Dystokia ramienok – novinky (Dystokia pliecok)

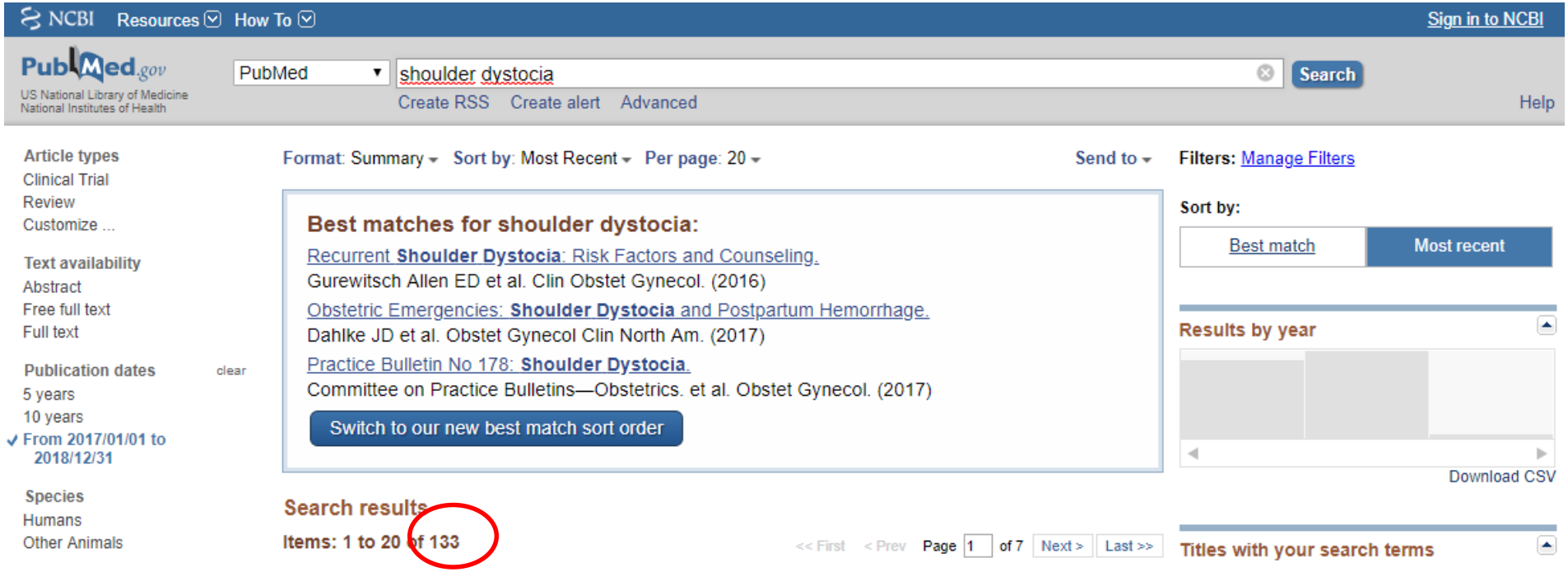
Jozef Záhumenský

II. Gynekologicko pôrodnícka klinika LFUK a UNB Bratislava

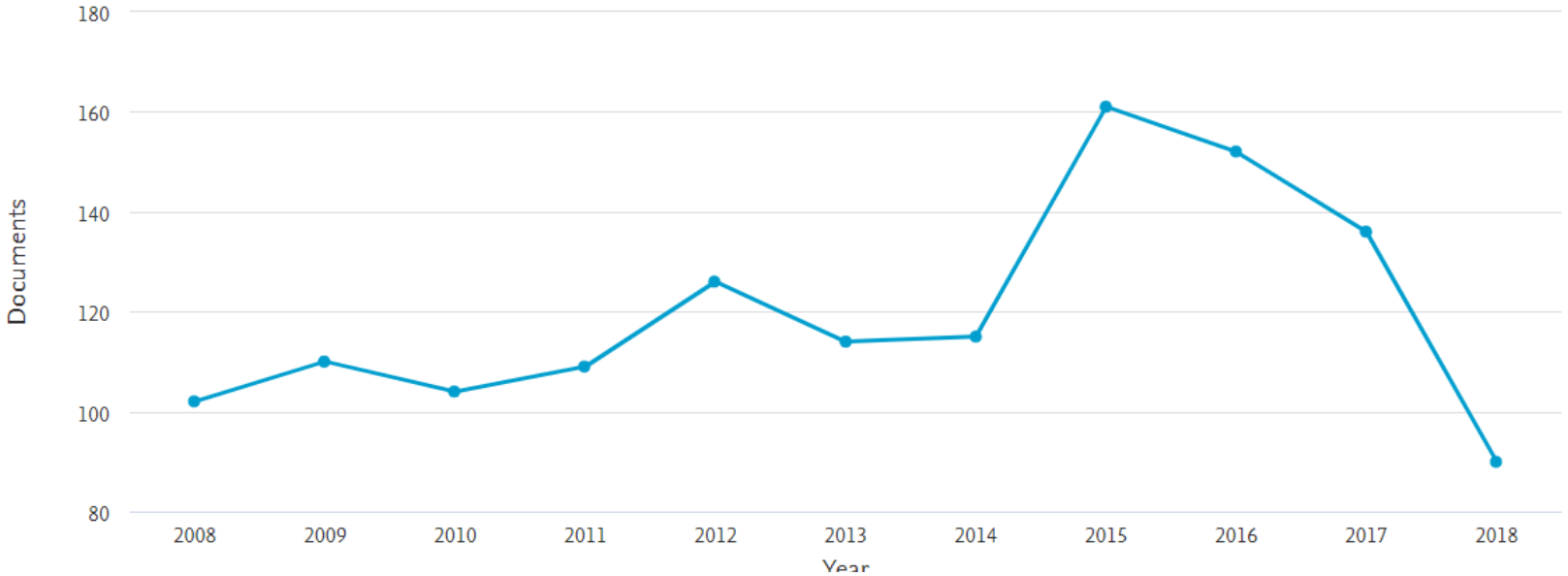
Závery – Kritické stavy 2016

- Dystokia ramienok ostáva stále nepreventabilná komplikácia
  - Indukcia pôrodu väčších plodov znižuje riziko
  - Indukcia pôrodu u GDM nemá vplyv na riziko
  - Extrakčná vaginálna operácia a makrozómia plodu zvyšuje riziko závažnej dystokie ramienok
- Chladná hlava a citlivé riešenie znižujú riziko poranenia brachiálneho plexu
  - Manipulácia s plodom nezvyšuje riziko jeho poranenia ale zvyšuje riziko poranenia matky
- Teamový tréning výrazne redukuje riziko poškodenia brachiálneho plexu
  - Checklisty – súčasť tréningu aj dokumentácie
- V prípade permanentnej obrny plexus brachialis možno očakávať súd v polovici prípadov
  - Najlepšia obrana je dokonalá dokumentácia

Shoulder dystocia 2017-2018

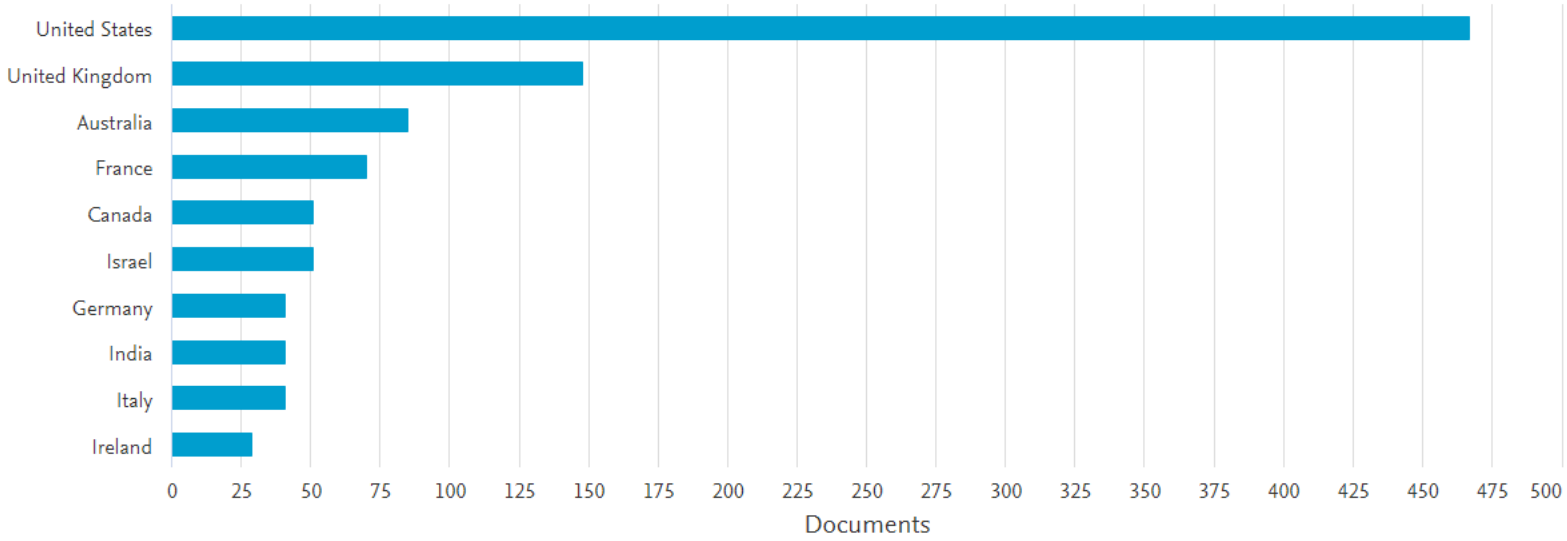


Documents by year



Documents by country or territory

Compare the document counts for up to 15 countries/territories



JOGNN

RESEARCH

Population-Based Risk Factors for Shoulder Dystocia

Palmira Santos, Jennifer Gaudet Hefele, Grant Ritter, Jennifer Darden, Cassandra Firneno, and Ann Hendrich

N=19.236 pôrodov

BMI 31-40	RR: 1,45
Čierna rasa	RR: 1,38
Hispánci	RR: 1,87
Predčasný pôrod	RR: 0,26
Pôrod 37-38 t.	RR: 0,55
Pôrod nad 41 t.	RR: 1,60
GDM na inzulíne	RR: 2,10
Pregestačný DM	RR: 3,11
Medicaid	RR: 1,47
Nepoistená	RR: 2,01
Epidurál	RR: 3,47

The prevalence of risk factors for shoulder dystocia is increasing in the United States.

When treated with insulin, gestational diabetes was associated with heightened risk for shoulder dystocia.

Use of epidural anesthesia strongly increased the risk of shoulder dystocia.

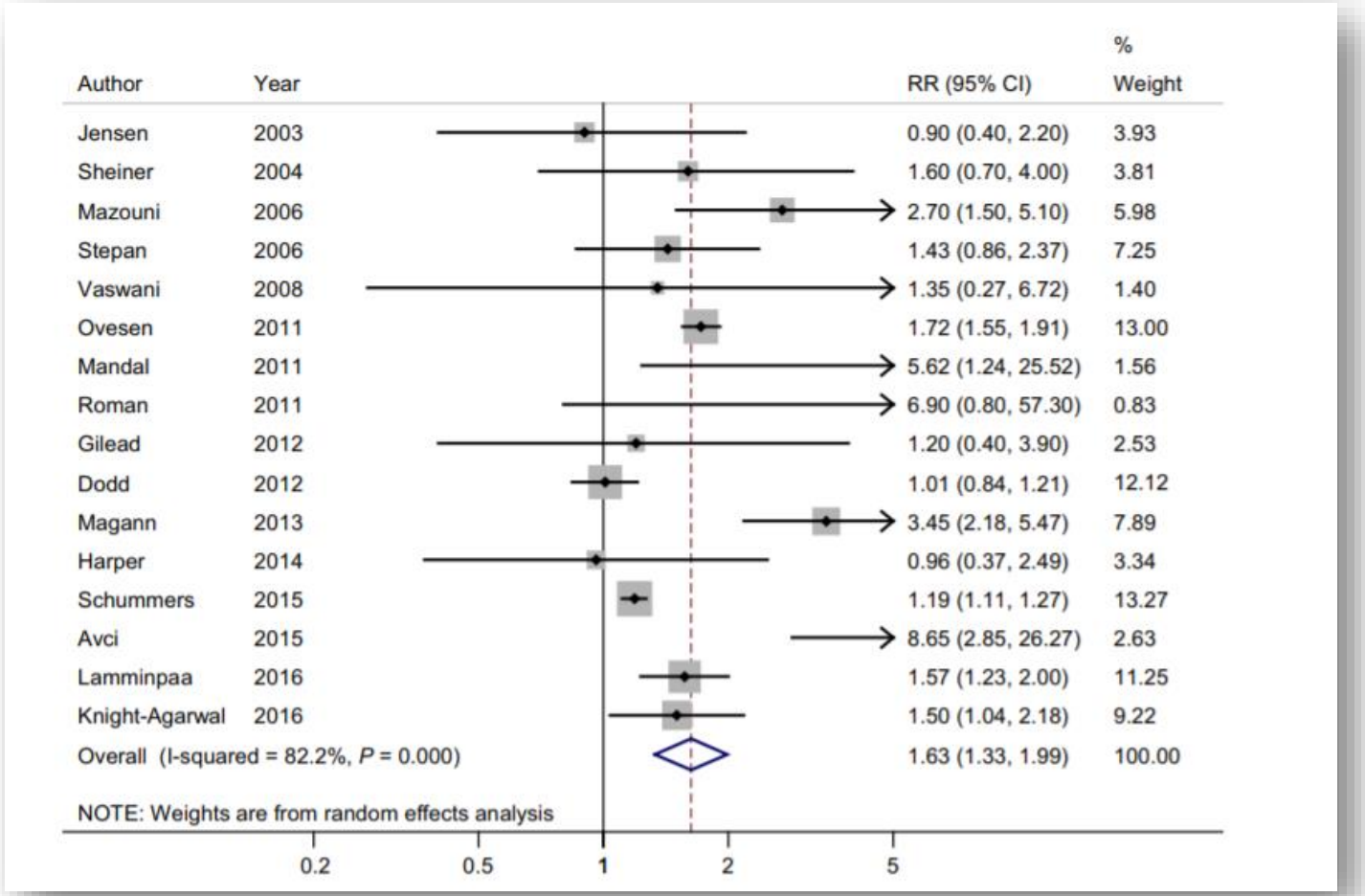
BJOG An International Journal of Obstetrics and Gynaecology

DOI: 10.1111/1471-0528.14841
www.bjog.org

Systematic review

Maternal prepregnancy obesity and the risk of shoulder dystocia: a meta-analysis

C Zhang, Y Wu, S Li, D Zhang



Archives of Gynecology and Obstetrics (2018) 298:1123–1129
https://doi.org/10.1007/s00404-018-4924-0

MATERNAL-FETAL MEDICINE

Birthweight thresholds for increased risk for maternal and neonatal morbidity following vaginal delivery: a retrospective study

Eran Ashwal[1,3] · Alexandra Berezowsky[1,3] · Sharon Orbach-Zinger[3,4] · Nir Melamed[5] · Amir Aviram[2,3] · Eran Hadar[1,3] · Yariv Yogev[2,3] · Liran Hiersch[2,3]

	aOR (95% CI)	
	4000–4399 g vs. 3500–3999 g	4400–5000 g vs. 3500–3999 g
Postpartum hemorrhage	1.45 (1.20–1.76)	1.32 (0.76–2.28)
NICU admission	1.22 (1.01–1.48)	2.90 (2.46–3.41)
Clavicle Fracture	2.13 (1.67–2.71)	3.26 (1.91–5.56)
Shoulder dystocia	6.11 (4.50–8.29)	19.60 (12.49–30.75)
Brachial plexus injury	4.39 (2.71–7.09)	13.90 (6.80–28.04)
Adverse neonatal outcome	1.66 (1.47–1.88)	2.72 (2.05–3.61)
Adverse maternal outcome	1.36 (1.14–1.63)	1.28 (0.77–2.15)

Impact of prenatal exercise on neonatal and childhood outcomes: a systematic review and meta-analysis

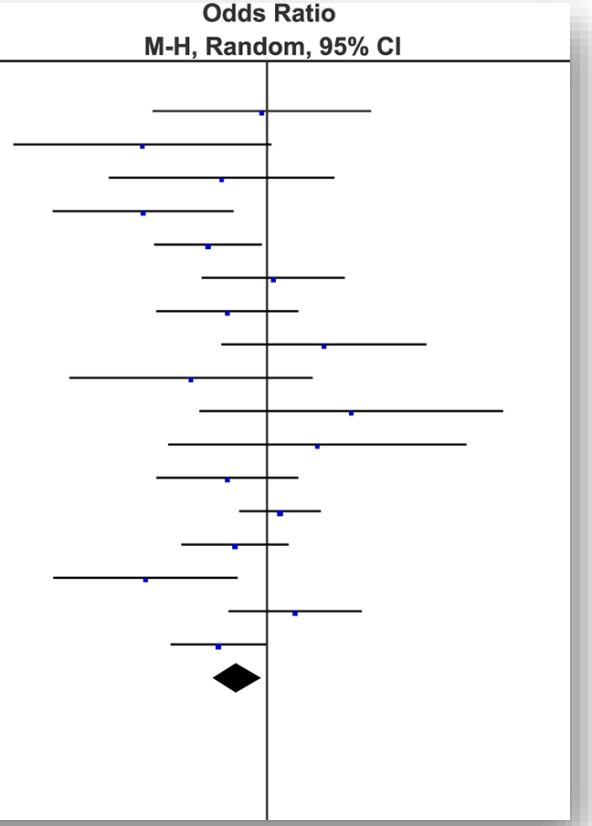
Margie H Davenport,[1] Victoria L Meah,[1] Stephanie-May Ruchat,[2] Gregory A Davies,[3] Rachel J Skow,[1] Nick Barrowman,[4] Kristi B Adamo,[5] Veronica J Poitras,[6] Casey E Gray,[7] Alejandra Jaramillo Garcia,[6] Frances Sobierajski,[1] Laurel Riske,[1] Marina James,[1] Amariah J Kathol,[1] Megan Nuspl,[8] Andree-Anne Marchand,[9] Taniya S Nagpal,[10] Linda G Slater,[11] Ashley Weeks,[12] Ruben Barakat,[13] Michelle F Mottola[10]

Davenport MH, *et al*. *Br J Sports Med* 2018;**52**:1386–1396. doi:10.1136/bjsports-2018-099836

Study or Subgroup	Experimental Events	Experimental Total	Control Events	Control Total	Weight	Odds Ratio M-H, Random, 95% CI
6.4.1 Exercise only						
Avery, 1997	3	15	3	14	0.9%	0.92 [0.15, 5.53]
Barakat, 2009	1	71	7	70	0.7%	0.13 [0.02, 1.07]
Barakat, 2011	2	40	3	30	0.9%	0.47 [0.07, 3.03]
Barakat, 2013	2	210	15	218	1.3%	0.13 [0.03, 0.58]
Barakat, 2016	7	382	18	383	3.3%	0.38 [0.16, 0.92]
Cordero, 2015	5	101	7	156	2.0%	1.11 [0.34, 3.59]
Haakstad, 2011a	5	52	9	53	2.1%	0.52 [0.16, 1.67]
Kasawara, 2013	5	55	2	53	1.1%	2.55 [0.47, 13.76]
Kong, 2014- OB	2	9	5	10	0.8%	0.29 [0.04, 2.11]
Kong, 2014- OW	3	9	1	9	0.5%	4.00 [0.33, 48.66]
Murtezani, 2014	2	30	1	33	0.5%	2.29 [0.20, 26.58]
Prabhu, 2015	5	52	9	53	2.1%	0.52 [0.16, 1.67]
Renault, 2014	37	125	17	67	5.0%	1.24 [0.63, 2.42]
Ruiz, 2013 - NW	8	335	14	352	3.3%	0.59 [0.24, 1.43]
Ruiz, 2013 - OW/OB	2	146	12	129	1.3%	0.14 [0.03, 0.62]
Seneviratne, 2016	10	37	7	37	2.3%	1.59 [0.53, 4.75]
Tomic, 2013	10	166	21	168	4.0%	0.45 [0.20, 0.98]
Subtotal (95% CI)		**1835**		**1835**	**31.9%**	**0.61 [0.41, 0.92]**
Total events	109		151			

Heterogeneity: Tau² = 0.26; Chi² = 26.98, df = 16 (P = 0.04); I² = 41%

Test for overall effect: Z = 2.36 (P = 0.02)



European Journal of Obstetrics & Gynecology and Reproductive Biology 227 (2018) 52–59

Contents lists available at ScienceDirect

European Journal of Obstetrics & Gynecology and Reproductive Biology

journal homepage: www.elsevier.com/locate/ejogrb

Full length article

Prevention of shoulder dystocia: A randomized controlled trial to evaluate an obstetric maneuver

Olivier Poujade[a,b,*], Elie Azria[b,c,d], Pierre-François Ceccaldi[a,b,d], Carine Davitian[a], Carine Khater[a], Paul Chatel[a,b,d], Emilie Pernin[a,b,d], Nizar Aflak[a], Martin Koskas[b,c,d], Agnès Bourgeois-Moine[b,c], Laurence Hamou-Plotkine[b,c], Morgane Valentin[b,c], Jean-Paul Renner[e], Carine Roy[f,g], Candice Estellat[f,g,h], Dominique Luton[a,b,c,d]

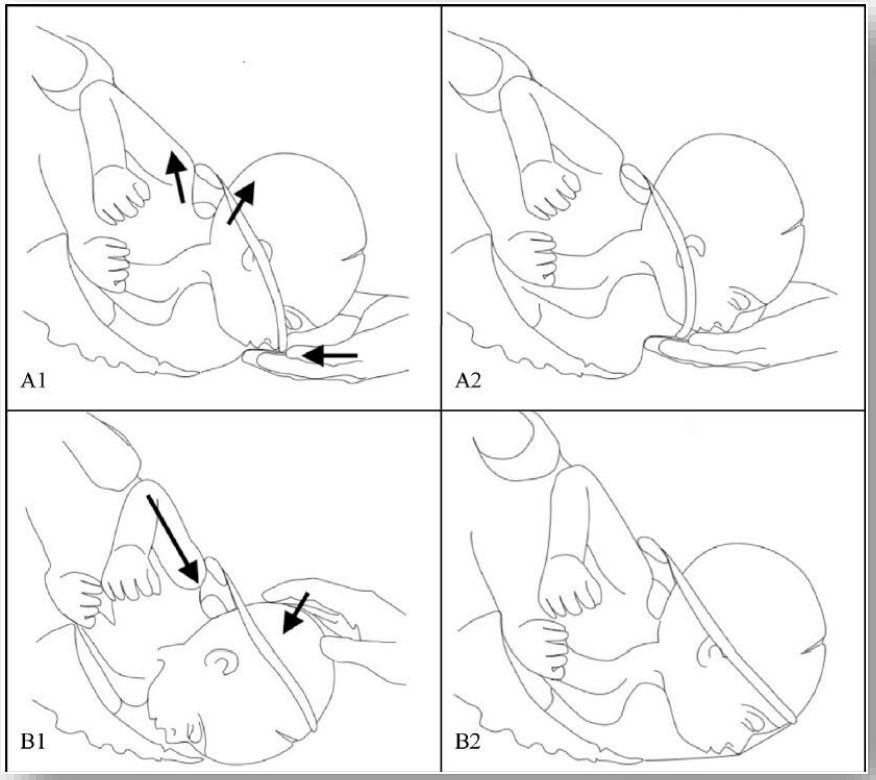


Table 2
Primary and secondary outcomes in both groups.

	P Group, Push back maneuver (N = 473)	S Group, Standard vaginal delivery (N = 472)	P value	Odds ratio (95% CI)
Variable				
Primary outcome:				
Shoulder dystocia — no. (%)	7 (1·5)	18 (3·8)	0·03	0·38 (0·16-0·92)
Success of MacRoberts maneuver — no. (%)	5 (1·1)	14 (3)		
Success of Woods screw maneuver — no. (%)	0	2 (0·4)		
Success of posterior arm extraction — no. (%)	2 (0·4)	2 (0·4)		
Secondary outcome (neonatal complication)[†]				
Any neonatal complication — no. (%)	6 (1·3)	9 (1·9)	0·43	
Generalized asphyxia — no. (%)	3 (0·6)	7 (1·5)	0·22	
Neonatal hematoma — no. (%)	1 (0·2)	0	1·00	
Brachial plexus injury — no. (%)	0	1 (0·2)	0·49	
Clavicular fracture — no. (%)	2 (0·4)	1 (0·2)	1·00	

[†] No neonatal convulsions, phrenic nerve palsy, humeral fracture or shoulder subluxation were diagnosed.

European Journal of Obstetrics & Gynecology and Reproductive Biology 203 (2016) 156–161

Contents lists available at ScienceDirect

European Journal of Obstetrics & Gynecology and Reproductive Biology

journal homepage: www.elsevier.com/locate/ejogrb

Review

Shoulder dystocia: guidelines for clinical practice from the French College of Gynecologists and Obstetricians (CNGOF)

Loïc Sentilhes [a,*], Marie-Victoire Sénat [b], Anne-Isabelle Boulogne [c,d], Catherine Deneux-Tharaux [e], Florent Fuchs [b], Guillaume Legendre [f], Camille Le Ray [g], Emmanuel Lopez [h], Thomas Schmitz [i], Véronique Lejeune-Saada [j,k]

Ask for help : an obstetrician if not present (and if possible, a third person)

Place the woman in the gynecological position

↓

Do not panic. Keep calm and carry on
Avoid excessive traction on the fetal head
Do not make hasty rotation movements
Avoid fundal pressure

↓

Perform the McRoberts maneuver, with or without supra-pubic pressure

Traction in the umbilical-coccygeal axis

If this fails ↓

Call an anesthesiologist and pediatrician to the delivery room
If the posterior shoulder is engaged → Reverse Wood corkscrew maneuver
If the posterior shoulder is not engaged → Jacquemier maneuver
To adapt according to the operator's experience

If this fails ↓

Perform an episiotomy if none has been performed yet

Repeat these maneuvers in the same order

If required, several times, changing the operator, and under general anesthesia

If this fails ↓

Perform the third-line maneuvers :

Zavanelli, symphyseotomy, cleidotomy, laparotomy with hysterotomy

In all cases, have the child examined by a pediatricians, and later explain clearly the circumstances and what happened to the woman and her partner

Dahlberg et al. BMC Pregnancy and Childbirth (2018) 18:361
https://doi.org/10.1186/s12884-018-2001-0

BMC Pregnancy and Childbirth

RESEARCH ARTICLE Open Access

Ten years of simulation-based shoulder dystocia training- impact on obstetric outcome, clinical management, staff confidence, and the pedagogical practice - a time series study

Johanna Dahlberg[1], Marie Nelson[2], Madeleine Abrandt Dahlgren[3] and Marie Blomberg[1,2*]

Table 4 Infant outcomes in deliveries complicated with shoulder dystocia

	PrePROBE (2004–2007) $n = 11$	Early postPROBE (2008–2011) $n = 20$	Late postPROBE (2012–2015) $n = 29$	*p*-value
Umbilical artery pH, mean	7.17	7.20	7.20	
Apgar score < 4 at 1 min, n (%)	2 (18)	7 (35)	9 (31)	0.56
Apgar score < 7 at 5 min, n (%)	1 (9)	6 (30)	8 (27)	0.33
No brachial plexus injury or fracture, n (%)	2 (18)	10 (50)	20 (69)	0.005
Brachial plexus injury at birth, n (%)	8 (73)	8 (40)	5 (17)	0.001
Fractured clavicle, n (%)	1 (9)	2 (10)	2 (7)	0.76
Fractured humerus, n (%)	1 (9)	3 (15)	2 (7)	0.65
Early neonatal death	0	0	1	
Brachial plexus injury at 6 months follow up, n (%)	1 (9)	1 (5)	2 (7)	0.89

V období po tréningu stúpol počet dobre zdokumentovaných prípadov dystokie (p=0,003)

- V rokoch 2006-2015 tvorila OBPI 14% všetkých súdov s pôrodníkmi
- 27 prípadov stálo 15 miliónov dolárov na odškodnení
- USA poisťovne organizujú a vyhodnocujú tréningy personálu pre management dystokie ramienok

Seminars in Perinatology 41 (2017) 187–194

Available online at www.sciencedirect.com

Seminars in Perinatology

www.seminperinat.com

Implementation of a multicenter shoulder dystocia injury prevention program

Linda Szymanski, MD, PhD[a], Christine Arnold, MS, RN[b], Arthur J. Vaught, MD[a], Susan LaMantia, RN, MS[c], Theresa Harris, RN, JD[c,d], and Andrew J. Satin, MD[a,*]

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HEALTH CARE IMPROVEMENT AND EVALUATION

Strategies to Improve Management of Shoulder Dystocia Under the AHRQ Safety Program for Perinatal Care

Jill McArdle, Asta Sorensen, Christina I. Fowler, Samantha Sommerness, Katrina Burson, and Leila Kahwati

Agency for Healthcare Research and Quality
Advancing Excellence in Health Care

Results: Use of shoulder dystocia safety strategies improved on the units. Differences between baseline and followup (10 months) were as follows: in situ simulation (50% vs. 89%), teamwork and communication (67% vs. 94%), standardization (67% to 94%), learning from defects (67% vs. 89%), and independent checks (56% vs. 78%). Interview data showed reasons to address management of shoulder dystocia, various approaches to implement safety practices, and facilitators and barriers to implementation.

Births complicated by shoulder dystocia require rapid, well-coordinated intervention by clinical teams to prevent or reduce the severity of adverse outcomes.

BRIEF CONTRIBUTION

Shoulder Dyst
Medicine Resi
Novel Low-fide
Pilot Study

Danielle Hart, MD, MACM,
Adeleki Oni, MD, and James

Conclusion:

Within our limited s difference in the
occurrence of dang ery following HFS and
LFS training. Our n r, assembled for less
than US$10 each, r ed providers on the
steps of this proced y, as does whether
HFS models with fc ful to train providers to
minimize dangerou excessive force

Randomised controlled study to assess skill retention at 6 vs 12 months after simulation training in shoulder dystocia

Menelik M H Lee, Chao Ngan Chan, Betty Y T Lau, Teresa W L Ma

Lee MMH, et al. BMJ Stel 2017;**3**:142–148. doi:10.1136/bmjstel-2017-000195

Table 4 Participants' scores and time to complete the scenario before (pre-training), immediately after (at-training) and retested at 6 months (for group 1) or 12 months (groups 2) after (post-training) simulation training on shoulder dystocia (doctors only)

Data comparison within individual group					
		Mean time or score (±SD)	p Value (paired t-test)	Mean time or score (±SD)	p Value (paired t-test)
Doctors only		Group 1 (retest at 6 months)		Group 2 (retest at 12 months)	
Overall score (out of 15)	Pre-training versus at-training	10.00 (±3.46) vs 14.86 (±0.38)	0.011*	11.17 (±2.14) vs 15.00 (±0)	0.007*
	At-training versus post-training	14.86 (±0.38) vs 12.71 (±1.11)	0.007*	15.00 (±0) vs 14.17 (±0.75)	0.042*
	Pre-training versus post-training	10.00 (±3.46) vs 12.71 (±1.11)	0.159	11.17 (±2.14) vs 14.17 (±0.75)	0.009*
Time (s)	Pre-training versus at-training	219.00 (±74.76) vs 116.86 (±32.55)	0.028*	241.17 (±87.69) vs 166.83 (±53.80)	0.160
	At-training versus post-training	116.86 (±32.55) vs 185.20 (±11.96)	0.011*	166.83 (±53.80) vs 160.50 (±30.09)	0.717
	Pre-training versus post-training	219.00 (±74.76) vs 185.20 (±11.96)	0.485	241.17 (±87.69) vs 160.50 (±30.09)	0.101
Comparison between group 1 and group 2					

Conclusions

Our study demonstrated that simulation training results in short-term and long-term improvement in shoulder dystocia management; however, knowledge degrades over time. Ongoing training is suggested at a minimum of 12 months' interval for all members of the obstetrics team including midwives and doctors.

Int Urogynecol J (2018) 29:377–381
DOI 10.1007/s00192-017-3351-2

ORIGINAL ARTICLE

Anal sphincter injury in vaginal deliveries complicated by shoulder dystocia

Mark P. Hehir[1,2] · Zachary Rubeo[1] · Karen Flood[1] · Anne H. Mardy[1] · Colm O'Herlihy[2] · Peter C. Boylan[2] · Mary E. D'Alton[1]

Table 3 Multivariate regression model demonstrating the comparison of mothers with anal sphincter injury after shoulder dystocia (*SD*) with those with an intact sphincter after shoulder dystocia

	SD with anal sphincter injury ($N = 60$)	SD with intact anal sphincter ($N = 625$)	B	Adjusted odds ratio	95% CI	Adjusted *p* value
Gestation (weeks)	40.1 ± 1.1	40.2 ± 1.2	0.06	1.06	0.82–1.38	NS
Nulliparity	75% (45/60)	45% (279/625)	1.35	3.88	1.91–7.86	<0.0001
Birthweight (g)	4,040 ± 407	4,027 ± 502	0.00	1.0	0.99–1.0	NS
Operative vaginal delivery	50% (30/60)	36% (226/625)	1.26	3.53	1.71–7.27	0.001
Episiotomy	47% (28/60)	48% (302/625)	−0.82	0.44	0.21–0.91	0.03
Internal maneuvers	50% (30/60)	32% (198/625)	0.65	1.90	1.08–3.36	0.03

p value <0.05 was considered statistically significant. *B* is the coefficient on the independent variable
CI confidence interval

Prevalencia poranenia análneho zvierača 9%

THE JOURNAL OF MATERNAL-FETAL & NEONATAL MEDICINE, 2018
https://doi.org/10.1080/14767058.2018.1450382

Taylor & Francis
Taylor & Francis Group

REVIEW ARTICLE

Risk of recurrent shoulder dystocia: are we any closer to prediction?

Shadha Al-Hawash[a], Clare L. Whitehead[a,b] and Dan Farine[a]

[a]Department of Obstetrics and Gynecology, University of Toronto, Mount Sinai Hospital, Toronto, Canada; [b]Department of Obstetrics and Gynaecology, University of Adelaide, Adelaide, Australia

Table 2. Rate of recurrent shoulder dystocia in women attempting a subsequent vaginal birth.

Author	Total vaginal cephalic deliveries (*n*)	Total patients with shoulder dystocia (*n*)	Rate of primary shoulder dystocia (%)	Total subsequent pregnancies (*n*, % of index)	Total vaginal births (*n*, % of subsequent births)	Recurrent shoulder dystocia (*n*)	Rate of recurrent shoulder dystocia (%)
Smith [21]	34,800	203	0.6	51 (25.1)	42 (81.6)	5	11.9
Lewis [15]	37,465	747	2	Not reported	123	17	13.8
Baskett [12]	40,518	254	0.6	Not reported	93	1	1.25
Bahar [11]	13,756	69	1.16	Not reported	Not reported	9	13
Olugbile [19]	24,100	154	0.53	20 (12.9)	18 (90)	2	11.1
Ginsberg [13]	39,681	602	1.5	73 (12.1)	66 (91.4)	11	16.7
Mehta [17]	25, 995	205	0.8	47 (22.9)	42 (89.4)	4	9.5
Usta [22]	22,207	193	0.9	48 (24.8)	44 (91.7)	11	25
Moore [18]	1,126,593	26,208	2.3	8991 (34.3)	7819 (87)	1,060	13.5
Overland [20]	554,773	2,745	0.5	2745 (100 – study design)	2344 (85.4)	170	7.3
Lima [16]	23,158	66	0.3	Not reported	Not reported	13	20
Ouzounian [25]	267,228	1904	0.7	Not reported	270	10	3.7
Kleitman [14]	201,422	425	0.2	307 (72%)	236 (76.9)	11	3.6

65% žien s dystokiou ramienok už nemá viac detí, z tých čo rodia, rodí cisárskym rezom 13%, z tých čo rodia vaginálne 13,5% má znovu dystokiu ramienok, z nich 10,7% má závažnú. Rizikovým faktorom vzniku je znovu makrozómia plodu.

Závery

Zaznamenali sme určitý trend poklesu záujmu štúdií o problematiku DR

Rizikovým faktorom vzniku ostáva obezita, gestačný DM a potermínová gravidita

Epidurálna analgézia?

DR zvyšuje riziko poranenia zvierača matky s celkovou prevalenciou 9%

Rizikové sú primipary a ženy po extrakčných operáciách

Tréning a checklisty znižujú výskyt OBPI – všimli si to aj komerčné poisťovne

Tréningy je vhodné opakovať každých 12 mesiacov

Primeraná telesná aktivita v tehotnosti znižuje riziko makrozómie plodu

Rekurentná závažná DR sa vyskytuje u 11% žien, ktoré rodia vaginálne po DR

... ďakujem za pozornosť