

OBSTETRIC ANAL SPHINCTER LACERATION REPAIR IN THE UNITED STATES: IS THERE A COMMON PRACTICE PATTERN?

Hypothesis / aims of study

To assess practice preferences in the repair of third and fourth degree obstetric lacerations among obstetrician/gynecologists in the United States.

Study design, materials and methods

A survey detailing third and fourth degree obstetric laceration repair techniques was distributed electronically to 634 practicing obstetrician/gynecologists, gynecologic sub-specialists and ob/gyn residents throughout the United States. The study was performed over a period of six months from July 2008 through March 2009, and all interested physicians were invited to take part in the study. The invitation was sent to the physicians' email addresses once a week for a period of three weeks for a total of three email invitations. The 23-question survey included questions regarding participant demographics, training background, detailed methods for the reapproximation of third and fourth degree lacerations, as well as intra-operative and post-operative management. Respondents were asked whether they considered themselves "experts" in this type of repair. The questions delved into such specifics as what type and size of suture material was utilized (i.e. 2-0 Vicryl), and the manner of closure for each tissue layer closed (i.e. running locked closure). Other practices such as preferred type of anesthesia, antibiotic preference and the use of frequent irrigation during closure were obtained as well. Categorical outcomes were compared for experts v. non-experts using Chi square or Fisher's Exact test where appropriate.

Results

303 surveys were returned for a response rate of 48%. 266 surveys were found to be complete and were included in this study. 173 respondents (65%) were below the age of 40, and 112 (41%) reported they were in residency training. There were 124 self reported "experts" (45%). There was no significant difference between experts and non-experts in the preference of vicryl suture for the closure of the anal mucosa (67% v. 63%; p=0.521), vaginal epithelium (80% v. 87%; p=0.133), internal anal sphincter (76% v. 72%; p=0.403) and external anal sphincter (70% v. 71%; p=0.331). Both experts and non-experts also preferred a running suture closure for the anal mucosa (66% v. 63%; p=0.609) and end-to-end closure of the internal (65% v. 61%, p=0.526) and external anal sphincters (56% v. 54%; p=0.902). A difference in closure preference of the vaginal epithelium was also non-significant between the two groups, 46% of experts and 43% of non-experts (p=0.711) preferred a running/locking closure, and 43% of experts and 39% of non-experts (p=0.533) preferred a simple running closure. Experts and non-experts alike preferred assistance during these repairs (82% v. 87%; p=0.395), did not prefer intra-operative prophylactic antibiotics (63% v. 67%; p=0.521) and preferred to perform the repair in the labor/delivery suite under epidural or spinal anesthesia (experts 51% v. non-experts 52%; p=0.902). Regarding post-operative management, 64% of experts and 56% of non-experts (p=0.211) reported no routine use of antibiotics, regular use of stool softeners (95% v. 99%; p=0.188), and preference for recommending sitz baths (89% v. 96%; p=0.028).

Interpretation of results

The results of this survey suggest that there are common practice patterns for the management of third and fourth degree obstetric lacerations among obstetrician/gynecologists. There were no significant differences found on any of the individual techniques involved in a complex laceration repair between self-reported experts and non-experts, other than recommending post-repair sitz baths.

Concluding message

This study provides evidence that the majority of physicians in the United States do have consensus regarding management of repair, however this study does not define an evidence-based approach for obstetric laceration repair.

Table 1 Suture materials and methods N=266 (%)

Tissue	Suture Size(%)	Suture Material(%)	Closure Method(%)
Anal Mucosa	4-0 (50)	Vicryl (66)	Running (68)
Internal Anal Sphincter	2-0 (59)	Vicryl (75)	End-to-end (67)
External Anal Sphincter	2-0 (74)	Vicryl (72)	End-to-end (58)
Rectovaginal Septum	2-0 (47)	Vicryl (81)	Running (51)
Vaginal Epithelium	3-0 (57)	Vicryl (84)	Run/Lock (46)
Bulbospongiosus	2-0 (52)	Vicryl (83)	End-to-end (86)
Superficial Transverse Perinei	2-0 (50)	Vicryl (84)	End-to-end (87)
Perineal Body	2-0 (61)	Vicryl (45)	Interrupted (43)

Specify source of funding or grant	NONE
Is this a clinical trial?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	Yes
Specify Name of Ethics Committee	This study was approved by the Institutional Review Board at the University of Oklahoma Health Sciences Center, IRB #14425.
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	No