

## **Appendiceal Diverticular Disease: A 10-year Retrospective Study of Cases from Tertiary Hospitals in Western Australia**

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### **Abstract**

*Background:* Appendiceal diverticular disease (ADD) is typically a histological diagnosis. Our paper aims to investigate the implications of ADD compared to acute appendicitis (AA).

*Methods:* We conducted a retrospective data collection of patients who had undergone an appendectomy in three tertiary hospitals across Western Australia between 2009-2019 and included patients with histopathological diagnoses of ADD and AA.

*Results:* Thirty-seven patients with ADD and forty with AA were included. The mean age in the ADD group was significantly older ( $p < 0.001$ ) at 50.1 compared to the AA group (37.3). The mean white cell count (WCC) in the ADD group was lower than the AA group ( $11 \times 10^9/L$  vs.  $13.3 \times 10^9/L$ ,  $p < 0.001$ ), whereas the C-Reactive Protein (CRP) level was greater, although not statistically significant. The ADD group had a greater risk of major surgery ( $p < 0.05$ ) and complications such as appendiceal perforation and appendiceal mass ( $p < 0.05$ ). Post-operative colonoscopy also demonstrated a higher incidence of polyps in patients with ADD (19% vs. 2.5%,  $p < 0.001$ ).

*Conclusion:* ADD frequently presents with clinical features indiscernible from AA. Our study demonstrates that ADD is associated with higher rates of appendiceal perforation, polyps and malignancy. We recommend that patients with ADD be advised to have a colonoscopy post-operatively to rule out underlying malignancy.

**Key words:** appendiceal diverticulum, acute appendicitis, diverticulitis