

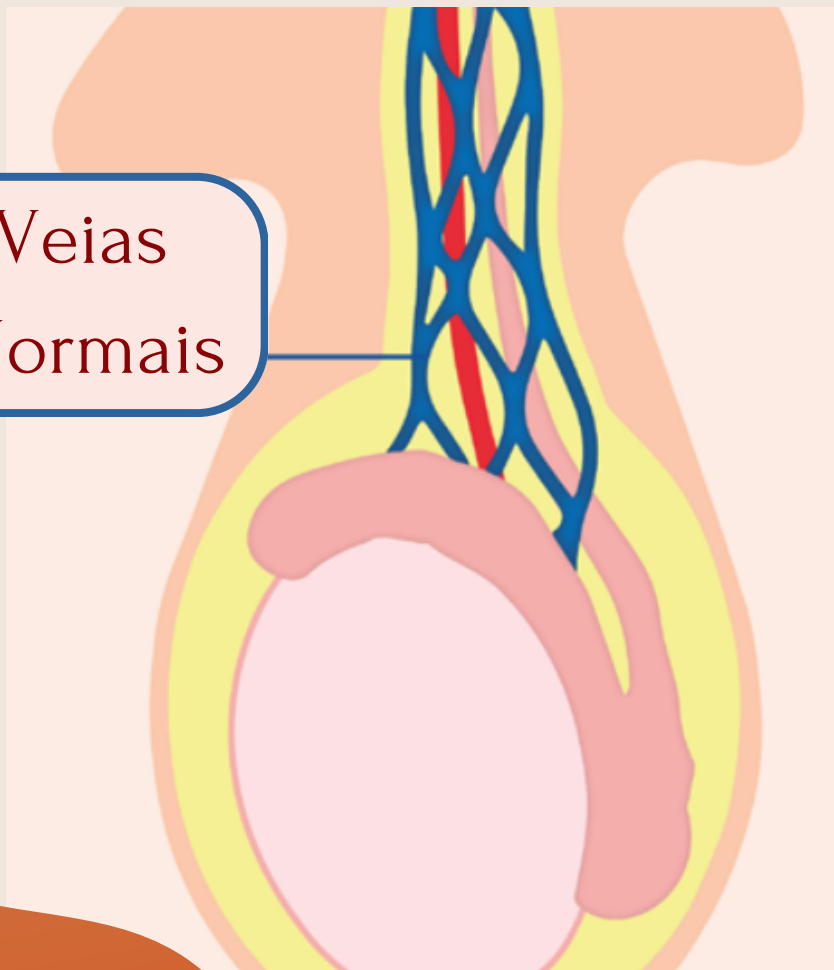
Varicocelelectomia e resultados da ICSI

TIAGO MAGALHÃES
Fellow Andrologia 2024

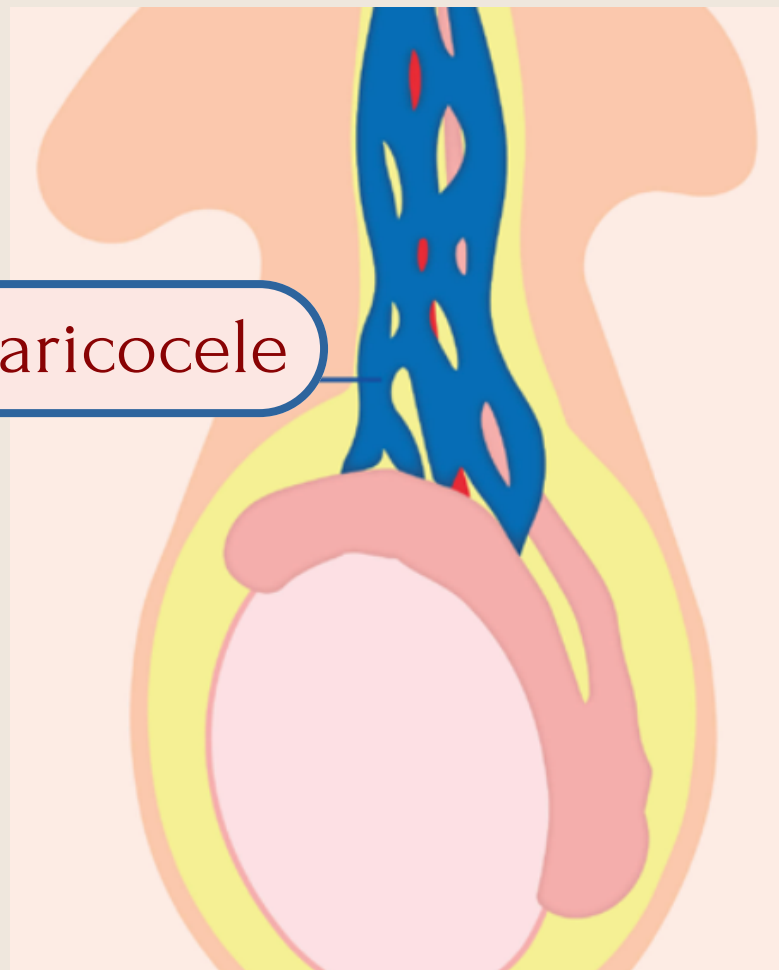
Varicocele

VÁLVULAS DEFICIENTES - REFLUXO VENOSO - DILATAÇÃO

Veias
Normais

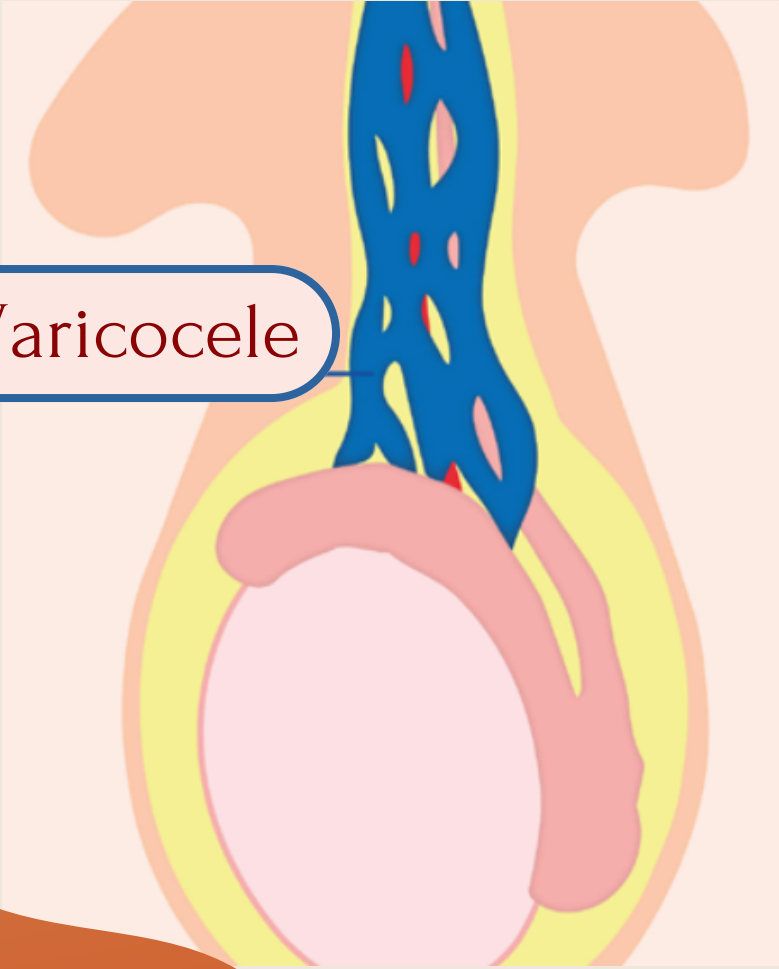


Varicocele



Varicocele

VÁLVULAS DEFICIENTES - REFLUXO VENOSO - DILATAÇÃO



Varicocele

HOMENS

15-20%

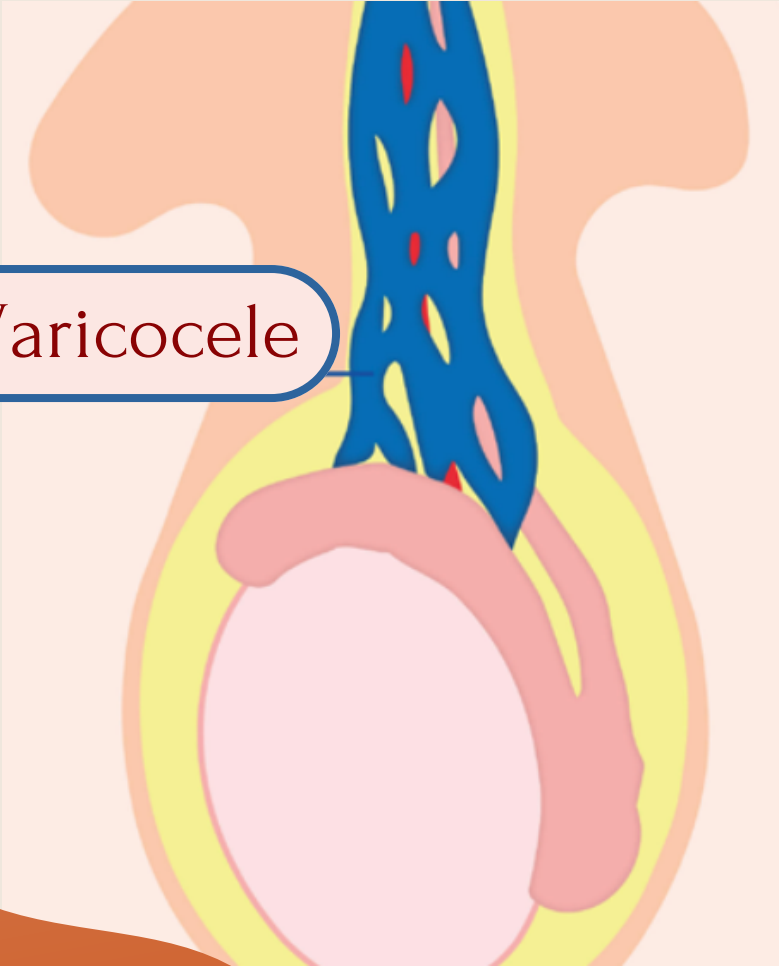
INFERTILIDADE

35-40%

INFERTILIDADE SECUNDÁRIA

80%

Varicocele



Varicocele

FERTILIDADE

Impacto na
Espermatogênese

HIPERTERMIA

ESTRESSE OXIDATIVO

REFLUXO DE METABÓLITOS ADRENAIS

QUEBRA DA BARREIRA HT

AC ANTI ESPERMATOZOIDES

Oligospermia

doi: 10.1111/andr.13281

doi: 10.1590/S1677-5538.IBJU.2023.04.06

Varicocele

Grau I

DOPPLER

Grau II

PALPÁVEL

Grau III

VISÍVEL

CLÍNICA

VARICOCELE
CLÍNICA



ALTERAÇÃO
SEMINAL

OLIGOSPERMIA

↑ IFDNA*



VARICOCELECTOMIA
MICROCIRURGICA
SUBINGUINAL

MELHORA NA TAXA
DE GRAVIDEZ
NATURAL**

Varicocelectomia e resultados em RA



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INVITED REVIEW

Male Fertility

Outcome of assisted reproductive technology in men with treated and untreated varicocele: systematic review and meta-analysis

Sandro C Esteves¹, Matheus Roque², Ashok Agarwal³



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	Included	Excluded
Population	Couples undergoing IVF/ICSI and the male partner diagnosed with clinical varicocele	Azoospermic/ cryptozoospermic patients
Intervention	Varicocelectomy prior to IVF/ICSI	Varicocele embolization
Comparison	IVF/ICSI without previous varicocelectomy	
Outcomes	Live birth rate Clinical pregnancy rate Implantation rate Miscarriage rate Fertilization rate	
Study type	Any type	

IVF: *in vitro* fertilization; ICSI: intracytoplasmic sperm injection



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4 estudos

Study	Design	ICSI cycles with prior varicocelectomy (n)	ICSI cycles without prior varicocelectomy (n)	Outcomes included in the review
Esteves <i>et al.</i> ²⁴	Retrospective	80	162	Live birth, clinical pregnancy, miscarriage, and fertilization rates
Pasqualotto <i>et al.</i> ²⁵	Retrospective	169	79	Clinical pregnancy, implantation, miscarriage, and fertilization rates
Shiraishi <i>et al.</i> ²	Retrospective	21	53	Live birth, clinical pregnancy, and fertilization rates
Gokce <i>et al.</i> ²⁶	Retrospective	168	138	Live birth, clinical pregnancy, and miscarriage rates

ICSI: intracytoplasmic sperm injection

ICSI

870 ciclos

438 varicocelectomia +

432 varicocelectomia -



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Tempo entre varicocelectomia e ICSI

Esteves *et al.*²⁴

6,2m (4 - 13m)

Pasqualotto *et al.*²⁵

Shiraishi *et al.*²

Gokce *et al.*²⁶

7,2m (4,4 - 10m)



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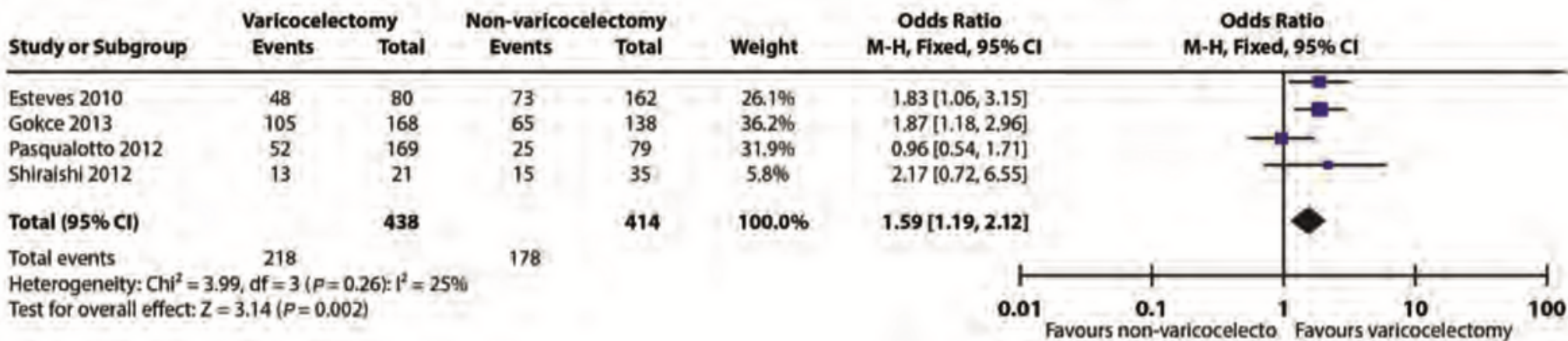
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Gravidez Clínica





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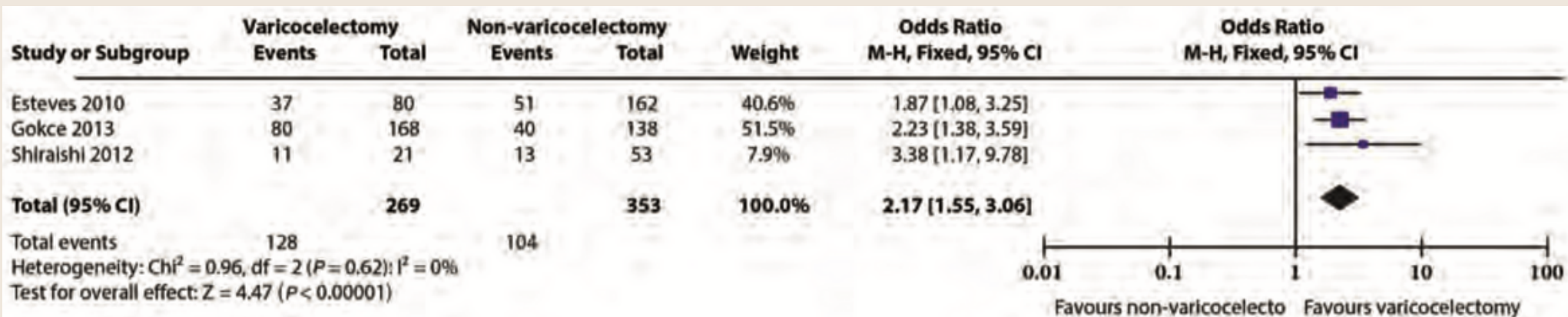
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Nascidos Vivos





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Study	Outcome	ICSI after varicocelectomy	ICSI and untreated varicocele	P
Esteves <i>et al.</i> ²⁴	Live birth rate (%)	46.3	31.5	0.03
	Clinical pregnancy rate (%)	60.0	45.1	0.04
	Miscarriage rate (%) [§]	22.9	30.1	0.46
Pasqualotto <i>et al.</i> ²⁵	Live birth rate (%)	NR	NR	NR
	Clinical pregnancy rate (%)	30.9	31.1	0.98
	Miscarriage rate (%)	23.9	21.7	0.84
Shiraishi <i>et al.</i> ²	Live birth rate (%)	52.3	24.5	0.02
	Clinical pregnancy rate (%)	61.9	28.3	0.02
	Miscarriage rate (%)	-	-	-
Gokce <i>et al.</i> ²⁶	Live birth rate (%)	47.6	29.0	0.0002
	Clinical pregnancy rate (%)	62.5	47.1	0.001
	Miscarriage rate (%)	14.9	18.1	0.057

NÃO FOI FEITA
METANÁLISE
PARA OS
DESFECHOS
SECUNDÁRIOS



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Qualidade dos estudos

<i>Study</i>	<i>Sequence generation</i>	<i>Allocation concealed</i>	<i>Blinding</i>	<i>Incomplete outcome data</i>
Esteves <i>et al.</i> ²⁴	No	Yes	No	No
Pasqualotto <i>et al.</i> ²⁵	No	Yes	No	No
Shiraishi <i>et al.</i> ²	No	No	No	No
Gokce <i>et al.</i> ²⁶	No	Yes	No	No

Alto risco
de viés

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