optimally sparing the normal critical tissues surrounding the target to be irradiated [7], like SBRT (Stereotactic Body Radiation Therapy) for small lesions, in order to increase the delivered radiation dose in selected cases. SBRT has also been proposed to preoperatively irradiate the posterior margin area, in an attempt to increase the R0 resection rate in this difficult to resect area [8]. All these aspects will be described and precisely discussed at the time of the conference.

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Thursday, 22 March, 16:00−17:30

Session IV. Different Cancer Types in the Oesophagus and Stomach

PG 5.01 SPEAKER ABSTRACT

Modern endoscopic imaging of gastrooesophageal lesions: Different techniques for different locations

R. Kiesslich. *Interdisziplinäre Endoskopie, Uniklinik Mainz, Mainz, Germany*

The prognosis of esophageal neoplasia is closely related on the stage of the disease at the time of detection. Early neoplastic lesions have an excellent prognosis in contrast to more advanced stages that usually have a dismal prognosis. Therefore, the early detection of these lesions is of great importance.
Several new endoscopic techniques have been introduced to improve the endoscopic detection of early lesions. The most important improvement, in general, has been the introduction of high-resolution/high-definition endoscopy into daily clinical practice. The value of superimposing techniques such as chromoendoscopy, narrow band imaging and computed virtual chromoendoscopy onto high-resolution/high-definition endoscopy do further refine the characterization of lesions and guide endoscopic therapy.
Furthermore endomicroscopy enables in vivo histology during ongoing endoscopy at subcellular resolution. This leads to immediate histological diagnosis of Barrett's esophagus and associated neoplasia. Endomicroscopy will also open the door for functional and molecular imaging as initial studies have shown.
Standardized teaching of the new diagnostic possibilities will be of fundamental importance to provide the affected patients with the best standard of care.

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Kiesslich R, Canto MI. Confocal laser endomicroscopy. Gastrointest Endosc Clin N Am. 2009 Apr;19(2):261−72.
Curvers WL, Kiesslich R, Bergman JJ. Novel imaging modalities in the detection of oesophageal neoplasia. Best Pract Res Clin Gastroenterol. 2008;22(4):687–720.

PG 5.02 SPEAKER ABSTRACT

Adenocarcinoma of the GEJ: gastric or oesophageal cancer?

J. Rüschoff. *Pathologie Nordhessen, Kassel, Germany*

Adenocarcinomas of the Oesophagus (OC) and Stomach (SC) are two different types of tumors that showed marked changes of incidence with constant rise of OC and decrease of SC during the last three decades in the Western World. Both types arise by two different etiological mechanisms − reflux and Barrett metaplasia in OC and H. pylori infection in SC. However, much confusion exists about the tumors at the distal third of oesophagus and gastric cardia. Adenocarcinomas at the gastrooesophageal junction (GOJ) have recently been defined as a third tumor type (GOJ cancer) by WHO Classification of Tumours of the Digestive System (2010). This classification is replacing the anatomic system of Siewert suggesting that type I (distal oesophageal) is different from type II (cardiac) and type III (subcardiac) adenocarcinoma. These tumors have now been included within the oesophageal category by UICC Cancer Staging Manual (7th ed., 2010). Besides morphologic heterogeneity (WHO 2010) there is strong evidence that at least two main different molecular pathways of carcinogenesis exist. Based on differences in the immunohistological-phenotype (intestinal vs gastric type cancer) and the accompanying background mucosa (Barrett vs cardiac type) about 70% of GOJ adenocarcinomas turned out to be associated with Barrett's metaplasia (*intestinal-type neoplastic pathway*) and about 1/3 with metaplastic columnar epithelium (*non-intestinal neoplastic pathway*). These pathways reflect distinct clinical and prognostic groups being significantly different with respect to the prevalence of potential therapy target such as EGFR and Her2/neu (Demicco et al., Mod Pathol 2011). In the latter anti-Her2 therapy recently turned out to be effective (Bang et al., Lancet 2011) which was based on specifically developed Her2 testing guidelines (Rüschoff et al., Mod Pathol 2012). Finally, the impact of the intestinal and non-intestinal pathway concept on current recommendations of AGA to not perform endoscopic surveillance in patients solely with (non-intestinal) columnar-type epithelium in the esophagus (http://www.gastrojournal.org/article/S0016-5085%2811%2900084-9/fulltext#sec2) will be challenged.

PG 5.03 SPEAKER ABSTRACT

Molecular mechanisms in gastric cancer: Basis for therapy?

R. Seruca. *IPATIMUP, Porto, Portugal*

Gastric cancer (GC) is one of the leading causes of cancer-related death worldwide, even though its incidence and mortality rates have been declining in recent decades. At initial diagnosis, most GC patients present an advanced disease stage with a high risk of relapse after surgical treatment. Various multimodal therapy regimens are used to improve the patient prognosis, with limited success. The high prevalence of incurable disease produces a heavy burden on patients' care which has a huge effect on healthcare resources. E-cadherin alterations/deregulation is a frequent event in gastric carcinogenesis, as an initiation event in more than 50% of diffuse GC, and as a progression event, by increasing epithelial cell invasion, in more than 70% of all gastric cancers. Recently, E-cadherin was suggested to act as a cell membrane receptor interacting with many signalling molecules. In this regard molecules interacting with E-cadherin became central targets for therapeutic intervention in gastric cancer. An increasing number of genetic and epigenetic alterations have also been associated with distinct histological types of gastric cancer. We will discuss the involvement of E-cadherin, EGFR, ERBB2, MMR genes, KRAS, and PIK3CA in the development and progression of gastric cancer and their role as biomarkers or as novel putative targets for therapy. We will also pay special attention to define the subset of gastric carcinoma which may benefit from EGFR and Notch inhibitors.

PG 5.04 SPEAKER ABSTRACT

Why is there a change in patterns of GE cancer?

J. Jankowski. *Centre for Digestive Diseases, Barts and the London School of Medicine and Dentistry, London, UK*

Abstract not available.

Friday, 23 March, 08:30−10:00

Session V. Choosing the Best Treatment for Oesophageal Cancer

PG 6.01 SPEAKER ABSTRACT

Who is a candidate for endoscopic surgery?

T. Oyama. *Gastroenterology, Saku Central Hospital, Nagano, Japan*

The incidence of lymph node metastasis is correlated with some pathological findings such as invasion depth, histological type and lymphatic or venous permeation [1,2]. However, these pathological findings could not be learned

via ablation method. Therefore, EMR or ESD [3] is better than ablation method as the treatment for the superficial esophageal cancer.

1. Indications of endoscopic resection for esophageal squamous cell carcinoma

1.1. Absolute indication.

The indication of endoscopic resection is esophageal cancer without lymph node metastasis. According to Japanese criteria, the invasion depth of mucosal SCC (T1a) was divided into three groups, as follows;

T1a EP: SCC those remaining in the mucosal epithelium (EP)

T1a LPM: SCC those remaining in the lamina propria mucosae (LPM).

T1a MM: SCC those contact or invade muscularis mucosae (MM)

And, the invasion depth of submucosal SCC was divided into two groups, as follows;

T1b SM1: SCC those invaded submucosal layer 200 micrometer or less.

T1b SM2: SCC those invaded submucosal layer 201 micrometer or deep.

The incidence of lymph node metastasis of T1a EP and LPM is extremely rarely. Therefore, T1a EP or LPM SCC was defined as the indications for endoscopic resection by the guidelines of Japan Esophageal Society [4].

1.2. Relative indications.

The incidence of lymph node metastasis of T1a MM, T1b SM1 and T1b SM2 reported as 9.3%, 19.3% and 40%, respectively [2]. The standard treatment for T1a MM or T1b SM is esophagectomy with lymph node dissection. However, the QOL after esophagectomy is not good. Therefore, T1a MM or T1b SM1 with clinical N0 (no lymph node swelling by CT and EUS) was defined as relative indications of endoscopic resection. In addition, lymphatic or venous involvement and infiltrative growth have been reported as the risk factors. However, precise pathological diagnosis is impossible by the piecemeal resected specimen. Therefore, an En bloc resection is necessary for the treatment of superficial esophageal SCC.

2. Indications of endoscopic resection for esophageal adenocarcinoma

Usually, the Barrett's esophagus has double layer of muscularis mucosae (MM), such as superficial MM (SMM) and deep MM (DMM). According to the Japanese criteria, the invasion depth of mucosal Barrett's esophageal adenocarcinoma was divided into three groups.

T1a SMM: adenocarcinoma those remaining in the mucosal epithelium (EP) or contact the SMM.

T1a LPM: adenocarcinoma those invaded SMM but not contact DMM

T1a DMM: adenocarcinoma those contact DMM.

And, the submucosal layer was divided into three groups as follows;

T1b SM1: upper one third of submucosal layer

T1b SM2: middle one third of submucosal layer

T1c SM3: lower one third of submucosal layer.

The risk factors of lymph node metastasis of mucosal or submucosal gastric adenocarcinoma are histological type (undifferentiated type), ulceration, invasion depth (500 micrometer under MM) and size [5]. And, the indication of endoscopic resection was defined based on the histology, size and invasion depth. However, the investigation of the risk factors of lymph node metastasis of superficial Barrett's adenocarcinoma (BEA) has not been enough. Therefore, the Japanese guide line defined the indication for BEA as T1a SMM or LPM. And, the relative indications have been discussing.

Reference(s)

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PG 6.02 SPEAKER ABSTRACT

Open or microinvasive resection?

C. Mariette. *Service De Chirurgie Digestive Et Générale Hôpital Claude Huriez, University Hospital of Lille, Lille, France*

Oesophagectomy is one of the most challenging surgeries. Potential for morbidity and mortality is high. Minimally invasive techniques have been introduced in an attempt to reduce postoperative complications and recovery times. Debate continues over whether these techniques are beneficial to morbidity and whether oncological resection is compromised. Globally, minimally invasive oesophagectomy (MIO) to oesophageal resection have been shown to be feasible and safe, with outcomes similar to open oesophagectomy. There are no controlled trials comparing the outcomes of MIO with open techniques, just a few comparative studies and many single institution series from which assessment of MIO and its present role have been made. The reported improvements from MIO approaches include reduced blood loss, time in intensive care and time in hospital. In comparative studies there is no clear reduction in respiratory complications, although larger series suggest there may be a benefit from MIO. Although MIO approaches report less lymph node retrieval compared with open extended lymphadenectomy, MIO cancer outcomes are comparable with open surgery. MIO will be a major component of the future esophageal surgeons' armamentarium, but should continue to be carefully assessed. Randomized trials comparing MIO versus open resection in oesophageal cancer are urgently needed: two phase III trials are recruiting, the TIME and the MIRO trials.

PG 6.03 SPEAKER ABSTRACT

Criteria for selecting the best multimodial therapy

A.H. Hölscher. *General, Visceral and Cancer Surgery, Uniklinik Köln, Köln, Germany*

Multimodal therapy means the combination of different treatment modalities for one disease. Adenocarcinoma (AC) or squamous cell carcinoma (SCC) of the oesophagus are different histopathologic entities but as the therapeutic results are not very different the histology has not been differentiated in many studies. In the neoadjuvant setting multimodal therapy of oesophageal cancer comprises mostly the combination of chemoradiation or only chemotherapy followed by surgery. Radiation alone as neoadjuvant treatment has more or less been given up because it has inferior results compared to radiochemotherapy. The strategy of neoadjuvant radiation alone has been analysed in 6 randomized published trials. A clinical response on neoadjuvant radiotherapy was reported in one third of the patients, a significant survival benefit however was only proven in 1 study [1]. Two studies even reported an inferior overall survival of the patients with neoadjuvant radiotherapy. A metaanalysis of 1147 patients mostly with SCC from 5 randomized studies showed a relative reduction of risk concerning death of 11%. The survival difference was 3% after 2 years and 4% after 5 years [2]. This result was not significant ($p = 0.062$). Because of these results neoadjuvant radiotherapy has no indication. In the adjuvant setting multimodal therapy of oesophageal cancer has been performed with surgery followed by chemotherapy (CTX) or radiotherapy (RTX) or radiochemotherapy (RTX/CTX). However the studies on adjuvant therapy have not shown a survival benefit compared to surgery alone. Therefore postoperative therapies with curative intention currently have no significance [3]. In the following palliative treatment will not be discussed, the focus is on multimodal therapy with curative intention and on neoadjuvant protocols.

Selection criteria Criteria to define the best multimodality treatment of oesophageal cancer are in the first place the long term results concerning overall survival disease free survival and quality of life from prospective randomized trials, from metaanalysis of randomized trials and from well designed retrospective studies. Further short term results are important as for perioperative mortality percentage of R0 resection number of resected lymph nodes and response to neoadjuvant treatment according to clinical criteria PET ("metabolic response") and histopathology of the specimen of such studies mentioned above. Indication for multimodal therapy The purpose of multimodal therapy is to combine the effects of different modalities because the results of monotherapy like surgery are unsatisfactory [3]. This is true especially for advanced cancer. The aim of the neoadjuvant treatment modality therefore is to reduce the size of the primary lesion to reduce the number of infiltrated lymph nodes to destroy potentially free tumor cells [5].

The first effect should result in a "downsizing" of vital tumor not always in a downstaging of the T-category. The shrinkage of the lesion is not always centripetal because vital tumor may be left behind in the peripheral areas of the cancer. This effect should facilitate the complete surgical removal of the tumor in order to achieve a R0-resection with sufficient tumor free resection margins. For oesophageal cancer this is especially important in areas with closely neighbouring organs like the trachea.

As advanced tumors mostly have lymph node metastasis the neoadjuvant modality should also destroy, damage or reduce the amount of infiltrated lymph nodes [5,6]. Both local effects concerning the primary lesion and the cancerous lymph nodes can be achieved by radiochemotherapy or chemotherapy or combined radiochemotherapy.

The third effect against circulating tumor cells can only be achieved by systemic chemotherapy. The indication for neoadjuvant therapy concerns patients with T3 or resectable T4 carcinomas and those with suspicion of lymph node infiltration. This however is difficult to prove [7]. The purpose of neoadjuvant treatment is not to make non resectable tumors resectable but to facilitate R0 resection with good safety margins. This also means radical en bloc esophagectomy and not a lesser extent of resection because of potential tumor response. From our point of view radical surgery including adequate lymphadenectomy is an essential modality of multimodal treatment [8−10].

Prospective randomized trials and metaanalysis Concerning neoadjuvant CTx 10 randomized trials have been published which comprised AC as well as SCC