Endoscopic Submucosal Dissection for superficial rectal tumors: prospective evaluation in France

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Abstract

Background and aims: Endoscopic Submucosal Dissection (ESD) provides a high en bloc resection rate of colorectal superficial tumors. The aim of this study was to evaluate the feasibility of ESD in France and the complete resection rate at 1 year.

Patients and methods: Superficial rectal tumors, more than 1 cm in size, were prospectively included in 9 expert French centers (February 2010–June 2012). The study was temporarily stopped because of the high complications rate. Inclusions have resumed after remedial action.

Results: 45 patients were included (47 years, 24 males). Immediate perforations rate was 17% (n=8), without salvage surgery. Six (13%) patients had late bleeding treated endoscopically for 5 and surgically for 1 patient who needed red blood transfusion. Mortality was zero. En bloc resection rate was 84% (39/45) and curative R0 resection rate was 54% (24/45). 3 (6%) patients had an invasive tumor (2 sm1, 1 T2). At 1 year, curative R0 resection rate was 54% (24/45). 3 (6%) patients had an invasive tumor (2 sm1, 1 T2). At the end of the study, after the remedial action, the en bloc resection rate increased from 81% to 86%, the operating time per square millimeter decreased from 4.3 to 2.3 and the perforation rate significantly decreased from 34% to 0%.

Conclusions: Superficial rectal tumors can be treated safely and effectively by ESD with a high complete resection rate. Experience in ESD is low in Europe and curative R0 resection should increase and complications rate decrease with experience and corrective actions.

Methods

Endoscopic submucosal dissection (ESD) is a recent technique with two major advantages showed in the literature: high rate of monobloc resection and R0 curative resection (1,2).

INCLUSION CRITERIA were:

- Rectal lesion 10 mm or larger classified as sessile polyps, non-projecting and non-excavated polyps, laterally spreading tumour with or without a depressed area
- Absence of deep invasion estimated by macroscopic endoscopic characteristics, chromoscopy (0.4% indigo carmine and/or virtual chromoscopy), no ulceration, absence of spontaneous bleeding and negative no-mo-sign.

This study was temporarily stopped by the Supervisory Committee after the first 25 patients because of the high complications rate. Inclusions have resumed after remedial action: (1) 3 centers with very low number of inclusion (one patient each) were closed; (2) air insufflations was systematically replaced by CO2 before ESD; (3) EUS was systematically performed before ESD.

Results

Table1: Baseline patient characteristics (n=45) and clinicopathological features of superficial rectal neoplasms treated by endoscopic submucosal resection.

ESD represents a significant advance in therapeutic endoscopy with a major advantage being the ability to achieve a higher en bloc resection rate by performing submucosal dissection using a special electrosurgical knife.

In this French prospective multicentre evaluation, superficial rectal tumors can be treated safely and effectively by ESD with a high complete resection rate.

Experience in ESD is low in Europe and curative R0 resection should increase and complications rate decrease with experience and corrective actions.

References


No conflict of interest - This study was supported by a grant from the "Institut National du Cancer" (INCA)