 (14)	1.00	85 (31)	1.00
25-44	248 (39)	3.33 (2.1 to 5.4)	188 (30)	0.98 (0.6 to 1.5)
45-54	127 (40)	3.54 (2.1 to 6.0)	83 (26)	0.78 (0.5 to 1.3)
55-64	80 (35)	2.88 (1.7 to 5.0)	54 (23)	0.66 (0.4 to 1.1)
65-74	48 (24)	2.19 (1.2 to 4.1)	43 (21)	0.43 (0.2 to 0.8)
≥75	28 (19)	1.66 (0.9 to 3.2)	25 (17)	0.34 (0.2 to 0.7)
	F _(5,1816) =6.47; P<0.001		F _(5,1806) =3.49; P=0.004	
Age left full time education				
≤14	49 (19)	1.00	59 (24)	1.00
15-18	360 (33)	1.52 (1.0 to 2.4)	302 (28)	0.63 (0.4 to 1.0)
19-25	113 (40)	2.15 (1.3 to 3.6)	61 (22)	0.43 (0.2 to 0.8)
>25	37 (44)	2.17 (1.2 to 4.1)	22 (26)	0.63 (0.3 to 1.3)
Still in education	12 (12)	1.06 (0.3 to 3.2)	33 (34)	0.72 (0.3 to 1.7)
No education	2 (27)	2.35 (0.2 to 3.4)	0	_
	F _(5,1816) =2.52; P=0.03		F _(4,1806) =2.26; P=0.06	
Region				
North of England	159 (31)	1.00	131 (25)	1.00
Midlands	155 (33)	1.07 (0.8 to 1.4)	147 (32)	1.43 (1.0 to 2.0)
London	53 (30)	0.87 (0.6 to 1.3)	45 (26)	1.06 (0.7 to 1.6)
South east England	73 (32)	0.99 (0.7 to 1.4)	42 (19)	0.73 (0.5 to 1.1)
South west England	43 (23)	0.62 (0.4 to 0.9)	52 (29)	1.25 (0.8 to 1.9)
Wales	41 (41)	1.62 (1.0 to 2.7)	27 (27)	1.09 (0.6 to 1.9)
Scotland	48 (31)	0.91 (0.6 to 1.4)	32 (20)	0.75 (0.5 to 1.2)
	F _(6,1816) =2.04; P=0.06		F _(6,1806) =2.50; P=0.02	

*All counts, percentages, and odds ratios are weighted to correct for unequal probability of selection. F statistics and P values refer to tests for heterogeneity of adjusted odds ratios.

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- 1 Gill ON, Adler MW, Day NE. Monitoring the prevalence of HIV. BMJ 1989:299:1297.
- Kopelman LM. Informed consent and anonymous tissue samples: the case of HIV seroprevalence studies. J Med Philosophy 1994;19:525-52.
- 3 Department of Health. The new NHS. London: Stationery Office, 1997:2. (Cm3807.)
- 4 Berridge V. Aids in the UK: the making of policy, 1981-1994. New York: Oxford University Press, 1996.
- 5 Kessel AS, Crawford M. Openness with patients: a categorical imperative to correct an imbalance. Science and Engineering Ethics 1997;3:297-304.

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Endpiece

Too much for poetry

He was young for the House of Commons, he was loose for the Army. He was refined, as might have been said, for the City and, quite apart from the cut of his cloth, sceptical, it might have been felt, for the Church. On the other hand he was credulous for diplomacy, or perhaps even for science, while he was perhaps at the same time too much in his senses for poetry and yet too little in them for art.

Henry James, introducing Morton Densher in The Wings of the Dove