

Abstract

Technological review on endoscopic submucosal dissection: available equipment, recent developments and emerging techniques

Endoscopic submucosal dissection (ESD) is widely practiced in Japan and the Eastern World and is rapidly expanding in western countries for the management of early malignancies of the upper and lower gastrointestinal tube. In addition, novel therapeutic applications deriving from ESD have emerged including the treatment of achalasia, of submucosal tumors, of diverticula, of strictures and of reflux disease. An ESD procedure necessitates not only skills and specific training, but also familiarization with a vast spectrum of devices (endoscopes, high-frequency generators and their settings, endoknives, hoods, irrigation devices) and techniques (such as countertraction, artificial ulcer closure), that render the procedure faster, more efficient and safer. This technological article gives an overview on current and novel equipment for an ESD and associated techniques.