

# 50-years of evidence on the effectiveness and complications following contralateral exploration: Are we there yet?

Sanne C. Maat<sup>1</sup>, Kelly M.A. Dreuning<sup>1</sup>, R. van Baren<sup>2</sup>, Joep. P.M. Derikx<sup>1</sup>, L.W. Ernest van Heurn<sup>1</sup> 1. Department of Pediatric Surgery, Emma Children's Hospital, Amsterdam UMC, University of Amsterdam, Amsterdam, The Netherlands. 2. Department of Paediatric Surgery, University Medical Centre Groningen, University of Groningen, Groningen, The Netherlands

#### Aim

• To assess the effectiveness and complications following contralateral exploration during unilateral hernia repair

### Methods

- Meta-analysis using MEDLINE, Embase and Cochrane Library databases
- Including patients with unilateral inguinal hernia who underwent contralateral exploration
- Random-effects model

#### Results

- 23 studies (n=6055, age range 1 week 16 years)
- Patent contralateral processus vaginalis in 63.5% (n=3635, 95CI 56.9-69.9, I<sup>2</sup>=95.8%)

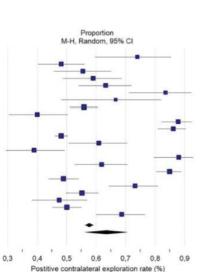
#### Complications

Testicular atrophy/ascent	0.02%/0.6% in n=1324/1206
Hydrocele/hematoma	0.5% in n=1324
Wound infection	0.6 in n=1444
Recurrence	0.1% in n=741
Metachronous contralateral h	ernia 8.4% in n=3008

Positive contralateral exploration rate (intervention group).

	Total	Positive CE (%)	95% C
Rothenberg 1955	50	74,000	59.655 to 85.370
Clausen 1958	164	48,171	40.314 to 56.095
McLaughlin 1960	108	55,555	45,681 to 65,118
Gilbert 1958	100	59,000	48,714 to 68,738
Laufer 1961	120	63,333	54,050 to 71,942
Martin 1961	55	83,636	71,197 to 92,234
Kling 1963	33	66,667	48,173 to 82,039
Holcomb 1965	433	55,889	51,070 to 60,621
Solomon 1967	100	40.000	30.329 to 50.279
Gunnlaugsson 1967	174	87,931	82,145 to 92,377
Simpson 1968	218	86,239	80,941 to 90,519
Rowe 1969	1965	48,142	45,912 to 50,379
Kalani 1972	100	61,000	50,731 to 70,599
Wright 1982	100	39,000	29,401 to 49,269
Rescorla 1984	92	88,043	79,613 to 93,878
Tepas 1985	121	61,983	52,713 to 70,652
Moss 1991	300	85,000	80,448 to 88,844
Surana 1992	390	48.974	43.909 to 54.055
Lugo Vincente 1995	116	73,276	64,261 to 81,085
Zona (II) 1996	331	55,287	49,753 to 60,726
Zampieri 2008	118	47,458	38,191 to 56,855
Maillet 2014	407	50,123	45,157 to 55,087
Disma 2018	131	68,702	60,021 to 76,516
Total (fixed effects)	5726	57,680	56,390 to 58,961
Total (random effects)	5726	63,490	56.878 to 69.856

leterogeneity: Q= 518,6745; df =2 (p < 0.0001); I<sup>2</sup>= 95.76



Contralateral patent processus vaginalis rate of 63.5%

# Complication rate of 1.5%.

## Currently, no recommendations for clinical practice can be made regarding contralateral exploration.



### Discussion

- CPPV 63.5% versus complication rate 1.5%
- No study compared complications to subsequent MCIH development (8.4%)
- Currently insufficient evidence to draw conclusions

→ Awaiting results of HERNIIA-trial (RCT: unilateral hernia repair with or without contralateral exploration in children 0-6 months)

