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.

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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

[11, 12, 13]. The latest metaanalysis of Sjoquist from 2011 about 2062 patients from these 10 studies showed a significant improvement of the 2 year overall survival of 5.1% after neoadjuvant CTX compared to surgery alone [14]. For patients with AC the difference was significant (Hazard ratio (HR) 0.83) whereas for those with SCC it was not (HR 0.95). As for neoadjuvant RTX/CTX the metaanalysis of Sjoquist is based on 1932 patients with AC or SCC from 13 randomized trials [14−19]. The 2-year overall survival benefit was 8.7% according to a reduction of overall mortality of 0.78 in favour of induction therapy compared to surgery alone. The improvement of survival was about the same for AC or SCC.

Summary: In summary the current data show that after neoadjuvant therapy of oesophageal cancer compared to surgery alone (1) the R0-resection is higher, (2) the perioperative mortality is slightly higher, (3) the overall 2 year survival rate is improved by 5%-8% with slight advantage for RTX/CTX compared to CTX, (4) The real benefit is achieved in the group of responders. The best multimodal therapy for advanced squamous cell carcinoma or adenocarcinoma of the oesophagus is neoadjuvant radiochemotherapy followed by transthoracic esophagectomy and radical lymphadenectomy. For adenocarcinoma neoadjuvant chemotherapy followed by radical surgery and adjuvant chemotherapy is a good alternative.

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PG 6.04 SPEAKER ABSTRACT

Biomarkers in the management of oesophageal cancer

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Abstract not available.

Friday, 23 March, 10:30−12:00

Session VI. Multimodal Therapy of GEJ Cancer

PG 7.01 SPEAKER ABSTRACT

When is definite radiochemotherapy the treatment of choice?

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The main goal for investigating multimodal therapy in GEJ cancer was to improve the prognosis, in particular the cure rate of the patients. With this respect it appears most useful to combine all treatment options available, e.g. chemotherapy, radiotherapy, and surgery to optimize treatment results. So, why should we discuss the role of definitive radiochemotherapy (RCT) without surgery? First of all because some of our patients have severe comorbidities which will unacceptably increase postoperative mortality. This risk will increase with the need for transthoracic instead of transhiatal esophagectomy and therefore is more likely in patients with tumors clearly invading the esophagus (type I cancer according to Sievert). However, it is easily spoken and hardly done to properly define inoperablity of a patient and the scarce data we have from treatment centers worldwide are somewhat different in their numbers of patients to be excluded from surgery. Second there are always patients who deny surgery because they want to keep their esophagus und stomach preserved. No doubt this will be the most appropriate way to safe life quality, but is RCT a treatment that may also safe life? There are sufficient data from randomized trials to assume this in patients with esophageal squamous cell carcinomas (SCC), whose tumors have regressed after RCT [1,2]. However, randomized studies investigating definitive RCT in adenocarcinomas of the esophagus or EGJ are lacking. From an US Surveillance Epidemiology and End Results analysis [3] including more than 4700 patients treated between 1973 and 2004 we know that the results of definitive or preoperative radio(chemo)therapy are equal or even improved for adenocarcinoma compared to SCC of the esophagus with a 3-year survival rate after definitive radiotherapy of 20% in both histologies. Moreover, a French matched-pair analysis [4] showed that despite clinical complete response to definitive RCT was observed significantly more often in squamous cell carcinomas (70% vs. 46%, $p = 0.01$), local recurrence in responders to RCT was significantly less frequent in AC and median overall survival was not different between both histologies. Definitive radiochemotherapy cannot regarded as an treatment standard in GEJ cancer. However, it is an option for patients who are not operable or who deny surgery. Since randomized data is lacking the curative potency of this treatment is unclear.

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