

## ABSTRAK

**Latar Belakang:** Apendisitis merupakan salah satu penyebab tersering kegawatdaruratan abdomen pada anak. Penatalaksanaan bedah dapat dilakukan dengan metode *laparoscopic appendectomy* (LA) maupun *open appendectomy* (OA). Meskipun LA semakin banyak digunakan karena sifatnya yang minimal invasif, bukti yang membandingkan luaran klinis antara LA dan OA pada pasien anak masih menunjukkan hasil yang tidak konsisten, dan data spesifik pada populasi anak di Indonesia masih terbatas.

**Tujuan:** Membandingkan luaran klinis antara LA dan OA pada pasien anak.

**Metode:** Penelitian ini merupakan studi analitik komparatif dengan desain retrospektif *cross-sectional* yang melibatkan pasien anak ( $\leq 18$  tahun) yang menjalani apendektomi di RSUP Dr. Kariadi dan RSND Semarang periode 2018–2024. Data diperoleh dari rekam medis rawat inap dan rawat jalan. Variabel yang dianalisis meliputi lama rawat inap, tingkat nyeri pascaoperasi, kejadian infeksi luka operasi, mortalitas, dan komplikasi pascaoperasi. Analisis statistik dilakukan menggunakan uji Mann–Whitney, Chi-square, dan Fisher’s exact test.

**Hasil:** Sebanyak 119 pasien memenuhi kriteria inklusi, terdiri dari 52 kasus LA dan 67 kasus OA. Median lama rawat inap lebih singkat pada kelompok LA (3 hari) dibanding OA (5 hari) ( $p = 0,026$ ). Kejadian infeksi luka operasi secara signifikan lebih rendah pada kelompok LA (1,9%) dibanding OA (20,9%) ( $p = 0,002$ ). Tidak terdapat perbedaan bermakna pada tingkat nyeri pascaoperasi ( $p = 0,673$ ), mortalitas ( $p = 0,067$ ), maupun komplikasi pascaoperasi ( $p = 0,580$ ).

**Kesimpulan:** LA memberikan luaran klinis yang lebih baik dibanding OA pada pasien anak, terutama dalam hal penurunan lama rawat inap dan kejadian infeksi luka operasi tanpa meningkatkan nyeri, komplikasi, maupun mortalitas pascaoperasi. LA dapat dipertimbangkan sebagai pendekatan utama yang aman dan efisien dalam penatalaksanaan apendisitis pada anak.

**Kata kunci:** apendisitis, *laparoscopic appendectomy*, *open appendectomy*, bedah anak, luaran pascaoperasi

## **ABSTRACT**

**Background:** Appendicitis is one of the most common causes of acute abdominal emergencies in children. Surgical management can be performed through laparoscopic appendectomy (LA) or open appendectomy (OA). Although LA is increasingly favored for its minimally invasive advantage, evidence comparing its clinical outcomes with OA in pediatric patients remains inconsistent, and data specific to the Indonesian pediatric population are still limited.

**Objective:** To compare the clinical outcomes between LA and OA in pediatric patients with appendicitis.

**Methods:** This analytic comparative study used a retrospective cross-sectional design involving pediatric patients ( $\leq 18$  years) who underwent appendectomy at RSUP Dr. Kariadi and RSND Semarang between 2018 and 2024. Data were obtained from inpatient and outpatient medical records. Variables analyzed included length of hospital stay, postoperative pain level, surgical site infection, mortality, and postoperative complications. Statistical analysis was performed using the Mann–Whitney, Chi-square, and Fisher’s exact tests.

**Results:** A total of 119 patients were included, consisting of 52 LA and 67 OA cases. The median length of stay was shorter in the LA group (3 days) compared with OA (5 days) ( $p = 0.026$ ). The incidence of surgical site infection was significantly lower in LA (1.9%) than OA (20.9%) ( $p = 0.002$ ). No significant differences were found in postoperative pain level ( $p = 0.673$ ), mortality ( $p = 0.067$ ), or postoperative complications ( $p = 0.580$ ).

**Conclusion:** LA provides superior clinical outcomes compared with OA in pediatric appendicitis, particularly in reducing hospital stay and surgical site infections, without increasing postoperative pain, complications, or mortality. LA can be considered a safe and efficient primary approach for appendicitis management in children.

**Keywords:** appendicitis, laparoscopic appendectomy, open appendectomy, pediatric surgery, postoperative outcomes