

APPENDIX 1. Systematic review of published outcomes of conservative treatment of acute appendicitis in children

All papers identified by our systematic review of conservative treatment¹ were included, and the literature search in that paper repeated to identify any further papers published between 2016 and April 2017.

Table 1. Characteristics of included studies

| Study | Publication Year | Region | Study Type | Sample size (intention to treat non-operatively) | Age of included population |
|------------------------|------------------|------------------------------|-----------------|--|----------------------------|
| Abes ² | 2007 | Antibiotics | Retrospective | Middle East | 16 |
| Armstrong ³ | 2014 | Antibiotics vs. appendectomy | Retrospective | North America | 12 |
| Caruso ⁴ | 2017 | Antibiotics vs. appendectomy | Retrospective | Europe | 197 |
| Chen ⁵ | 2016 | Antibiotic | Retrospective | Asia | 125 |
| Gorter ⁶ | 2015 | Antibiotics | Prospective | Europe | 25 |
| Hartwich ⁷ | 2016 | Antibiotics | Prospective | North America | 24 |
| Jimbo ⁸ | 2016 | Antibiotics | Retrospective | Asia | 71 |
| Kaneko ⁹ | 2004 | Antibiotic | Prospective | Asia | 91 |
| Koike ¹⁰ | 2014 | Antibiotics | Retrospective | Asia | 134 |
| Mahida ¹¹ | 2016 | Antibiotics | Prospective | North America | 5 |
| Minecci ¹² | 2016 | Antibiotics | Prospective | North America | 37 |
| Mudri ¹³ | 2017 | Antibiotics and appendectomy | Retrospective | North America | 26 |
| Steiner ¹⁴ | 2015 | Antibiotics | Retrospective | Middle-east | 45 |
| Steiner ¹⁵ | 2017 | Antibiotics | Retrospective | Middle-east | 197 |
| Svensson ¹⁶ | 2015 | Antibiotics and appendectomy | Prospective RCT | Europe | 24 |
| Tanaka ¹⁷ | 2015 | Antibiotics and appendectomy | Retrospective | Japan | 78 |

Outcomes from these papers were then mapped, where possible, to the outcomes identified in our previous systematic review of outcomes of appendicitis in children¹⁸.

Table 2. Outcomes mapped to those previously described¹⁸

| | Abes | Armstrong | Caruso | Chen | Gorter | Hartwich | Jimbo | Kaneko | Koike | Mahida | Minecci | Mudri | Steiner 2015 | Steiner 2017 | Svensson | Tanaka |
|---|------|-----------|--------|------|--------|----------|-------|--------|-------|--------|---------|-------|--------------|--------------|----------|--------|
| Wound Infection | | | x | | x | | | | | | | | x | | | |
| Intra-abdominal abscess | | | x | x | x | | | | | | | x | | | | |
| (Adhesive) obstruction | | | x | | | | | | | | | | | | | |
| Complication of antibiotics or treatment intervention | | | | | x | | | | | | | | | | | |
| Major/minor complications | | x | | | | | | | | | | | | | | |
| Non-infectious wound complications | | | | | | | | | | | | | | | | |
| Re-admission to hospital | | x | x | | x | X | | | | | x | x | | | | |
| Other infectious complications | | x | | x | | | | | | | | x | | | | |
| Interventional radiology procedure | | | | | | | | | | | | | | | | |
| Need for operation/re-operation | | | x | | x | x | x | x | | x | x | x | x | x | x | x |
| Conversion laparoscopic to open surgery | | | | | | | | | | | | | | | | |
| Recurrent appendicitis | x | x | | | x | x | x | x | x | x | x | x | x | x | x | x |
| Other complications | | | X | | x | | | | | | | | | | | |
| Bacterial isolates | | | | | | | | | | | | | | | | |
| Post-treatment fever | | | | | | | | | | | | | x | x | | |
| Measure of recovery of gastro-intestinal function | | | | | | | x | | | | | | | | | |
| Blood markers (WCC/CRP) | | | x | | | | | | | | | | x | x | | |
| Duration of abdominal drainage | | | | | | | | | | | | | | | | |
| Validated pain score | | | | | | | | | | | | | | | | |
| Other pain assessment | x | | x | | | | | | | | | | x | | x | |

| | | | | | | | | | | | | | | | | |
|--|---|---|---|---|--|--|---|---|---|---|---|---|---|---|---|---|
| Time away from normal activities or school | | | | | | | | | | | x | | | | | |
| Recovery to full activity/sport | | | | | | | | | | | | | | | | |
| Cosmesis | | | | | | | | | | | | | | | | |
| Time to ambulation | | | | | | | | | | | | | | | | |
| Other PROM | | | | | | | | | | | | | | | | x |
| Duration of home healthcare | | | | | | | | | | | | | | | | x |
| Paediatric quality of life assessment | | | | | | | x | | | | x | | | | | |
| Parental quality of life assessment | | | | | | | x | | | | x | | | | | |
| Hospital length of stay | | x | x | x | | | x | | x | | x | x | x | x | x | x |
| Duration of surgery/analgesia | | | | | | | x | | | | | | | | | |
| Total charges | | | | | | | x | | | x | | x | x | | x | |
| Duration of antibiotics | | | | | | | | | | | | | | x | | |
| Narcotic/analgesia doses | | | | | | | | | | | | | | | | |
| Healthcare visits | | x | | | | | | | | | | | | | | |
| Post-treatment imaging | x | | x | | | | | x | | | | | x | x | | x |
| Cost effectiveness | | | | | | | x | x | | | | | x | | | |
| Death | | | | | | | | | | | | | | | | |

No completely new outcomes were identified using this search. However, perforation is considered as a major complication, and it may be required to elevate this to the level of a separate outcome in the Core outcome set.

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