**Neurodevelopment outcomes in the first five years of the life of children with Transposition of the Great Arteries surgically corrected in the neonatal period: systematic review and meta-analysis**

**Supplementary File**

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**Supplementary Table 1 Medline via OVID**

|  |  |  |
| --- | --- | --- |
| **Number** | **Query** | **Search results** |
| #1 | exp Transposition of Great Vessels/ | 8081 |
| #2 | (Complete and transpos\* and "great arter\*").mp. | 943 |
| #3 | (complete adj3 (malposition or transposition) adj5 (arter\* or vessel\*)).mp. | 688 |
| #4 | ((D or dextro) adj1 transpos\* adj5 arter\*).mp. | 805 |
| #5 | ("TGA" or "TOGA" or "dextro?TGA" or "d?TGA").mp. | 16406 |
| #6 | (arter\* adj2 switch adj2 operation\*).mp. | 1650 |
| #7 | (arter\* adj2 switch adj2 procedure\*).mp. | 231 |
| #8 | (Jatene adj2 procedure).mp. | 41 |
| #9 | (transposition adj2 "great arter\*").mp. | 898 |
| #10 | (transposition adj2 "great vessel\*").mp. | 7495 |
| #11 | exp Child Development/ | 65128 |
| #12 | exp Neurodevelopmental Disorders/ | 199548 |
| #13 | (neurological adj3 (outcome or sequel\*)).mp. | 12742 |
| #14 | (neurodevelopment\* disorder\* or neurodevelopment\* outcome\* or neurodevelopment\* disabilit\*).mp. | 22026 |
| #15 | neurodevelopment\*.mp. | 44544 |
| #16 | child\* develop\*.mp. | 69373 |
| #17 | (neurocogniti\* or neuropsych\* or cogniti\* or motor\* or movement or psychomotor or intell\*).mp. | 1638112 |
| #18 | exp Neuropsychological Tests/ | 188946 |
| #19 | exp Psychomotor Performance/ | 119612 |
| #20 | (neurologic and (outcome\* or examination\*)).mp. | 63545 |
| #21 | (developmental adj3 (outcome or sequel\*)).mp. | 1895 |
| #22 | developmental delay.mp. | 14616 |
| #23 | (gross motor or fine motor or neuromotor).mp. | 13150 |
| #24 | 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 | 24438 |
| #25 | 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 | 1936462 |
| #26 | 24 and 25 | 484 |

**Supplementary Table 2 ISI Web of Science**

|  |  |  |
| --- | --- | --- |
| **Number** | **Query** | **Search results** |
| #1 | (TS=(Complete AND transpos\* AND "great arter\*")) OR (TS=(complete NEAR/3 (malposition OR transposition) NEAR/5 (arter\* OR vessel\*))) OR (TS=(((D OR dextro) NEAR/1 transpos\* NEAR/5 arter\*))) OR (TS=(("TGA" OR "TOGA" OR "dextro$TGA" OR "d$TGA"))) OR (TS=((arter\* NEAR/2 switch NEAR/2 operation\*))) OR (TS=((arter\* NEAR/2 switch NEAR/2 procedure\*))) OR (TS=(Jatene NEAR/2 procedure)) OR (TS=(transposition NEAR/2 "great arter\*")) OR (TS=(transposition NEAR/2 "great vessel\*"))  | 94711 |
| #2 | (TS=(neurological NEAR/3 (outcome or sequel\*))) OR (TS=(neurodevelopment\* disorder\* OR neurodevelopment\* outcome\* OR neurodevelopment\* disabilit\*)) OR (TS=neurodevelopment\*) OR (TS=(child\* develop\*)) OR (TS=(neurocogniti\* OR neuropsych\* OR cogniti\* OR motor\* OR movement OR psychomotor OR intell\*)) OR (TS=(neurologic AND (outcome\* OR examination\*))) OR (TS=(developmental NEAR/3 (outcome OR sequel\*))) OR (TS=(developmental delay)) OR (TS=(gross motor or fine motor or neuromotor)) | 3136966 |
|  |  |  |
| #3 | #1 AND #2 | 997 |

**Supplementary Table 3 Scopus**

|  |  |  |
| --- | --- | --- |
| **Number** | **Query** | **Search results** |
| #1 | ( ( TITLE-ABS-KEY ( complete AND transpos\* AND "great arter\*" ) ) OR ( TITLE-ABS-KEY ( complete PRE/3 ( malposition OR transposition ) PRE/5 ( arter\* OR vessel\* ) ) ) OR ( TITLE-ABS-KEY ( ( ( d OR dextro ) PRE/1 transpos\* PRE/5 arter\* ) ) ) OR ( TITLE-ABS-KEY ( ( "TGA" OR "TOGA" OR "dextro$TGA" OR "d$TGA" ) ) ) OR ( TITLE-ABS-KEY ( ( arter\* PRE/2 switch PRE/2 operation\* ) ) ) OR ( TITLE-ABS-KEY ( ( arter\* PRE/2 switch PRE/2 procedure\* ) ) ) OR ( TITLE-ABS-KEY ( jatene PRE/2 procedure ) ) OR ( TITLE-ABS-KEY ( transposition PRE/2 "great arter\*" ) ) OR ( TITLE-ABS-KEY ( transposition PRE/2 "great vessel\*" ) ) ) AND ( ( TITLE-ABS-KEY ( neurological PRE/3 ( outcome OR sequel\* ) ) ) OR ( TITLE-ABS-KEY ( neurodevelopment\* AND disorder\* OR neurodevelopment\* AND outcome\* OR neurodevelopment\* AND disabilit\* ) ) OR ( title-abs-keyneurodevelopment\* ) OR ( TITLE-ABS-KEY ( child\* AND develop\* ) ) OR ( TITLE-ABS-KEY ( neurocogniti\* OR neuropsych\* OR cogniti\* OR motor\* OR movement OR psychomotor OR intell\* ) ) OR ( TITLE-ABS-KEY ( neurologic AND ( outcome\* OR examination\* ) ) ) OR ( TITLE-ABS-KEY ( developmental PRE/3 ( outcome OR sequel\* ) ) ) OR ( TITLE-ABS-KEY ( developmental AND delay ) ) OR ( TITLE-ABS-KEY ( gross AND motor OR fine AND motor OR neuromotor ) ) ) | 1779 |

**Supplementary Table 4** Reasons to exclude studies

|  |  |
| --- | --- |
| **Study** | **Reason to exclude** |
| 1-25 | Neurodevelopment assessment beyond 5 years of age |
| 26-36 | Age at surgery beyond neonatal period |
| 37-46 | No neurodevelopment assessmentNo reported outcomes of interest |
| 47 | Fetal period |
| 48,49 | Data for TGA not specified |





**Supplementary Fig. 1** Risk of bias summary and risk of bias graph for included studies. A- Risk of bias summary of non-randomized studies; B- Risk of bias summary of randomized studies; C- Rick of bias graph of non-randomized studies; D- Risk of bias graph of randomized studies.

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