**Appendix S1** Systematic review search strategy

**MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily**Inception to June, 30 2022

|  |  |
| --- | --- |
| **Search** | **Query** |
| **25** | (((((prenatal diagnosis) OR (prenatal ultrasound)) OR (ultrasound)) OR (antenatal ultrasound)) OR (fetal ultrasound)) AND (((((((((hydronephrosis) OR (hydroureteronephrosis)) OR (vesicoureteral reflux)) OR (lower urinary tract obstruction)) OR (LUTO)) OR (bladder outlet obstruction)) OR (posterior urethral valves)) OR (anterior urethral valves)) OR (urethral atresia)) |
| **24** | ((((prenatal diagnosis) OR (prenatal ultrasound)) OR (ultrasound)) OR (antenatal ultrasound)) OR (fetal ultrasound) |
| **23** | ((((((((hydronephrosis) OR (hydroureteronephrosis)) OR (vesicoureteral reflux)) OR (lower urinary tract obstruction)) OR (LUTO)) OR (bladder outlet obstruction)) OR (posterior urethral valves)) OR (anterior urethral valves)) OR (urethral atresia) |
| **11** | fetal ultrasound |
| **10** | antenatal ultrasound |
| **22** | ultrasound |
| **9** | prenatal ultrasound |
| **12** | prenatal diagnosis |
| **7** | urethral atresia |
| **8** | anterior urethral valves |
| **5** | posterior urethral valves |
| **3** | bladder outlet obstruction |
| **2** | LUTO |
| **1** | lower urinary tract obstruction |
| **21** | vesicoureteral reflux |
| **20** | hydroureteronephrosis |
| **19** | hydronephrosis |

**OVID MEDLINE**

1 hydronephrosis.mp.

2 hydroureteronephrosis.mp.

3 vesicoureteral reflux.mp.

4 lower urinary tract obstruction.mp.

5 LUTO.mp.

6 bladder outlet obstruction.mp.

7 posterior urethral valves.mp.

8 anterior urethral valves.mp.

9 urethral atresia.mp.

10 prenatal diagnosis.mp.

11 prenatal ultrasound.mp.

12 ultrasound.mp.

13 antenatal ultrasound.mp.

14 fetal ultrasound.mp.

15 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9

16 10 or 11 or 12 or 13 or 14

17 15 and 16

**Embase Classic+Embase** Inception to April, 30 2022

|  |  |
| --- | --- |
| **#** | **Searches** |
| 1 | urethra valve/ |
| 2 | bladder obstruction/ |
| 3 | urinary tract obstruction/ |
| 4 | (posterior urethral valve? or PUV or PUVs).tw,kw. |
| 5 | (obstruct\* adj3 (urinary bladder or urinary tract? or urethra?)).tw,kw. |
| 6 | or/1-5 |
| 7 | prenatal diagnosis/ |
| 8 | fetus echography/ |
| 9 | sensitiv:.tw. or diagnostic accuracy.sh. or diagnostic.tw. [McMaster HIRU Medline Search Filter - Embase - Diagnosis (Best balance of sensitivity and specificity)] |
| 10 | follow-up.mp. or prognos:.tw. or ep.fs. [McMaster HIRU Medline Search Filter - Embase - Prognosis (Best balance of sensitivity and specificity)] |
| 11 | ((ultrasound\* or ultra-sound\*) adj3 (prenatal or pre-natal or antenatal or ante-natal or fetal or fetus or foetal or foetus)).tw,kw. |
| 12 | ((ultrasonograph\* or ultra-sonograph\*) adj3 (prenatal or pre-natal or antenatal or ante-natal or fetal or fetus or foetal or foetus)).tw,kw. |
| 13 | ((echograph\* or echosonograph\*) adj3 (prenatal or pre-natal or antenatal or ante-natal or fetal or fetus or foetal or foetus)).tw,kw. |
| 14 | hydronephrosis/ |
| 15 | oligohydramnios/ |
| 16 | (oligohydramnios or amniotic fluid deficienc\* or diminished amniotic fluid? or oligo-hydramnion or oligo-hydramnios or oligohydramnion or reduced amniotic fluid?).tw,kw. |
| 17 | (keyhole sign? or key hole sign? or thicken\* bladder wall? or micturat\* or hydronephros#s).tw,kw. |
| 18 | or/7-17 |
| 19 | 6 and 18 |
| 20 | limit 19 to yr="1990 -Current" |
| 21 | limit 20 to english language |

**SCOPUS Search Strategy**

( ( ( ( TITLE-ABS-KEY ( mcug\* ) )  OR  ( TITLE-ABS-KEY ( micturition  AND urethrogr\* ) )  OR  ( ( TITLE-ABS-KEY ( vcug\* ) )  OR  ( TITLE-ABS-KEY ( voiding  AND cystourethrogr\* ) ) ) )  AND  ( ( ( TITLE-ABS-KEY ( posterior  AND urethral  AND valve\* ) )  OR  ( TITLE-ABS-KEY ( puv\* ) ) ) ) )  AND  ( TITLE-ABS-KEY ( ( sensitivit\*  OR  specificit\* )  OR  predictive  AND value ) ) )  OR  ( ( TITLE-ABS-KEY ( ( sensitivit\*  OR  specificit\*  OR  odds  AND ratio  OR  likelihood  AND ratio  OR  diagnos\*  OR  prognos\* )  OR  predictive  AND value ) )  AND  ( ( ( ( ( TITLE-ABS-KEY ( posterior  AND urethral  AND valve\* ) )  OR  ( TITLE-ABS-KEY ( puv\* ) ) ) )  AND  ( ( ( TITLE-ABS-KEY ( ultrasound ) )  OR  ( TITLE-ABS-KEY ( ultrasonography ) ) )  AND  ( ( TITLE-ABS-KEY ( prenatal ) )  OR  ( TITLE-ABS-KEY ( fetal ) )  OR  ( TITLE-ABS-KEY ( fetus ) ) ) )  AND  ( TITLE-ABS-KEY ( sign\* ) ) ) ) )

( ( TITLE-ABS-KEY ( "posterior urethral valve\*"  OR  puv  OR  puvs ) )  OR  ( TITLE-ABS-KEY ( ( obstruct\*  W/3  ( "urinary bladder"  OR  "urinary tract"  OR  urethra\* ) ) ) ) )  AND  ( ( TITLE-ABS-KEY ( diagnos\*  OR  prognos\*  OR  predict\* ) )  OR  ( TITLE-ABS-KEY ( ( ultrasound\*  W/3  ( prenatal  OR  pre-natal  OR  antenatal  OR  ante-natal  OR  fetal  OR  fetus  OR  foetal  OR  foetus ) ) ) )  OR  ( TITLE-ABS-KEY ( ( ultra-sound\*  W/3  ( prenatal  OR  pre-natal  OR  antenatal  OR  ante-natal  OR  fetal  OR  fetus  OR  foetal  OR  foetus ) ) ) )  OR  ( TITLE-ABS-KEY ( ( ultrasonograph\*  W/3  ( prenatal  OR  pre-natal  OR  antenatal  OR  ante-natal  OR  fetal  OR  fetus  OR  foetal  OR  foetus ) ) ) )  OR  ( TITLE-ABS-KEY ( ( ultra-sonograph\*  W/3  ( prenatal  OR  pre-natal  OR  antenatal  OR  ante-natal  OR  fetal  OR  fetus  OR  foetal  OR  foetus ) ) ) )  OR  ( TITLE-ABS-KEY ( ( ( echograph\*  OR  echosonograph\* )  W/3  ( prenatal  OR  pre-natal  OR  antenatal  OR  ante-natal  OR  fetal  OR  fetus  OR  foetal  OR  foetus ) ) ) )  OR  ( TITLE-ABS-KEY ( oligohydramnios  OR  "amniotic fluid deficienc\*"  OR  "diminished amniotic fluid\*"  OR  "oligo-hydramnion"  OR  "oligo-hydramnios"  OR  oligohydramnion  OR  "reduced amniotic fluid\*" ) )  OR  ( TITLE-ABS-KEY ( "keyhole sign\*"  OR  "key hole sign\*"  OR  "thicken\* bladder wall\*"  OR  micturat\*  OR  hydronephros\* ) ) )  AND  ( LIMIT-TO ( PUBYEAR ,  2021 )  OR  LIMIT-TO ( PUBYEAR ,  2020 )  OR  LIMIT-TO ( PUBYEAR ,  2019 )  OR  LIMIT-TO ( PUBYEAR ,  2018 )  OR  LIMIT-TO ( PUBYEAR ,  2017 )  OR  LIMIT-TO ( PUBYEAR ,  2016 )  OR  LIMIT-TO ( PUBYEAR ,  2015 )  OR  LIMIT-TO ( PUBYEAR ,  2014 )  OR  LIMIT-TO ( PUBYEAR ,  2013 )  OR  LIMIT-TO ( PUBYEAR ,  2012 )  OR  LIMIT-TO ( PUBYEAR ,  2011 )  OR  LIMIT-TO ( PUBYEAR ,  2010 )  OR  LIMIT-TO ( PUBYEAR ,  2009 )  OR  LIMIT-TO ( PUBYEAR ,  2008 )  OR  LIMIT-TO ( PUBYEAR ,  2002 )  OR  LIMIT-TO ( PUBYEAR ,  2001 )  OR  LIMIT-TO ( PUBYEAR ,  2000 )  OR  LIMIT-TO ( PUBYEAR ,  1999 )  OR  LIMIT-TO ( PUBYEAR ,  1998 )  OR  LIMIT-TO ( PUBYEAR ,  1997 )  OR  LIMIT-TO ( PUBYEAR ,  1996 )  OR  LIMIT-TO ( PUBYEAR ,  1995 )  OR  LIMIT-TO ( PUBYEAR ,  1994 )  OR  LIMIT-TO ( PUBYEAR ,  1993 )  OR  LIMIT-TO ( PUBYEAR ,  1992 )  OR  LIMIT-TO ( PUBYEAR ,  1991 )  OR  LIMIT-TO ( PUBYEAR ,  1990 ) )  AND  ( LIMIT-TO ( LANGUAGE ,  "English" ) )

**Cochrane Central Register of Controlled Trials**Inception to April, 30 2022

|  |  |
| --- | --- |
| **#** | **Searches** |
| 1 | Urethra/ab [Abnormalities] |
| 2 | Urinary Bladder Neck Obstruction/ |
| 3 | (posterior urethral valve? or PUV or PUVs).tw,kw. |
| 4 | (obstruct\* adj3 (urinary bladder or urinary tract? or urethra?)).tw,kw. |
| 5 | or/1-4 |
| 6 | Ultrasonography, Prenatal/ |
| 7 | Diagnosis/ |
| 8 | Prognosis/ |
| 9 | (prognos\* or diagnos\* or predict\*).tw,kw. |
| 10 | ((ultrasound\* or ultra-sound\*) adj3 (prenatal or pre-natal or antenatal or ante-natal or fetal or fetus or foetal or foetus)).tw,kw. |
| 11 | ((ultrasonograph\* or ultra-sonograph\*) adj3 (prenatal or pre-natal or antenatal or ante-natal or fetal or fetus or foetal or foetus)).tw,kw. |
| 12 | ((echograph\* or echosonograph\*) adj3 (prenatal or pre-natal or antenatal or ante-natal or fetal or fetus or foetal or foetus)).tw,kw. |
| 13 | Hydronephrosis/ |
| 14 | Oligohydramnios/ |
| 15 | (oligohydramnios or amniotic fluid deficienc\* or diminished amniotic fluid? or oligo-hydramnion or oligo-hydramnios or oligohydramnion or reduced amniotic fluid?).tw,kw. |
| 16 | (keyhole sign? or key hole sign? or thicken\* bladder wall? or micturat\* or hydronephros#s).tw,kw. |
| 17 | or/6-16 |
| 18 | 5 and 17 |
| 19 | limit 18 to yr="1990 -Current" |
| 20 | limit 19 to english language |

**CINAHL Plus [EBSCO]**

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| **#** | **Query** | **Limiters/Expanders** |
| S19 | S5 AND S17 | Limiters - Published Date: 19900101-20201231 Search modes - Boolean/Phrase |
| S18 | S5 AND S17 | Search modes - Boolean/Phrase |
| S17 | S6 OR S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S15 OR S16 | Search modes - Boolean/Phrase |
| S16 | TI ( "keyhole sign#" or "key hole sign#" or "thicken\* bladder wall#" or micturat\* or hydronephros?s ) OR AB ( "keyhole sign#" or "key hole sign#" or "thicken\* bladder wall#" or micturat\* or hydronephros?s ) | Search modes - Boolean/Phrase |
| S15 | TI ( (oligohydramnios or "amniotic fluid deficienc\*" or "diminished amniotic fluid#" or "oligo-hydramnion" or "oligo-hydramnios" or oligohydramnion or "reduced amniotic fluid#") ) OR AB ( (oligohydramnios or "amniotic fluid deficienc\*" or "diminished amniotic fluid#" or "oligo-hydramnion" or "oligo-hydramnios" or oligohydramnion or "reduced amniotic fluid#") ) | Search modes - Boolean/Phrase |
| S14 | (MH "Oligohydramnios") | Search modes - Boolean/Phrase |
| S13 | (MH "Hydronephrosis") | Search modes - Boolean/Phrase |
| S12 | TI ( ((echograph\* or echosonograph\*) N3 (prenatal or pre-natal or antenatal or ante-natal or fetal or fetus or foetal or foetus)) ) OR AB ( ((echograph\* or echosonograph\*) N3 (prenatal or pre-natal or antenatal or ante-natal or fetal or fetus or foetal or foetus)) ) | Search modes - Boolean/Phrase |
| S11 | TI ( ((ultrasonograph\* or ultra-sonograph\*) N3 (prenatal or pre-natal or antenatal or ante-natal or fetal or fetus or foetal or foetus)) ) OR AB ( ((ultrasonograph\* or ultra-sonograph\*) N3 (prenatal or pre-natal or antenatal or ante-natal or fetal or fetus or foetal or foetus)) ) | Search modes - Boolean/Phrase |
| S10 | TI ( ((ultrasound\* or ultra-sound\*) N3 (prenatal or pre-natal or antenatal or ante-natal or fetal or fetus or foetal or foetus)) ) OR AB ( ((ultrasound\* or ultra-sound\*) N3 (prenatal or pre-natal or antenatal or ante-natal or fetal or fetus or foetal or foetus)) ) | Search modes - Boolean/Phrase |
| S9 | TI ( prognos\* or diagnos\* or predict\* ) OR AB ( prognos\* or diagnos\* or predict\* ) | Search modes - Boolean/Phrase |
| S8 | (MH "Prognosis") | Search modes - Boolean/Phrase |
| S7 | (MH "Diagnosis") | Search modes - Boolean/Phrase |
| S6 | (MH "Ultrasonography, Prenatal") | Search modes - Boolean/Phrase |
| S5 | S1 OR S2 OR S3 OR S4 | Search modes - Boolean/Phrase |
| S4 | TI ( (obstruct\* N3 ("urinary bladder" or "urinary tract#" or urethra#)) ) OR AB ( (obstruct\* N3 ("urinary bladder" or "urinary tract#" or urethra#)) ) | Search modes - Boolean/Phrase |
| S3 | TI ( "posterior urethral valve#" or PUV or PUVs ) OR AB ( "posterior urethral valve#" or PUV or PUVs ) | Search modes - Boolean/Phrase |
| S2 | (MH "Bladder/AB") | Search modes - Boolean/Phrase |
| S1 | (MH "Urethra/AB") | Search modes - Boolean/Phrase |