A novel endoscopic technique to close large post EMR defects using a double ring and clips

T1525

Takahiro Fujii
TF clinic, GINZA, Chuo-ku, Japan

Background and Aim

Even though EMR is proven to be a safe procedure to remove flat colorectal lesions, the risk of hemorrhage and perforation increases with lesions larger than 20 mm. To prevent such complications, we have previously reported a technique to close large mucosal defects produced after EMR using the endoloop snare and metallic clip suture method. This procedure, however, requires the use of a two-channel colonoscope, which is not always available in every endoscopy unit.
We have recently developed a novel and simple technique for complete closure of large mucosal defects using a stainless 8-ring device that can close a large defect with a conventional one-channel colonoscope.

Results

Characteristics

No. of lesions: 10 in 10 patients
Size: 16.3 ± 6.7 mm(10-25mm)
Age : 64.8 ± 4.3 years
Location: C 1,Asc 4, Trans 2,Des 1, Sig 2
Macroscopic type: LST 8,Sessile 1, Flat 1
Histopathology: Hyperplastic Polyp 1
Intramucosal neoplasia 8
Submucosal invasive cancer 1

All defects were successfully closed.

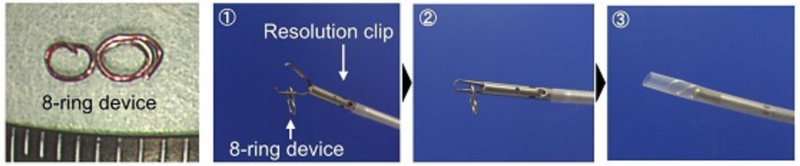
Complications: none

Conclusion

Large post-EMR mucosal defects can be successfully treated using our 8-ring and clips technique and a standard one-channel colonoscope.

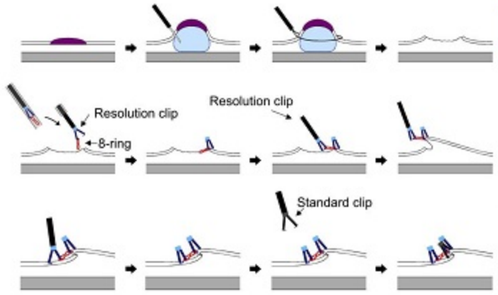
This simple technique can be useful not only to prevent EMR complications like perforation or bleeding after endoscopic resection of large flat lesions but also to treat the complication itself avoiding the necessity of surgical intervention.

Attach the 8-ring device into resolution clip



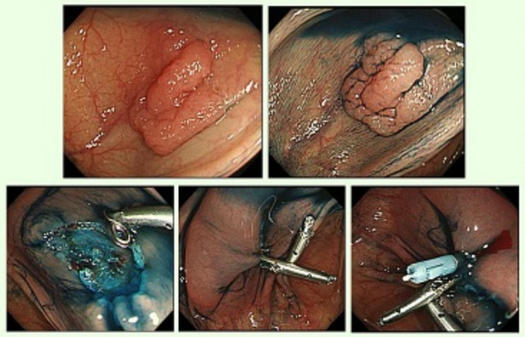
This 8-ring device of 6×3mm in size is made of stainless steel.

The 8-ring device is attached to the resolution clip (Boston Scientific Co. MA, USA) as shown in ①to ③.



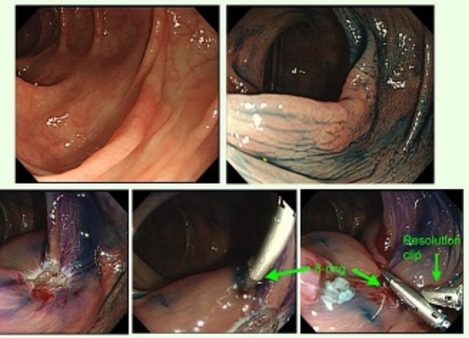
Method

The resolution clip is placed through one hole of the 8-ring shape device and clipped in the periphery of the large post-resection mucosal defect. Another clip is inserted through the remaining hole of the device and clipped in the normal mucosa to approximate the margins of the defect. Thus a complete closure is accomplished. To prevent the closure from becoming loose, a third metallic clip is placed to reinforce the suture.



Case 1

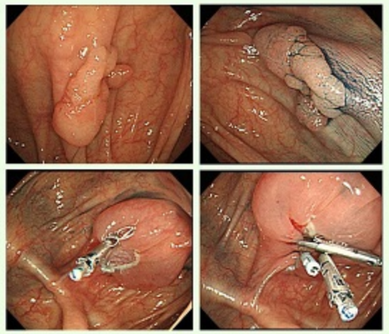
56yrs. Male,
Transverse Colon,
Lateral Spreading Tumor,
20mm,
Tubulovillous adenoma with severe atypia



Case2

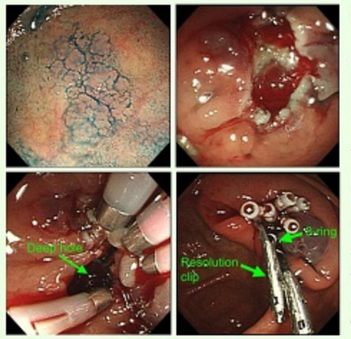
72yrs. Female,
Transverse Colon,
Lateral Spreading Tumor,
20mm,
Tubular adenoma with moderate atypia

To prevent delayed bleeding, this closure technique was performed in the large post-resection mucosal defect.



Case 3

60yrs. Male,
Ascending colon,
Lateral Spreading Tumor ,
18mm,
Tubular adenoma with severe atypia



Case 4

65yrs. Male,
Cecum,
Hyperplastic polyp

This is a large hyperplastic polyp (10mm in diameter) located on the cecum which was removed by EMR. Immediate bleeding and a deep hole was observed post EMR. Initially 4 standard clips were applied obtaining an effective hemostasis. This novel technique using the 8-ring device enabled to completely close the deep hole. No complications were observed after the procedure.