

## **Abstract**

### **Introduction:**

Cold snare polypectomy (CSP) and underwater endoscopic mucosal resection (UEMR) have been developed recently, in addition to conventional methods, but adverse events of each method have not been fully clarified. We compared outcomes of each method for the appropriate choice.

### **Methods:**

Patients who underwent CSP, endoscopic mucosal resection (EMR)/hot snare polypectomy (HSP) or UEMR for small and intermediate-sized colorectal polyps between April 2017 and June 2020 were retrospectively examined. The rate of adverse events and recurrences due to each method were determined as main outcomes. Clinical factors related with adverse events were examined.

### **Results:**

A total of 1,025 patients with 3,163 polyps underwent polypectomy using any of the methods. CSP, EMR/HSP and UEMR were performed for 704 (22.2%), 2,145 (67.8%) and 314 polyps (9.9%), and median size for each method was 4, 6 and 7 mm, respectively. Delayed bleeding for CSP, EMR/HSP and UEMR was 0%, 0.2% and 0.6% ( $P = 0.15$ ), and perforation was 0%, 0.1% and 0%, respectively ( $P = 0.62$ ). Recurrence after CSP, EMR/HSP and UEMR was 0.3%, 0.09% and 1.3%, respectively ( $P < 0.01$ ). Recurrence for UEMR was significantly higher in the early stage of procedure introduction ( $P = 0.015$ ). Oral anticoagulants were the risk factor for delayed bleeding ( $P < 0.01$ , respectively).

### **Conclusion:**

There was no significant difference regarding adverse events among each method for small and intermediate-sized polyps, although recurrence rate after UEMR was higher than other methods.