

New Double Balloon Interventional Platform Significantly Reduces Time of Endoscopic Submucosal Dissection: Case Control Study Of 86 Patients With Large Sessile Colonic Lesions

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ABSTRACT BODY:

BACKGROUND. Endoscopic Submucosal Dissection (ESD) is gaining popularity around the world. However, colonic ESD in the USA is still perceived as labor-intensive and time-consuming procedure. A recently developed double balloon interventional platform (Lumendi LLC, Westport, CT) was designed to help facilitate complex endoscopic interventions like colonic ESD.

STUDY AIM:

To compare procedural outcomes of ESD with and without the assistance of the double balloon interventional platform.

METHODS:

This was a single center, single operator, non-randomized, retrospective study. We analyzed 53 patients with large (over 5 cm in size) sessile colonic lesions outside the rectum/sigmoid who had ESD with the assistance of the double balloon platform and compared it with 33 similar size controls removed without the platform in 2016-2018. All data (size and location of the lesion, dissection time, total procedure time, etc.) were collected and entered into an Excel database for analysis.

RESULTS:

Double balloon platform assisted advancement of the endoscope through the colon, stabilized the colonoscope and created a conduit from rectum to the therapeutic zone around the colonic lesion, provided dynamic multi-directional traction, counter-traction and triangulation markedly facilitating colonic ESD. Although both groups were similar by location ($p=0.90$) and size (6.42 cm vs 6.29 cm, $p=0.76$), propensity adjusted comparison of the interventions with and without the platform demonstrated statistically significant savings for ESD time by 24% (87.12 ± 46.52 vs 114.81 ± 51.36 minutes, $p=0.021$), normalized ESD time by 27% (2.87 ± 1.33 vs 3.94 ± 2.30 min/cm, $p=0.012$), total case time by 17% (144.14 ± 53.45 vs 174.03 ± 59.31 minutes, $p=0.032$) and normalized total case time by 18%, (4.98 ± 1.88 vs 6.10 ± 3.17 min/cm, $p=0.050$) achieved with the assistance of the new therapeutic platform.

CONCLUSIONS:

New double balloon interventional platform markedly facilitates colonic ESD and significantly decreases dissection and total case time required for endoscopic removal of large sessile colonic lesions.



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