Department of Surgery
2026 Research Day
6th May 2026 (Wednesday) | 7 am – Noon | MART Auditorium

Title:
Real Life Incidence and Management of Stump Appendicitis

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Background:
Stump appendicitis (SA) is a rare complication resulting from an incomplete index appendectomy characterized by either residual inflammation or subsequent re-infection of a retained appendiceal stump. Reported incidence of SA, based on second appendectomies, is 0.15-0.25% with median time to SA of 2 years, ranging from weeks to decades. We aimed to define the incidence, timeline, and risk factors for SA based on analysis of comprehensive state-level database.

Methods:
All adult patients with a primary diagnosis of acute appendicitis who underwent appendectomy between 2016-2023 were captured in the New York Statewide Planning And Research Cooperative System (SPARCS) database. Subsequent encounters with SA and repeat appendectomy were identified up to 2024. Risk factors associated with SA were determined by a multivariable Cox proportional hazards model.

Results:
Out of 100,319 patients with acute appendicitis who underwent appendectomy, 3,264 (3.25%) developed at least one episode of SA, with 80 (2.45%) of these patients requiring a second appendectomy at some point. The time from index appendectomy to readmission for SA was 28.7 ± 88.6 days (mean ± SD), while the time from index appendectomy to repeat appendectomy was 292 ± 395 days. Factors associated with subsequent SA on a multivariable Cox proportional hazard model were male sex (HR=1.26 [95% CI, 1.17-1.35]), non-White race (HR=2.30 [2.05-2.57], presence of any complication from the index appendectomy (HR=1.43 [1.22-1.67]), and residence in the NYC area (HR=4.06 [3.39-4.86]; all $p<0.0001$.

Conclusions:
The rate of SA following index appendectomy for acute appendicitis is substantially higher than the modern rate of second appendectomy, as compared with historical cohorts. This could be due to surgeons increasingly preferring non-operative management given the expected difficulty of a second appendectomy.