

Supplementary Data

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Search Strategy:

PubMed Search Strategy: (((((((("Prostheses and Implants"[Mesh] OR "Vascular Closure Devices"[Mesh]) OR (percutaneous[All Fields] AND ("equipment and supplies"[MeSH Terms] OR ("equipment"[All Fields] AND "supplies"[All Fields]) OR "equipment and supplies"[All Fields] OR "device"[All Fields]))) OR (percutaneous[All Fields] AND closure[All Fields])) OR "Cardiac Catheterization"[Mesh]) OR (starflex[All Fields] AND septal[All Fields] AND closure[All Fields] AND system[All Fields])) OR "Septal Occluder Device"[Mesh]) OR starflex[All Fields]) OR amplatzer[All Fields]) AND (((("Foramen Ovale, Patent"[Mesh] OR "Foramen Ovale"[Mesh]) OR ("foramen ovale, patent"[MeSH Terms] OR ("foramen"[All Fields] AND "ovale"[All Fields] AND "patent"[All Fields]) OR "patent foramen ovale"[All Fields] OR ("patent"[All Fields] AND "foramen"[All Fields] AND "ovale"[All Fields]))) OR ("foramen ovale"[MeSH Terms] OR ("foramen"[All Fields] AND "ovale"[All Fields]) OR "foramen ovale"[All Fields]))) AND Randomized Controlled Trial[ptyp]

Database: Embase <1988 to 2017 Week 48>

Search Strategy:

1 exp patent foramen ovale/ (6038)

- 2 patent foramen ovale.mp. (8428)
- 3 heart foramen ovale/ (1355)
- 4 foramen ovale.mp. (10222)
- 5 (prostheses and implants).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word] (8351)
- 6 exp devices/ (2686767)
- 7 percutaneous device.mp. (440)
- 8 percutaneous closure.mp. (2854)
- 9 exp heart catheterization/ (47052)
- 10 starflex septal closure system.mp. (11)
- 11 exp septal occluder/ (2746)
- 12 starflex.mp. (368)
- 13 amplatzer.mp. (6225)
- 14 1 or 2 or 3 or 4 (10222)
- 15 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 (2720119)
- 16 14 and 15 (3967)
- 17 limit 16 to randomized controlled trial (41)

Database: EBM Reviews - Cochrane Database of Systematic Reviews <2005 to November 22, 2017> Search Strategy:

-
- 1 [exp patent foramen ovale/] (0)
 - 2 patent foramen ovale.mp. (7)
 - 3 [heart foramen ovale/] (0)
 - 4 foramen ovale.mp. (10)
 - 5 (prostheses and implants).mp. [mp=title, abstract, full text, keywords, caption text] (78)
 - 6 [exp devices/] (0)
 - 7 percutaneous device.mp. (3)
 - 8 percutaneous closure.mp. (2)
 - 9 [exp heart catheterization/] (0)
 - 10 starflex septal closure system.mp. (1)
 - 11 [exp septal occluder/] (0)
 - 12 starflex.mp. (1)
 - 13 amplatzer.mp. (3)
 - 14 1 or 2 or 3 or 4 (10)
 - 15 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 (83)
 - 16 14 and 15 (1)
 - 17 randomized controlled trial.mp. [mp=title, short title, abstract, full text, keywords, caption text] (2927)
 - 18 16 and 17 (1)

Web of Science Search Strategy: ((TOPIC: ("foramen ovale" OR "patent foramen ovale") AND TOPIC: (((device OR closure) OR "septal occluder") OR starplex) OR amplatzer)) AND TOPIC: ((rct OR "randomized controlled trial") OR "randomized control trial"))

DATABASE	RESULTS	DUPLICATES	REMAINING
PubMed	25	14	11
Embase	41	3	38
Web of Science	24	3	21
Cochrane Database of Systematic Reviews	1	0	1
TOTAL	91	20	71

Risk of Bias Assessment:

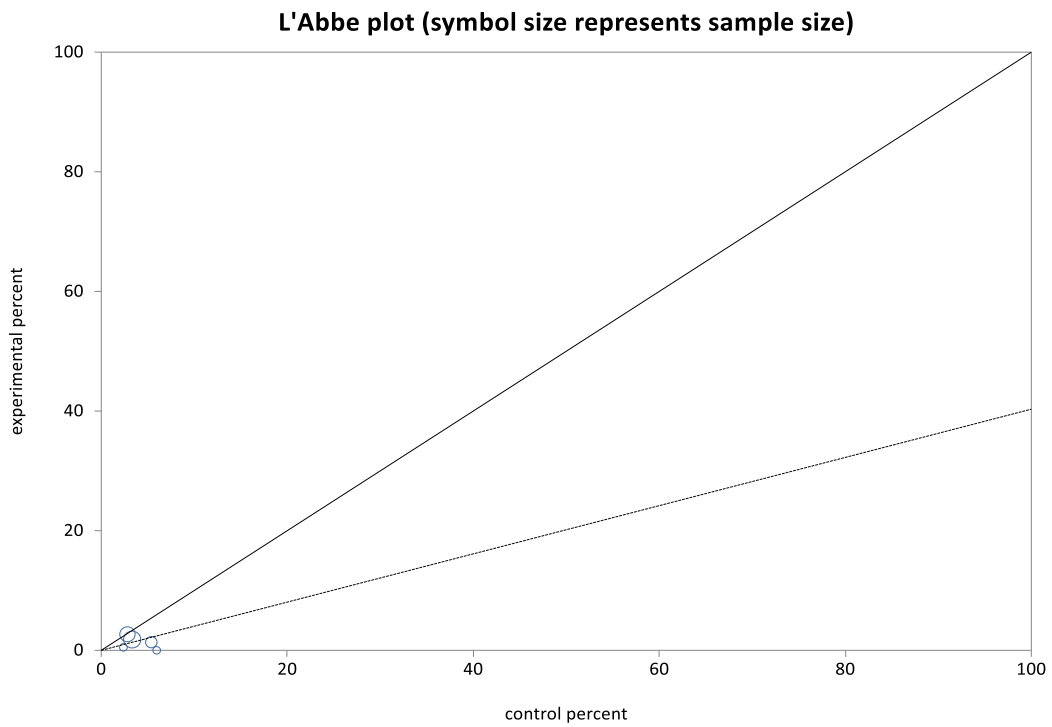
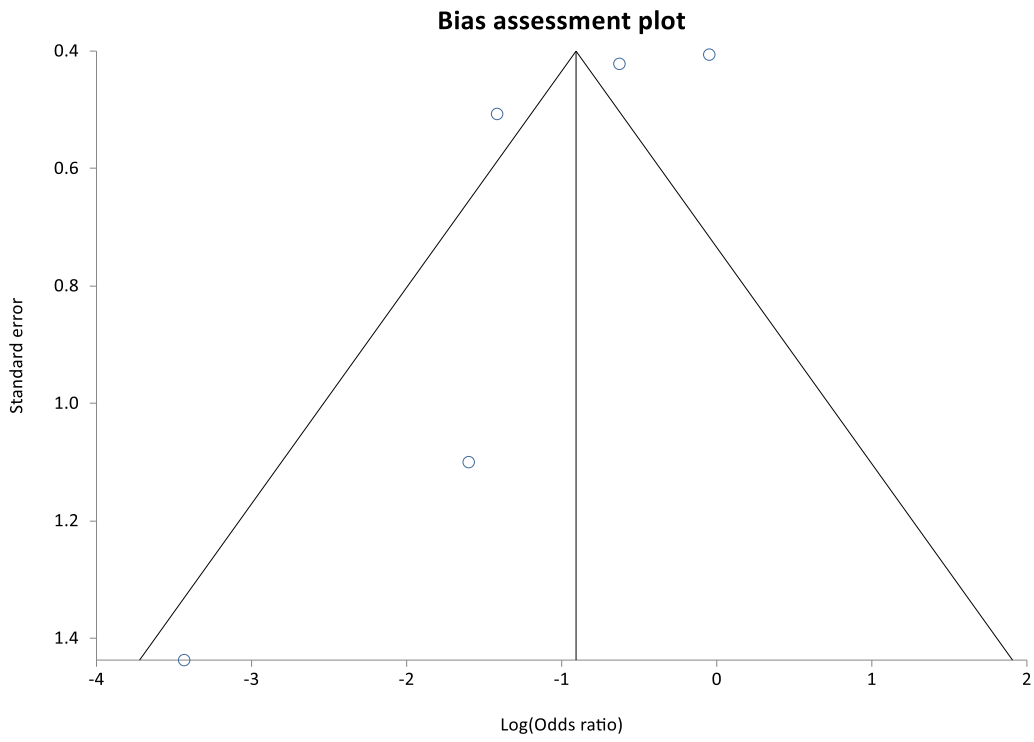
1)Stroke:

Bias indicators

Begg-Mazumdar: Kendall's tau = -0.8 P = 0.0167 (low power)

Egger: bias = -2.603378 (95% CI = -6.356463 to 1.149707) P = 0.1144

Harbord-Egger: bias = -3.846727 (92.5% CI = -11.992195 to 4.298741) P = 0.2949



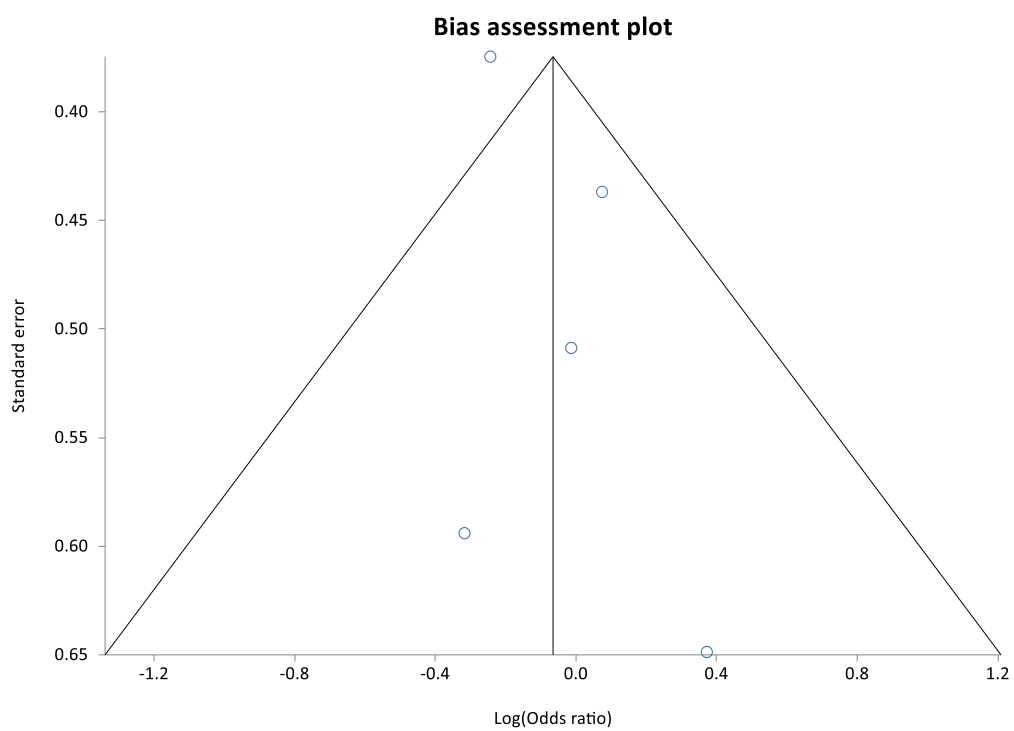
2)TIA:

Bias indicators

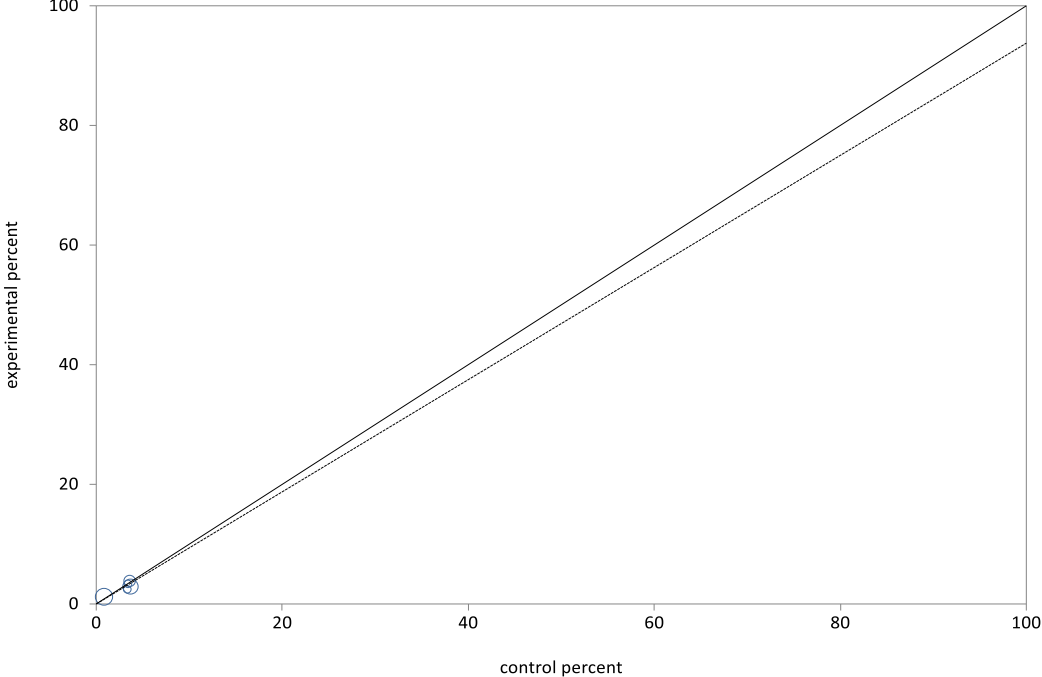
Begg-Mazumdar: Kendall's tau = 0.4 P = 0.4833 (low power)

Egger: bias = 1.033054 (95% CI = -2.598693 to 4.664801) P = 0.4321

Harbord-Egger: bias = 1.039475 (92.5% CI = -2.075886 to 4.154835) P = 0.437



L'Abbe plot (symbol size represents sample size)



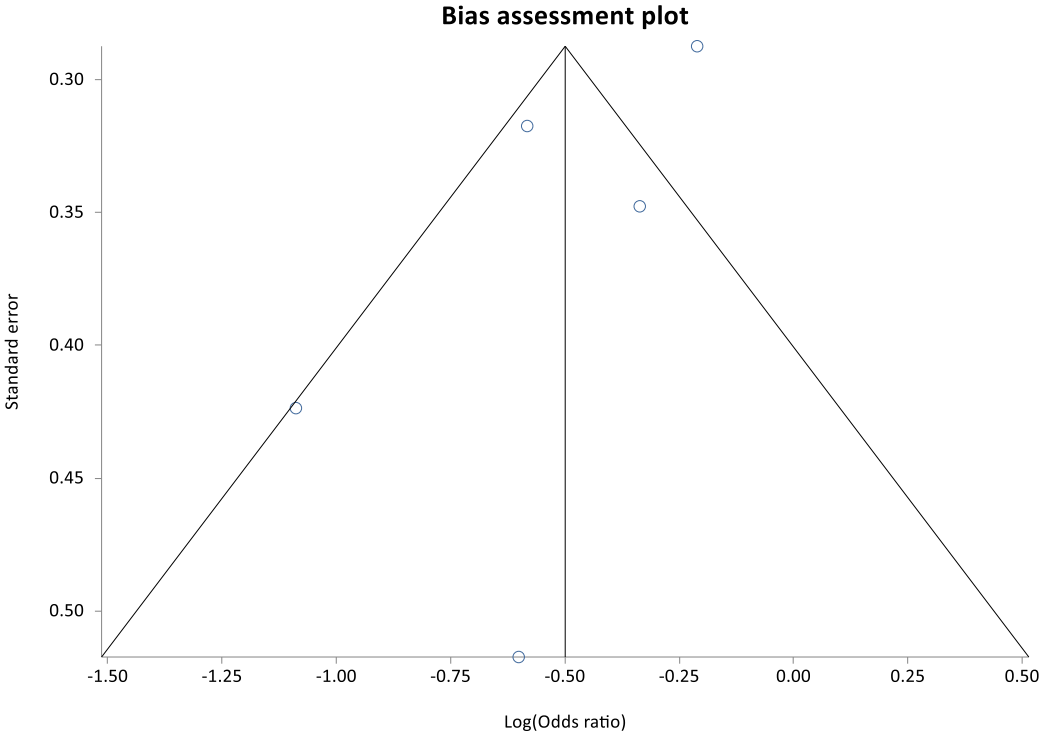
3) Composite of TIA,Stroke & peripheral embolism

Bias indicators

Begg-Mazumdar: Kendall's tau = -0.4 P = 0.2333 (low power)

Egger: bias = -2.592767 (95% CI = -8.467407 to 3.281873) P = 0.2548

Harbord-Egger: bias = -2.551823 (92.5% CI = -8.758464 to 3.654817) P = 0.3509



L'Abbe plot (symbol size represents sample size)

