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Una recopilación de algunos de los resúmenes más destacados, enviados a la Semana Europea de Enfermedades Digestivas 2010, celebrado en Barcelona

A compilation of some of the most outstanding abstracts, submitted to the European Digestive Disease Week 2010, held in Barcelona

Dr. y M. en C. José Guillermo de la Mora Levy

1. Radiofrecuencia en esófago: resultados en Barrett y aplicación en cáncer epidermoide o escamoso

Safety outcomes of balloon-based circumferential radiofrequency ablation after focal endoscopic resection of early Barrett's neoplasia in 118 patients: results of an ongoing European multicenter study

Pouw RE, Bisschops R, Pech O, EURO-II Study Group

Introduction: In patients with a Barrett's esophagus (BE) containing high-grade dysplasia (HGD) or early cancer (EC), endoscopic resection (ER) of visible lesions followed >6 weeks later by step-wise radiofrequency ablation (RFA) for residual BO is highly effective, however, limited data is available related to the adverse event profile of this approach.
Objective & methods: To evaluate the frequency and severity of adverse events related to balloon-based circumferential RFA of BO >6 weeks after ER. This prospective European trial is conducted at 13 tertiary referral centers with expertise in BO neoplasia. Investigators were trained at the coordinating site and the first 4 RFA cases were supervised on-site by the principal investigator. A coordinating study team attended all treatments and first follow-up at each site to maximize protocol compliance and standardize technique. A single expert pathologist interpreted all ER specimens, post-ER/pre-RFA and post-RFA biopsies. Eligibility criteria: BO ≤12

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cm with HGD/EC; ER of visible lesions pre-RFA (ER <2 cm length; <50% circumference); no invasion >T1sm1; no N+ on EUS; 2 endoscopies post-ER/pre-RFA with 4- quad/2 cm biopsies to exclude residual EC. At least 6 weeks after ER, balloon-based circumferential RFA was performed, followed every 2-3 months by additional RFA until clearance of BO.
Results: One hundred and eighteen patients (96 male, mean age 65 years, median BO length 6 cm) underwent en-bloc (n = 57) or piecemeal ER (n = 61, median 3 (IQR 2-4) pieces/session). Worst ER histology: EC (n = 75), HGD (n =35), LGD (n = 5), no dysplasia (n = 3). Worst histology post-ER/pre-RFA: HGD (n = 30), LGD (n = 50), no dysplasia (n = 38, all had HGD/EC in ER). Acute adverse events included superficial mucosal laceration evident after inflation of the RFA balloon: at the ER scar (n = 10, 8.5%) or at a reflux stenosis (n = 2, 1.7%), none required intervention. One delayed adverse event occurred: melena (n = 1. 0.8%), no intervention was required. All adverse events were categorized on the protocol case report forms as "mild". By May 2010, 82 patients completed treatment: complete eradication of neoplasia (CR-N) and intestinal metaplasia (CR-IM) was achieved in 82/82 (100%) and 76/82 (93%) patients, respectively.
Conclusion: This is the largest prospective multicenter study combining ER and RFA for treatment of HGD/EC in BO. Our safety outcomes suggest that when performed by trained, expert endoscopists in carefully selected patients after limited ER for staging purposes, adverse events related to balloon-based RFA are infrequent and mild. Interim efficacy outcomes from 82 patients (CR-N 100%, CR-IM 93%) are very favorable and comport with those from other studies.

First prospective study on endoscopic radiofrequency ablation of moderate and high-grade intraepithelial squamous neoplasia and early squamous cell cancer of the esophagus

Bergman JJ, Fleischer D, Zhang Y, et al.

Introduction: Esophageal squamous cell carcinoma (ESCC) is the 6th most common cause of cancer death worldwide (400,000/year). Moderate- and high-grade intraepithelial squamous neoplasia (MGIN, HGIN) lead to ESCC in the majority of patients within a decade, and are thus targets for screening and indications for treatment in high prevalence regions. Radiofrequency ablation (RFA) is safe and effective for eradicating early neoplasia in Barrett's esophagus (BE), but RFA has not yet been tested for treating MGIN/HGIN in squamous epithelium.
Objective & methods: To evaluate safety and efficacy of RFA for eradicating esophageal MGIN, HGIN and flat ESCC (T1m2). This prospective trial was conducted at two Chinese medical centers, with ethics approval and informed consent. High-resolution (HR) Lugol's chromoendoscopy was used to identify and biopsy all unstained lesions (USL) of the esophagus. Inclusion criteria included: at least 1 flat (type 0-IIb) USL ≥3 cm, USL-bearing portion of esophagus ≤12 cm, consensus diagnosis of MGIN, HGIN, or T1m2 in USL(s) by 2 expert pathologists, and normal EUS and CT. Exclusions included: non-flat mucosa, prior EMR or stricture, and ESCC ≥ **T1m3.** The study team has extensive experience in management of BE and ESCC, including use of RFA. All patients had circumferential RFA, creating a contiguous treatment area (TA) encompassing all USL(s). Every 3 months, patients had HR chromoendoscopy with biopsies from the TA (2 bx/2 cm) and any USLs. Focal RFA was applied to residual USL(s) to achieve complete response of neoplasia (CR-Neo). If all interim visit biopsies were negative for MGIN or worse, patients were released to the 12 month visit.
Results: Twenty nine patients were enrolled (14 male, mean 59.6 years) with MGIN (18), HGIN (10), or ESCC (1). The mean USL length was 6.2 cm. After 1 ablation, 25 (86%) achieved CR-Neo. At 3 months, the 4 patients with residual neoplasia received additional focal ablation, resulting in CR-Neo in all at 6 months. At 12 months, 28 patients were CR-Neo (97%); one patient with baseline ESCC had a small residual focus of HGIN. Four strictures were successfully dilated.
Conclusion: This is the first prospective trial of RFA for early squamous neoplasia of the esophagus. In this group of patients, we found RFA to be highly effective and well tolerated. CR-Neo at 12 months was achieved in 97% of the patients, the majority of whom would have otherwise been treated by radical EMR or esophagectomy.

A pilot trial of endoscopic radiofrequency ablation for the eradication of esophageal squamous intraepithelial neoplasia and

early squamous cell carcinoma limited to the mucosa

Van Vilsteren FG, Alvarez Herrero L, Pouw RE, et al.

Introduction: Esophagectomy is indicated for esophageal squamous cell cancer (ESCC) involving the muscularis mucosae (T1*m3*) or deeper, due the elevated risk for lymphatic invasion. For the earlier lesions of high-grade intraepithelial neoplasia (HGIN) and ESCC (T1*m2*), however, endoscopic therapy may be preferred, due to a lower morbidity and mortality risk compared to surgery. Endoscopic resection (ER) and radiofrequency ablation (RFA) are safe and effective for dysplasia and early cancer in Barrett's esophagus. Less is known about their use in squamous HGIN and early ESCC.
Objective & methods: Assess the feasibility of ER and RFA for esophageal squamous HGIN and early ESCC (T1*m2*). Patients were enrolled in this prospective, ethics committee approved trial after signing informed consent. High-resolution chromoendoscopy (Lugol's) of the esophagus showed ≥1 unstained lesion (USL) with HGIN or ESCC (T1*m2*) on biopsy or ER. Tattoos were placed 1 cm proximal and distal to the USL-bearing portion of the esophagus, defined as the treatment area (TA). Focal ER was used to remove visible lesions (type 0-IIa or 0-IIc) for staging and to render the mucosa flat prior to RFA. EUS/CT ruled out metastatic disease. Primary circumferential RFA was applied if TA ≥4 cm. Chromoendoscopy was repeated every 3 months with biopsy and focal RFA of residual USLs until biopsies were negative for squamous neoplasia (CR-Neo). After CR-Neo, chromoendoscopy was repeated at 2 and 6 months and then annually, with 2 biopsies/1 cm of TA.
Results: Twelve patients (6 male, median age 67 (IQR 58-73), 9 HGIN/3 ESCC) were enrolled. Nine patients had prior ER. Median length of TA was 5 cm (IQR 4-6). Median extent of USLs was 50% of circumference (IQR 25-75%). All 12 patients achieved CR-Neo after median 1 RFA (IQR 1-2). During RFA, there was 1 mucosal laceration (at ER scar) and 1 intramural hematoma, none requiring therapy. Two patients developed stenosis after ER/RFA. Dilation resulted in perforation in 1, managed with a covered stent. Median follow-up is 21 months (IQR 14-28). All patients remain CR-Neo.
Conclusion: In this single center, pilot trial of ER and RFA for esophageal squamous HGIN and ESCC (T1*m2*), all patients reached CR-Neo in a median of 1 RFA session. No recurrences have occurred 21 months after achieving CR-Neo. Although our results are encouraging, larger studies in homogeneous patient populations are needed.
Comentario: El estudio multicéntrico de seguridad de la radiofrecuencia posterior a resección de lesiones visibles por mucosectomía, demostró un porcentaje de 8.5% de laceraciones mínimas en el sitio de la resección y 1.7% en el sitio de estenosis pépticas, ninguna de las cuales requirió tratamiento. El éxito de la mucosectomía combinada con radiofrecuencia para erradicar el cáncer fue de 100% y de 92% para la metaplasia intestinal.
Los otros dos estudios informan sobre el uso de radiofrecuencia en lesiones precursoras y cáncer epidermoide de esófago temprano (hasta *T1M2*). Se incluyeron 41 pacientes, con resección mucosa previa en nueve. Se logró la desaparición total de la lesiones en 86% con una sesión y en 97% con dos sesiones.
La radiofrecuencia aparece como un método muy efectivo y seguro en la ablación de grandes áreas de tejido y seguramente se convertirá en el tratamiento de elección en estos casos.

2. Prótesis expandibles esófagicas para indicaciones benignas

Temporary placement of covered self-expandable metallic stent for benign refractory esophageal strictures. Results of a French prospective study

Chaput U, Heresbach U, Vanbiervliet G, et al.

Introduction: Esophageal stents have been proposed as an alternative to repeat dilation and bougienage for the management of benign refractory esophageal strictures.
Objective & methods: To evaluate the feasibility of placement and extraction of fully covered self-expandable metallic stents (FCMS) in this indication. A multicenter prospective study placed under of the aegis of the French Society of Digestive Endoscopy. Patients with histologically proven benign esophageal strictures recurring after a minimum of 3 endoscopic dilations of at least 15 mm during the previous 12 months were included. In a 1st series of patients, standard FCMS were used and left in place during 4 weeks. In a 2nd subsequent series, we used a novel specifically designed stent with a reinforced plastic cover (Hanarostent EBN®, Life Partners Europe).

This type of stent was left in place during 3 months before removal. Patients were followed clinically during 12 months after stent removal.

Results: Forty one patients (27 men, 14 women), mean age 62 ± 17 years were included, (1st study, n = 24; 2nd study, n = 17). Early complications (within 24 h) were mainly migrations and occurred in 1 (4.1%) patients in the 1st study and 5 (29.4%) in the 2nd study. During esophageal calibration, complications occurred in 6 (25%) and 6 (35.3%) patients in the 1st and 2nd study, respectively, mainly migrations (1st study, n = 2 (8.3%), 2nd study, n = 4 (23.5%)). The median duration of sizing was respectively 27 (20-80) and 90 (82-140) days. Extraction of the stent was always possible with no procedure-related morbidity except in 2 patients who were lost of follow-up and one in which stent was left in place because of late diagnosis of esophageal cancer. During follow-up, stricture recurrence occurred in 15/19 (79%) and 7/8 (87.5%) patients in the 1st and 2nd study, respectively. The median time to recurrence of esophageal stricture was respectively 1.75 (0.6-12) and 1 (0.1-6) months in the 1st and the 2nd study.

Conclusion: Placement and extraction of FCMS for benign refractory esophageal stricture was feasible, even after 3 months of implantation, when using specific stents. However, stricture recurrence occured early and frequently after stent removal. Specific stents did not seem to improve outcomes.

Esophageal stent for benign esophageal disease: short and long-term efficiency

Oden-Gangloff A, Antonietti M, Blondin V & Lecleire S.

Introduction: Esophageal stenting in benign esophageal disease is an emerging therapeutic procedure in a variety of indications: anastomotic leak or stenosis, peptic or caustic stenosis, radiation-induced stricture or fistula. However, the short-term and long-term results of this endoscopic technique seem to be different.

Objective & methods: To evaluate the efficacy and the complications of stent insertion in benign esophageal disease (i.e. refractory esophageal stricture and perforation/fistula). Patients and methods - We retrospectively included all the patients treated in Rouen University Hospital from April 1998 to August 2009. Short-term efficacy criteria were the improvement of dysphagia score after stent insertion for esophageal strictures, and the esophageal sealing after stent removal for esophageal perforations/fistulas. Long-term efficacy in esophageal strictures was defined as no recurrent symptomatic stricture requiring a new endoscopic procedure. Major complications corresponded to new perforation/fistula, severe bleeding or respiratory complication (i.e. aspiration pneumonia or tracheal compression). Minor complications corresponded to stent migration and recurrent symptomatic stricture.

Results: Forty-three esophageal stents, including 14 partially covered stents (PCS), 18 fully covered stents (FCS) and one biodegradable stent were inserted in 22 patients, for a stricture (n = 33 stents) or a perforation/fistula (n = 10 stents). The stent insertion was associated with a significant improvement of the dysphagia score (1.41 versus 3.05, p = 1.08. 10-8) for esophageal strictures and with an esophageal sealing in 66% of patients for esophageal perforations/fistula. Only 20% and 25% of the stent insertions resulted in a long-term efficacy when the stent was left in place and when it was removed, respectively. There was no observed long-term efficacy after stent migration. There was a trend to an increase in major complications after PCS insertion versus after FCS insertion (28.6% *versus* 0%). There was no significant association between the stent type and recurrent stricture or stent migration.

Conclusion: Esophageal stenting was associated with short-term efficacy both for esophageal stricture and esophageal perforation/fistula. Nevertheless, long-term efficacy on esophageal stenosis was low. We suggest that FCS should be preferred to PCS to avoid the occurrence of major complications.

Endoscopic treatment of benign anastomotic Esophageal Strictures with a Biodegradable Stent (ESBIO)

Van Hooft JE, van Berge Henegouwen MI, Rauws EA, et al.

Introduction: Benign cervical anastomotic strictures are a cumbersome entity often requiring repetitive dilatations before a clinical acceptable steady state is achieved.

Objective & methods: Prospective single center feasibility study to investigate the safety and efficacy of a biodegradable uncovered expandable stent (SX-ELLA Biodegradable Esophageal Stent BD, ELLA-CS, Hradec Kralove, Czech Republic) for the treatment of anastomotic esophageal strictures. Ten patients with dysphagia grade ≥2 (ability to eat

semisolids, to swallow liquids or having complete obstruction) due to benign anastomotic esophageal strictures who fulfilled the patient selection criteria were included. The primary outcome measure was endoscopic re-intervention within 6 months after stent placement. Secondary outcome measures were: improvement of dysphagia score at 1 week, 3 and 6 months, failed disintegration, increasing pain scores (visual analogue scale, 10 being worst possible pain) and complications. Patients' dysphagia score was listed weekly for the first month and thereafter monthly; their pain score was noted at day 1, 2 and 7. At 3 months a follow-up gastro-duodenoscopy was performed to investigate on stent disintegration and esophageal stricture. The total follow-up is 6 months.
Results: Between January 2009 and February 2010, 10 patients (8 men, 2 women; mean age ± standard deviation [SD] 62.1 ± 6.8 years) were included. Nine patients had undergone esophagectomy because of esophageal carcinoma, one patient because of a Boerhaave's syndrome. Thus far 6 patients completed 6 months and 4 patients completed 4 months of follow-up. The dysphagia score improved significantly (Wilcoxon signed ranks test; $p < 0.001$) when comparing the mean score prior to stenting with the score at 1 week, 3 and if yet available 6 months. In all patients the stent disintegrated but was still partially visible at the 3 months endoscopy. Two patients suffered from pain (7 out of 10) directly after stent placement, the pain subsided completely within 1 week. Two patients (20%) required re-intervention because of reobstruction due to hyperplasia occurring 4 months after stent placement. No serious adverse events occurred.
Conclusion: Placement of the SX-ELLA biodegradable esophageal stent in patients with dysphagia due to benign anastomotic esophageal strictures appears to be safe and effective.
Comentario: Desafortunadamente, el estudio multicéntrico francés demostró una tasa de migración alta, de hasta casi 30% en forma temprana y recurrencia de la estenosis en 79% a 88% en un promedio de 1.5 meses, a pesar de ser útiles durante el tiempo que permanecieron colocadas; la extracción no fue difícil incluso hasta tres semanas después de la colocación.
En el tratamiento de fístulas, el éxito fue de 66% a corto plazo, aunque a largo plazo fue menor a 25%; se encontraron significativamente más complicaciones con las prótesis parcialmente cubiertas que con las totalmente cubiertas. En pacientes con estenosis de la anastomosis, las prótesis expandibles resultaron efectivas en seguimientos máximos de seis meses, con absorción casi total de la prótesis en tres meses y con formación de tejido hiperplásico no obstructivo en 20%.
Estos resultados en conjunto sugieren que las prótesis cubiertas o absorbibles pueden ser útiles al menos temporalmente en pacientes seleccionados, aunque a largo plazo su eficacia disminuye enormemente. Esto debe ser tomado en cuenta para decidir cuándo y en quienes deben ser utilizadas.

3. Miotomía endoscópica para el tratamiento de Acalasia

Per-oral endoscopic myotomy: poem - 35 cases clinical experiences - noble endoscopic treatment against esophageal achalasia

Minami H, Inoue H, Hosoya T, et al.

Introduction: Esophageal achalasia patients' Quality of Life is highly disturbed in spite of its' benign nature. Laparoscopic Heller-Dor myotomy has been performed as a therapeutic approach to this disease. But it still demands at least 5 abdominal skin incisions for trocar placement. In 2007, Pasricha et al. reported a method of submucosal endoscopic myotomy with no skin incision in experimental model. We conducted clinical application of modified Pasricha technique as per-oral endoscopic myotomy (POEM).
Objective & methods: Thirty-five patients aged 18 to 73 years old (mean 46.2) were enrolled in this study between Sep. 2008 and April 2010. General indication of this procedure was defined as achalasia patients who had mild to severe esophageal dilation. About 2 cm longitudinal mucosal incision was put as a mucosal entry to submucosal space. Submucosal tunnel was created down to gastric cardia by the techniques of ESD using triangle tip knife. Inner circular muscle bundle was dissected from 3 cm distal to mucosal entry. Dissection continued down to gastric cardia inducing total 3 to 15 cm length inner circular muscle defect. Thickened esophageal muscle bundle was completely dissected. Mucosal entry was closed using endoscopic clipping device.
Results: Thirty-five achalasia patients who had lasting symptom of dysphagia received POEM. Barium swallows before and after procedure demonstrated total release of thickened LES. Mean operating time

was about 120 min and mean hospital stay after the procedure was 4.9 days. No severe complication was reported and dysphagia symptom disappeared after the procedure. Mean resting pressure of the sphincter fell from 55.0 to 22.3 mmHg. Subjective symptom score was significantly improved in all the cases. This noble method is achieved with already available techniques and devices of ESD. This procedure allows direct approach to the thickened inner muscular layer with no skin incision and effectively releases LES pressure. Myotomy length can be flexibly determined according to the patients' symptom such as dysphagia and chest pain.

Conclusion: Thirty-five successful clinical cases of POEM were reported. This result supports the clinical feasibility of this novel no-skin-incision technique. POEM can be less invasive and promising treatment for esophageal achalasia.

Comentario: Este trabajo demuestra la efectividad de la miotomía endoscópica en el tratamiento de la acalasia, tanto en la sintomatología como en parámetros objetivos, como manometría y trago de bario. Sorprendentemente no se presentaron complicaciones; en este momento la duración del procedimiento parece prolongada (dos horas). Aunque teóricamente atractivo, la dilatación neumática es también altamente efectiva y muy sencilla, aunque el efecto es incontrolado. El abordaje laparoscópico está bien establecido por lo que es necesario esperar y analizar los resultados de otros estudios para adoptar esta técnica.