

PERINEAL TRAUMA REDUCTION

FOR PROVIDERS ONLY

SAFE PASSAGES

SELECTED REFERENCES

Aasheim, et al, Cochrane Review, Assessed techniques to reduce 3rd/4th degree lacerations, 8 trials including 11,651 randomized women, Two studies, 1525 women, evaluated warm compresses, The use of warm compresses during labor cut the risk in half (RR) 0.48, 95% confidence interval (CI) 0.28 to 0.84

Aasheim, et al, Cochrane Review, Perineal massage reduces the likelihood of perineal trauma by 50%, There was also a significant effect towards favoring massage versus hands off to reduce third- and fourth-degree tears (RR 0.52, 95% CI 0.29 to 0.94 (two studies, 2147 women)

Abenheim HA, Morin L, Benjamin A, Kinch RA. Effect of instrument preference for operative deliveries on obstetrical and neonatal outcomes. *Eur J Obstet Gynecol Reprod Biol* 2007;134:164-68.

Albers, et al., *Birth*. 2006 Jun;33(2):94-100, Valsalva pushing associated with increased trauma, Delivery of infant's head between contractions associated with reduced trauma

Baskett TF, Fanning CA, Young DC. A prospective observational study of 1000 vacuum assisted deliveries with the OmniCup device. *J Obstet Gynaecol Can* 2008;30:573-80.

Beckmann, et al, *Cochrane Database Syst Rev*. 2006 Jan 25;(1):CD005123. Three trials (2434 women), All were of good quality, Conclusions: Antenatal perineal massage reduces- Perineal trauma (mainly episiotomies) and ongoing perineal pain.

Burke N, Field K, Mujahid F, Morrison JJ. Use and safety of Kielland's forceps in current obstetric practice. *ObstetGynecol* 2012;120:766-70.

De Vogel, et al *AJOG* May, 2012, 2861 operative vaginal deliveries, Netherlands; retrospective cohort, Median episiotomy excluded, Obstetric Anal Sphincter Injuries (OASIS) , 162 cases = 5.7%, 3.5% of women with mediolateral, 15.6% of women without episiotomy, Vacuum 5.9%, Forceps 3.2%, Sixfold reduction in OASIS with mediolateral vs none, NNT Vacuum = 8.64, Forceps 5.21

Dudding TC, et al, *Ann Surg*. 2008 Feb;247(2):224-37

Hals, et al *OB GYN* 2010, 40,152 vaginal deliveries enrolled, Design focused on: Good communication between the accoucheur and the delivering woman, Adequate perineal support, Delivery position that allows visualization of the perineum, Episiotomy only on indication. Results: OASIS from non-instrumental vaginal deliveries decreased from 3.90% to 1.14%

Hartmann et al, *JAMA* 2005, Metanalysis, 1950-2004, 26/986 articles useful, No benefit from routine episiotomy, More "trauma", Unclear Median vs Mediolateral, "In the absence of benefit and with a potential for harm, a procedure should be abandoned", Stop Routine use

Kudish, et al. *AJOG* March, 2006, 33,842 Births, 12% Operative Delivery, 22.4% midline Episiotomy, Episiotomy Tripled Risk of OASIS

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Laine et al, OB GYN 111, No 5, May 2008, 12,369 women, 2002 to Mar 2007, Mother not to push while head delivered, No sig difference in operative delivery or size during study

Lindgren HE, et al, [BMC Pregnancy Childbirth](#). 2011 Jan 18;11:6

Murphy DJ, Koh DK. Cohort study of the decision to delivery interval and neonatal outcome for emergency operative vaginal delivery. *AMJObstetGynecol*2007;196:145.e1-7.

Murphy DJ, Liebling RE, Verity L, et al. Early maternal and neonatal morbidity associated with operative delivery in second stage of labour: a cohort study. *Lancet* 2001;358:1203-7.

Ouzounian JG, Gherman RB, Chauhan S, et al. Recurrent shoulder dystocia: Analysis of incidence and risk factors. *Am J Perinatol* 2012;29:515-18.

Rouse DJ, et al. *Am J Obstet Gynecol* 2009;201:357.e1-7. Second-stage labor duration in nulliparous women: relationship to maternal and perinatal outcomes.

Shaffer et al *AJOG* 2006, OP or OT, N=1715, 712 Manual (41%), 737 Forceps (43%), 266 Vacuum (16%) auto rotation

Shorten et al, [Birth](#). 2002 Mar;29(1):18-27. 2891 vaginal births analyzed, Retrospective, Compared Midwives to Physicians, Lateral position was associated with highest rate of intact perineum (66.6%), Squatting position was associated with the least favorable perineal outcomes (intact rate 42%), especially for nulliparas.

Sooklim, et al. *Reproductive Health*, 2007, 1302 term, low-risk vaginal deliveries, All women received episiotomy, 426 midline, 876 mediolateral, 14.8% of midline resulted in deep perineal tears, 7% of mediolateral resulted in deep perineal tears, No difference in blood loss, vaginal hematoma, infection, pain, dyspareunia, women's satisfaction with method

Soong et al, [Birth](#). 2005 Sep;32(3):164-9. 3756 vaginal births analyzed, Regional anesthesia, 1,679 women (44.5%) required perineal suturing, semi-recumbent position → inc need for suturing, lateral position → reduced need for suturing

Spong CY, Berghella V, Wenstrom KD, et al. Preventing the first cesarean delivery. *Obstet Gynecol* 2012;120:1181-93.

Walsh CA, Robson M, McAuliffe FM. Mode of delivery at term and adverse neonatal outcomes. *Obstet Gynecol* 2013;121:122-8.

Yeomans ER. Operative Vaginal Delivery. In: Queenan's Management of High-Risk Pregnancy – An Evidence-Based Approach, 6th Edition. Queenan JT, Spong CY, Lockwood CJ (eds). Wiley-Blackwell, Malden, MA, 2012, p.429-33.

Yeomans ER. Operative vaginal delivery. *Obstet Gynecol* 2010;115:645-53.

[Zetterström](#) J, et al, [Obstet Gynecol](#). 1999 Jul;94(1):21-8