

ISDE



NEWS

The International Society for Diseases of the Esophagus No. 5, Feb. 1st, 1989

Secretariat : ISDE Office Tokyo Women's Medical College 8-1 Kawadacho Shinjuku-ku Tokyo 162, Japan Tokyo 03(353)8111

APPROACHING!!

FOURTH WORLD CONGRESS OF THE INTERNATIONAL SOCIETY FOR DISEASES OF THE ESOPHAGUS

Program Description:

Wednesday, September 6, through Friday, September 8, the program will offer 80 scientific papers, 120 poster papers, invited lectures by international figures in esophageal disease, luncheon panels, scientific cinema and video presentations, and technical exhibits.

Submitted papers, invited lectures, audiovisual presentations and poster sessions will provide a comprehensive update of scientific and clinical research and clinical practice in esophageal disease. Medical and surgical approaches to esophageal disease will be discussed. Topic areas covered will include:

Basic Aspects of Physiology and Anatomy
Benign Disorders of the Esophagus
Gastroesophageal Reflux Disease
Motor Disorders
Stricture
Barrett's Esophagus
Congenital Disorders
Malignant Disorders of the Esophagus
Diagnosis of Esophageal Malignancies
Staging of Esophageal Cancer
Therapeutic Approaches to Esophageal Malignancies
Reconstruction after Esophagectomy

**SEPTEMBER 6-8, 1989
FAIRMONT HOTEL
CHICAGO, ILLINOIS, U.S.A.**

Congress President
David B. Skinner, M.D., FCCP

Organizing Committee
Alex G. Little, M.D., FCCP
Mark K. Ferguson, M.D., FCCP



Prof. David B. Skinner
Congress President

Fourth World Congress of ISDE

Social/Guest Program:

Tuesday evening, September 5: Opening Congress reception in the State of Illinois Building, a neomodern glass-and-steel landmark in Chicago's Loop. Optional postreception boat ride on the Chicago River and Lake Michigan.

Wednesday evening, September 6: Reception in the Regenstein Pavilion, Chicago Art Institute.

Thursday evening, September 7: Congress banquet in the Imperial Ballroom, Fairmont Hotel.

Friday evening, September 8: Farewell event in the Crystal Room, Fairmont Hotel.

Continuing Medical Education Credit:

The American College of Chest Physicians is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to sponsor continuing medical education for physicians.

The American College of Chest Physicians designates that this continuing medical education offering meets the criteria for hour-for-hour credit in Category I as outlined by the American Medical Association for the Physician's Recognition Award.

Hotel Accommodations:

A block of rooms has been reserved at the Fairmont Hotel, Chicago. Reservation forms for the Fairmont Hotel will be sent to applicants upon receipt of their Congress registration. Alternative hotel information will be sent upon request by checking the box on the congress registration form. Hotel reservations must be received by the hotel on or before August 4, 1989. After that date, all reservations will be made on a space-available basis. Please make hotel reservations immediately upon receipt of the hotel reservation card, which will be sent with acknowledgment of Congress registration.

Congress Registration Fees:

Members of ISDE and ACCP.....	\$300
Nonmember physicians.....	\$350
Member physicians-in-training.....	\$150
Nonmember physicians-in-training.....	\$175
Spouse or guest of Congress registration.....	\$150
Allied health professionals.....	\$175

NOTE: A \$50 additional fee will be charged for on-site registration.

Refunds for cancellation by registrants prior to August 15, 1989 will be made less a \$30.00 administrative fee.



CURRICULUM VITAE

Alexander G. Little III, M.D.

- Born: August 24, 1943, Atlanta, Georgia
- 1965 A.B., University of North Carolina
- 1974 M.D., John Hopkins School of Medicine
- 1974— Johns Hopkins Hospital, Baltimore
- 1981 Maryland and University of Chicago Medical Center
- 1988 Professor and Chairman, Department of Surgery University of Nevada School of Medicine



CURRICULUM VITAE

Mark K. Ferguson, M.D.

- Born: January 10, 1951
Minneapolis, Minnesota
- 1969—
- 1973 A.B., Harvard College
- 1973— M.D., University of Chicago Pritzker School of Medicine
- 1977— University of Chicago Hospitals, Surgical Resident
- 1984— Assistant Prof., University of Chicago Pritzker School of Medicine
- 1987
- 1988— Associate Prof., University of Chicago Pritzker School of Medicine

The ISDE's address is as follows

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Kawadacho Shinjuku-ku
Tokyo 162 Japan

Please be sure to include the name "ISDE".

Research Remarks

BARRETT'S ESOPHAGUS—"STATE OF ART"

The term Barrett's esophagus is used to define a situation where the esophagus is circularly lined by a cylindrical epithelium, some centimeters above the esophagogastric transition, usually associated to hiatal hernia and gastroesophageal reflux.

This condition is of considerable importance because it can be associated to deep chronic ulcers, stenosis and mainly adenocarcinoma of the esophagus.

Concerning the origin of the epithelium, it is well defined, at the moment. This epithelium has an acquired origin, and it is related to the gastroesophageal reflux.

The diagnostic suspicion is aroused by the symptoms. The most frequent is a long period of heartburn, complicated by dysphagia, chest pain, hematemesis or weight loss.

The diagnosis of Barrett's esophagus is made when we can determine the relative position between the epithelial transition, the esophageal sphincter and the diaphragm hiatus, using endoscopy, manometry, Rexam and endoscopy during the surgery defining the portion of esophagus lined by columnar epithelium.

There is no doubt today this epithelium has high risk of degeneration, mainly when dysplasia is observed or in case of intestinal metaplasia.

The management of Barrett's esophagus is made by eliminating the gastroesophageal reflux, the main pathophysiological factor in this situation.

The reflux can be eliminated by medical and surgical methods. In few cases the radical surgical method represented by the subtotal esophagectomy is necessary, as the follow: adenocarcinoma, scleroderma and severe peptic stenosis.

Thus the medical method cannot definitively eliminate the reflux, there is a consensus between the authors that this method must be reserved for the cases where surgery cannot be performed due to the age or any clinical contraindication.

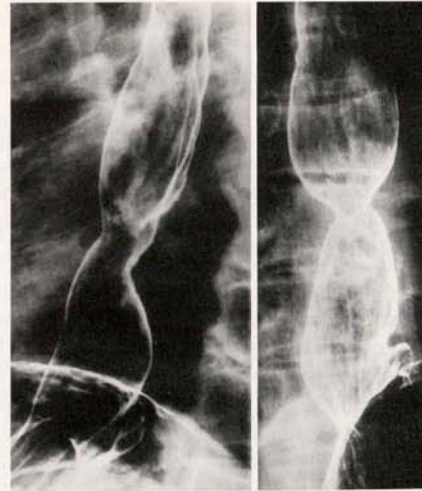
The applied conservative surgery treatment is the hiato-plasty by approximating the two branches of medial pillar of diaphragm associated with the partial posterior fundoplication, involving two thirds of the esophageal circumference with the gastric fundus.

The results obtained by the conservative surgical treatment was as follows:

This operation in our experience was performed in 33 cases, but for the conclusions we utilized only 22 cases that could be followed over 2 to 10 years with an average of 4 years and 10 months.

The level of the epithelium remained the same before and after the operation.

In one case (4.5%) 2 years after the operation, an adenocarcinoma occurred. This case was treated by esophagectomy without thoracotomy and remains in good condition until today, three years after the radical treatment.



The possibility of adenocarcinoma degeneration of Barrett's epithelium referred by international literature in prospective studies is 2.5% in a follow-up from 1.5 to years quite different from the retrospective studies where the incidence was near 15%.

Comparing these results with that obtained after conservative surgical treatment, in 106 cases mentioned by many authors, we can see that the adenocarcinomatous degeneration possibility is the same with or without a conservative operation, and only in 12% of the cases a partial regression of the Barrett's epithelium was observed.

In conclusion: The indicated treatment for the Barrett's esophagus is the fundoplication, eliminating the reflux surgically. The follow-up with an annual endoscopic study is necessary due to the 5% possibility of adenocarcinomatous degeneration, even after surgical treatment.

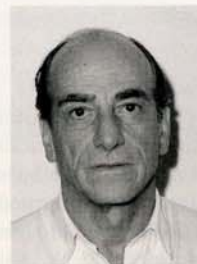
Henrique Walter PINOTTI—

Professor of Surgery. Chairman of the Digestive Surgery Division, Department of Gastroenterology of the Medical School of University of Sao Paulo, Sao Paulo, Brazil.

Wilson Modest POLLARA—

Assistant of the Digestive Surgery Division. Member of the Esophageal Surgery Unit.

(H.W. Pinotti, W.M. Pollara)



Prof. H.W. Pinotti



Prof. W.M. Pollara

Related Activities

France

OESOPHAGEAL SURGERY IN FRANCE

The prevalence of oesophageal carcinoma is high in France because of the heavy rate of combined alcoholic and tobacco consumption. After colonic carcinoma, esophageal carcinoma is the 2nd cause of death by digestive cancer. Gastric carcinoma is third.

Surgery of the esophagus began to develop in France after World War II. During the period between 1945-1960, French surgeons including Lortat-Jacob, Santy and Maillet pioneered techniques, invented new instruments, as they formed and trained the younger generation. Esophageal surgery developed rapidly afterwards during the years 1960-1975, but the mortality (30%) and morbidity rates of esophageal surgery remained high.

During the last ten years, the principal surgical teams dealing with this type of surgery in France include those of Fekete and Maillard in Paris, Gignoux and Segol in Caen, Rebound in Marseille, Launois and Campion in Rennes, and Beaulieux in Lyon. Their experience has largely contributed to reducing the rate of mortality and complications while indications have been extended.

Unfortunately, one third of patients are withheld from operation either because of severe physical impairment or because of the extension of disease at the time of diagnosis. The percentage of multicenter and associated tumors (ENT, bronchopulmonary, non squamous cell carcinoma) hovers close to 10%. Most tumors invade the esophageal adventitia and are associated with Lymph node spread. Superficial carcinoma represents 15% of operated patients.

The most commonly used operative procedure is removal of the esophagus by the combined abdominal and right thoracic routes. The proximal oesophago-gastric anastomosis is made at the apex of the thorax or in the neck for carcinoma located below and above the aortic arch, respectively. Celiac and mediastinal lymph nodes must be removed. The mortality rate is lower than 5% for some teams. Total oesophagopharyngolaryngectomy is performed for carcinoma of the proximal esophageal junction and cervical esophagus. The digestive tract is reconstructed by means of a gastric tube or coloplasty. Pre and postoperative radiation or chemotherapy trials have been conducted, but they have not been conclusive. Even though adequate lymph node removal cannot be ensured by this technique, esophagectomy without thoracotomy is performed in some centers.

Non cancerous disease of the esophagus occupies an important place in esophageal surgery in France. Gastroesophageal reflux, one of the principal non cancerous diseases of the esophagus, is routinely studied by pH-metry and manometry. Gastroesophageal reflux, complicated by esophagitis or poorly tolerated, is treated by Nissen fundoplication or a posterior half-wrap by the abdominal route. Severe cases with stenosis, Barrett's esophagus or



postoperative esophagitis are treated by duodenal diversion rather than by resection. The Collis-Nissen procedure is rarely employed in France.

Motor disorders, diverticula, idiopathic achalasia, diffuse spasm are also common diseases. Heller's operation by the abdominal route and pneumatic dilatation are performed, accordingly. Severe acute corrosive esophagitis requires transhiatal esophagectomy and total gastrectomy. Secondary reconstruction is made by coloplasty.

Operative mortality in esophageal surgery is low, because intrathoracic fistules have become scarce; morbidity, however, remains high because of postoperative pulmonary infection.

(F. Fekete)

Geemo

Report about the VIII. GEEMO-Meeting on Caustic injuries of the esophagus and Carcinoma of the upper third of the esophagus

Leuven, September 17, 1988

President: Prof. Dr. T. Lerut

Dr. Mendes de Almeida from Lisbon made an analysis of a questionnaire of 16 European institutions contributing 1418 cases of caustic esophageal lesions. 973 were acute lesions and 445 chronic lesions. 923 patients had caustic lesions because of lye, 382 because of acid, and 113 because of ingestion of other fluids. Primary symptoms of perforation were observed in 2.1% (mediastinitis 1.6%, cervical emphysema in 0.5% and peritonitis in 0.5%). If there had been signs of peritonitis intraoperatively, the mortality rate was 48.8%. All operative procedures had a high mortality rate of 20-35%. About 50% of all patients needed a secondary esophagoplasty. A secondary carcinoma after chronic lesion as a result of a caustic injury of the esophagus developed in 12 cases, that means 2.5%.

Dr. Gayet from Paris suggested a 4 stage classification of caustic esophageal injuries with stage I erythema, stage II noncircumferential ulcers and stage IV complete necrosis or perforation. Dr. Gayet suggested an early and severe acid. The mortality rate was 8.3%. In his series all patients with esophageal necrosis had gastric necrosis but not all patients with gastric necrosis had esophageal necrosis. Dr. Celerier reported a series of 9 cases with necrotic lesions of trachea and bronchus after burns of the upper respiratory tract. The author performed as an emergency operation tracheobronchoplasty using a lung patch or a plasty with the latissimus dorsi muscle.



Prof. T. Lerut

Dr. Ribet from Lille observed 5 cases with a mucocele of the esophagus after exclusion in case of caustic injury. The relevance of the development of mucoceles in an excluded esophagus was discussed.

Dr. Gerzic from Belgrad reported about esophagocoloplasty for postcorrosive strictures of the esophagus and he had a low mortality rate of 2.3% in 88 patients of the last 9 years with good functional long term results.

Dr. Bardini from Padova suggested a pharyngoplasty in 3 or 2 stages after damages caused by caustics. In a first step after resection a suture of the posterior wall of the anastomosis in the neck is performed and a provisory cutaneous stomy is done. The stomy can easily be closed after 3 weeks.

Dr. Bardini reported also the questionnaire about carcinoma of the upper third of the esophagus. This questionnaire included 529 cases with an average age of 58.4 years. In 16.4% CT could demonstrate an infiltration of the aorta or tracheobronchial tree. 3.3% of the patients had a concurrent cancer in the ENT region. The resection rate was 50.4% with a hospital mortality rate of 11% (curative 9.6%, palliative 14.4%). The 5-year-survival rate was 9.3%.

Dr. Fink from Munich gave a summary of a multimodality treatment of squamous cell carcinoma of the upper half of the esophagus with concurrent radio- and chemotherapy. 30 patients with locally advanced squamous cell carcinoma of the upper half of the esophagus without distant metastases were treated. The treatment consisted of mitomycin C (10 mg/sqm/day 1), and continuous infusion of 5 fluorouracil (1500 mg/day 1-4) and a radiotherapy of 30 Gray. A major clinical response was observed in 15 patients, minor response in 8, no changes in 5, and a local progression in 1 patient. One patient died during the 3rd week of therapy due to septicaemia. 18 of 29 patients were referred to surgery and could be resected. In 11 patients surgery could not be performed due to severe comorbidity. 4 tumor recurrences were observed in the surgically treated group. In conclusion concurrent chemoradiotherapy preoperatively improved the resectability and the local control of advanced primaries in the upper half of the esophagus. However, to improve curability more effective multimodal strategies are necessary. (A. Holscher)

Scholarship Report



A RESEARCH EXPERIENCE IN OMAHA: DOGS SWITCH ON COMPUTERS

Itinerary

June 29, 1987	Arrived in Omaha
September 7-10, 1987	Visit to Mayo Clinic
August 1, 1988	Leave Omaha

Since July, 1987 I have studied for 13 months in the Department of Surgery at Creighton University, Omaha, Nebraska, U.S.A. The Surgery Department involves the General Surgery division with nine senior staff members, the Cardiovascular Surgery division with four staff members, the Thoracic Surgery division with four staff members, and the Colorectal Surgery division with two staff members. The Department also has 21 residents and 11 research fellows (six GI fellows) now. The Chairman of the Department of Surgery is Dr. Tom R. DeMeester who is well known with his score about 24-hour pH study and the successful operation for gastroesophageal reflux disease (GERD).

My research activity in the Department of Surgery at Creighton University was in two parts; clinical research and basic research. Usually I spent two days a week performing esophageal manometry and pH monitoring of the esophagus or the stomach in patients or volunteers. On the other days I used dogs to perform physiological experiments in the animal laboratory. Both studies were interesting for me and I really enjoyed the time in the esophageal lab and animal lab in Creighton University.

Clinical Research

Esophageal manometry and 24-hour pH monitoring are now well known to be important in making a precise diagnosis for patients with heartburn, unexplained choking, chest pain, or dysphagia. The manometry here was measured by using a perfused multi-lumen catheter connected to a pneumohydraulic capillary infusion pump. The analogue signals recorded from various parts of the study were connected to digital numbers and stored on a personal computer for analysis. The location, length, pressure, and percent relaxation of the lower and upper sphincter were summarized by a computer program. The record of 24-

hour pH monitoring was also transferred from a digitraper to a computer. Reflux episodes were defined by the pH falling below 4.0 and the following parameters—number of episodes and percent time while supine, upright, and total—were used to calculate a pH score (The DeMeester score). In the case of gastric pH analysis, fraction times in fasting upright position, in supine position, of prandial pH plateau and of post prandial pH decline were evaluated at each pH level and calculated to get the gastric score (Fuchs & DeMeester, 1987). Recently 24-hour ambulatory manometry has been used for patients who need further detailed diagnosis. This was also analyzed by a computer program here.

The manometry and pH data were discussed at the Swallowing Conference with gastroenterologists and radiologists on Friday mornings. Video roentgenographic barium studies and endoscopies were presented with manometry and pH records. This combined department (Swallowing Center) was of great value to analyze pathophysiological conditions of patients.

Basic Research

In addition to clinical activity, we completed four research projects; one was to investigate the gastric acid secretion in the dogs before and after a new operation called the "duodenal switch" and the other three were basic researches on gastric secretion in dogs.

Duodenogastric Reflux

Duodenogastric reflux (DGR) often occurs along with an incompetent cardia and causes duodenogastroesophageal reflux. To prevent the side effects of the Roux-en-Y operation with gastrectomy such as gastric dumping or delayed gastric emptying after vagotomy, suprapapillary Roux-en-Y duodenojejunostomy (duodenal switch operation) was proposed as the surgical treatment for the patient with pathological DGR (DeMeester, 1987). Early surgical attempts for bile diversion (e.g. Mann Williamson procedure) resulted in a high incidence of stomal ulcers. The duodenal switch operation, however, is associated with a very low incidence of stomal ulcers in the experimental animals, and no ulcer has been seen in the 22 patients done so far. The purpose of our study was to see why this operation prevented stomal ulcers and to measure the changes of acid secretion and gastrointestinal hormones which may have inhibited the gastric acid secretion. Acid response to meal and histamine was obtained from the Pavlov pouch and gut hormones such as gastrin, secretion, CCK, NPY, PYY and GIP in plasma were measured before and after duodenal switch operation in six conscious dogs.

Gastroesophageal Reflux

Gastric hypersecretion is a common finding in gastroesophageal reflux. It often overcomes the mechanically normal cardia to produce reflux. It has become, therefore, important to study the inhibitory mechanism that regulates gastric acid secretion physiologically. We have done three academic projects in our animal laboratory; (a) a study of the biological activity of the new gastrin C-terminal derivatives, (b) a study of the mechanism of action of pirenzepine, and (c) a study of the feedback mechanism between the gastric antrum and fundus.

a) Gastrin Analogues

The biological activity of gastrin is known to reside in the C-terminal tetrapeptide. This sequence has been further analyzed and several substitutions were shown to be potent inhibitors of gastric acid secretion. Effective inhibitors of gastrin should have both affinity for the receptor and resistance to dipeptidase contained within the receptor. A series of di- and tripeptide derivatives of the C-terminus of gastrin were synthesized and we have studied the inhibitory actions on gastric acid secretion in six conscious dogs with gastric fistulae and Heidenhain pouches.

b) Pirenzepine

Muscarinic receptors showing high affinity to pirenzepine have been found in discrete areas of the brain and peripheral ganglia (M1 receptors). Low-affinity sites for pirenzepine have been located in muscles of the heart and in the smooth muscle of the upper intestine and the urinary bladder (M2 receptors). In vitro studies it is suggested that muscarinic receptors on gastric parietal cells are not M1 in type. To elucidate the function of pirenzepine on the gastric acid secretion in dogs, we used neural agonists which purely stimulated the different parts of vagal pathway in conscious dogs.

c) Fundo-pyloric Relationship

Any drugs or operative interferences which reduce the ability of the gastric fundus are accompanied by increases in fasting blood gastrin levels. On the other hand, reduction of the sensitivity on antrum mucosa decreases acid secretion without changes of gastrin levels. Fundo-pyloric relationship and correlation of gastrin and adrenergic nerves were studied using conscious dogs with antral and fundic pouches. Further work has to be done to prove this hypothesis.

Finally, I appreciate Dr. Tom R. DeMeester, Chairman of the Department of Surgery, for giving me this great opportunity to work in his department and leading me in both clinical and basic studies. I also appreciate Dr. Ronald A. Hinder who encouraged me with his great kindness, and Dr. Donal F. Magee, Chairman of the Department of Physiology, who always taught me gastrointestinal physiology in his lab. I thank the GI fellows of 1987; Dr. Ernst P. Eypasch (from Koln, West Germany), Dr. Antony P. Barlow (from the Royal Lancaster Infirmary, England), and Dr. Richard E. Perry (from Christchurch University, New Zealand) for their great help and kindness.

The scholarship of I.S.D.E. was of great help for me to come to the U.S.A. and giving me the opportunity to study in the Department of Surgery at Creighton University. Omaha is one of the larger cities in the Midwest. People here were very kind and are likely to preserve the good traditions of the great America. I have really enjoyed the life of Omaha, and experienced valuable days in the U.S.A.

(A. Yasui)

FLOW CYTOMETRIC DNA ANALYSIS AND MALIGNANT POTENTIALITY OF SQUAMOUS CELL CARCINOMA OF THE ESOPHAGUS

I arrived at The Department of Surgery of The University of Chicago on January 1988. I was really impressed by the organization and the technology of this hospital. Moreover, I also appreciated the friendship and the kindness of all the staff. My research was addressed to evaluate the intrinsic malignant potentiality of squamous cell carcinoma of the esophagus by means of flow cytometry. In fact, there is considerable heterogeneity within the various stages of these patients, and none of the staging criteria predicts accurately the prognosis for an individual patient. The low prognostic accuracy of even surgical-pathologic TNM staging suggests that additional parameters, such as biological staging of the intrinsic malignant potentiality of the tumor, would be useful for determining prognosis. In this sense, DNA content has been shown to directly correlate with the risk of recurrence and survival probability [1]. A general observation is that, for many solid tumors, DNA aneuploidy correlates with a more malignant behavior so that aneuploid tumors have a more aggressive potential than diploid tumors in comparable stages.

Seventy seven patients with squamous cell carcinoma of the esophagus who underwent esophagectomy either at the Department of Surgery of the University of Padova or at the Department of Surgery of the University of Chicago were evaluated. Patient selection was based on the availability of paraffin embedded tumor specimens. All patients with hospital deaths, or deaths due to chemo or radiation-therapy were excluded from this study. There were 56 males and 21 females, with a mean age of 59.1 years (range 41-74). Pathological staging was performed according to the TNM Classification System (UICC-1987). There were: 11 Stage I (14.2%), 24 Stage II (31.2%), 34 Stage III (44.2%), and 8 Stage IV (10.4%) patients.

The paraffin-embedded tissue blocks were retrieved and examined in a double-blind fashion. Thirty-micron sections were dewaxed using 5 ml of xylene and then rehydrated in a sequence of 100, 95, 70, and 50% ethanol washes. The tissue was washed twice in distilled water, resuspended in 2 ml of 0.5% pepsin in 0.9% NaCl adjusted to a pH 1.5, and incubated in waterbath at 37C with intermittent vortexing for 30-60 minutes. The suspension was washed with PBS, filtered through a 74 micron nylon mesh and centrifuged. The pellet was incubated 30 minutes with RNase 1 mg/ml at 37C and then stained overnight with 1 ml of propidium iodide 50 micrograms/ml in 0.12% sodium citrate. An EPICS-C flow cytometer (Coulter electronics, Hialeah FL., USA) was used for the DNA content measurements. A 488 nm argon-ion laser at 200 milliwatts was used for excitation, and total red fluorescence emission was measured. At least 10,000 cells were collected in each single parameter 256 channels DNA histogram. The flow cytometer was calibrated with ficoll separated human peripheral blood lymphocytes for position of the diploid peak. Normal diploid cells within the section under study were used as an internal standard.

DNA content was expressed as the DNA Index (DI), which is the ratio of the DNA content of the tumor cells in the G0

resting state and G1 presynthetic phase (G0/G1 peak) to the G0/G1 cells of a normal, diploid population. By definition the DI of diploid cells is 1.00, while aneuploid tumors have a DI different from 1.00 [1]. In addition, the quality of each histogram is expressed by the coefficient of variation (CV) of the G0/G1 peak.

Results

The DNA index ranged from 0.77 to 2.55 (average 1.43, median 1.48), and the coefficient of variation ranges from 4.6 to 12.0 (average 7.25, median 6.88). Of the 77 patients, 23 (29.9%) had a diploid tumor with DNA index =1, and 54 (70.1%) had an aneuploid tumor with DNA index $<>1$. Thirteen of the aneuploid group had more than one aneuploid peak.

The mean CVs of the euploid and aneuploid groups were respectively 7.16 and 7.19 (P=NS). Similarly, no differences were present between the two groups in the mean age, male/female distribution, or incidence of complete and incomplete resections.

The DI does correlated with the histologic grading of the tumor: 11 of 23 or 47.8% of the patients of the euploid group versus 11 of 54 or 20.3% of the patients of the aneuploid group had a well differentiated tumor (P>0.025).

There was no difference between the survival curves of the two groups. Actuarial survival rates of the euploid and aneuploid group were respectively: 57.6% and 77.8% at 1 year, 28.8% and 41.3% at 3 years, and 28.8% and 19.1% at 5 years (P>0.1). Recurrence after a complete resection did correlate with the DI, and was present in 22 of 77 patients: 3 of 23 (13.0%) in the euploid group, and 19 of 54 (35.1%) in the aneuploid group (P<0.05).

There was no correlation of DI with the postsurgical staging of the tumors of the two groups: the highest incidence of Stage I tumors was in the aneuploid group (10/54), and only one patient in this Stage had a DI of 1. In addition, DI did not correlate with wall penetration or lymph node metastases. The incidence of T1 tumors in the two groups was respectively 1 (4.3%) in the 23 euploid patients, and 10 (18.5%) in the 54 aneuploid cases. Also in cases where the tumor invaded the muscularis propria (T2) and the adventitia (T3) there was no significant difference between the diploid and aneuploid populations. Although lymph nodal metastases were found in 14 (60.8%) of the euploid patients compared to 22 (40.7%) of the aneuploid patients, this difference was not significant (P>0.1).

Discussion

The DNA content (ploidy) of squamous cell carcinoma of the esophagus has been investigated only by five cytophotometric [2, 3, 4, 5, 6] and one flow cytometric [7] studies. In these studies a general effort to correlate the ploidy to the patient prognosis was attempted, but the clinical value of DNA analysis is still not completely clear because of conflicting findings.

The incidence of DNA aneuploidy in 70% of our patients is similar to that previously reported [5, 7]. In addition, the correlation we found between the DI and histologic grading of the tumor has been reported by other investigators utilizing both flow cytometry and cytophotometric

analysis. However there are conflicting results, not only in different reports, but even in investigations from the same institution. For example, Sugimachi, using a cytophotometric method, found a correlation between ploidy and histologic grading in the first report [2] which was not evident in a second and larger series [3]. In our series, there was no significant correlation between the DI and the patients' prognosis, although the 5-year survival was slightly better in the diploid group than in the aneuploid group, 28.8% versus 19.1%. Some previous studies [4, 5] did find by cytophotometric DNA analysis that aneuploid cases had a significantly poorer prognosis than patients with euploid tumors. In the only study in which the prognostic value of flow cytometry in squamous cell carcinoma of the esophagus was evaluated [7], the 18-month survival of diploid cancers was better than that of aneuploid cancer patients. However, the small number of patients, only 22, and the lack of long term follow-up suggest caution in the evaluation of these data. Moreover, in this study fresh tissue was used for DNA analysis, in contrast to archival, paraffin-embedded tissue which was used in our series: this may affect the results of flow cytometry [8].

We found no correlation between the DI and wall penetration by the tumor. In contrast, other investigators [5, 6], using cytophotometry, reported a significant correlation between the degree of penetration of cancer into the neighboring structures and DNA aneuploidy. Interestingly, Sugimachi [3] in a cytophotometric study of both Japanese and Chinese patients found that in the latter group of patients there was no correlation between the depth of penetration and the DNA pattern; on the other hand, a correlation was found in the Japanese. In both these groups there was a good correlation between DNA analysis and patients' prognosis.

Similarly, we found no association between DI and lymph nodal involvement, another major pathologic predictor of prognosis. Previous cytophotometric studies both agree [2, 5] and disagree [3] with this finding. It is interesting that also in this report Sugimachi's study showed differences between the Chinese and Japanese patients [3].

In our series, DI correlated well with the incidence of recurrence after a complete resection. This is in agreement with other cytophotometric studies [2, 5, 6], but it is confusing since DI did not correlate with survival in our study. Clearly, it is expected that recurrence correlates with survival.

In conclusion, the contribution of DNA analysis to the understanding and clinical management of squamous cell carcinoma of the esophagus is not yet fully defined. At the present, only a few studies are available, the techniques of cytophotometric and flow cytometric DNA analysis are not yet standardized, and the results vary from series to series.

Technological standardization is a critical component of flow cytometry in achieving comparable results from different series and different institutions. Preliminary data are interesting, but larger and prospective studies with multivariate analysis are needed to determine the value of flow cytometry in clinical practice.

I would like to thank very much Prof. David B. Skinner and Prof. Alex G. Little whose human, scientific and technical qualities must be emphasized.

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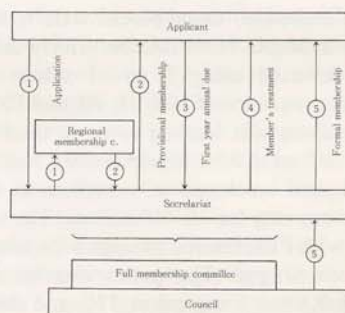
(A. Segalin)

Membership News

AMENDMENT OF MEMBERSHIP APPLICATION

The guidelines which have been partially revised as follows.

The completed application form and two recommendation letters are sent only to the secretariat. The Secretariat will notify the applicant of the result of the review of these documents by the committee. The rest of the procedure is unchanged.



NON-PAYERS OF DUES AND THEIR MEMBERSHIP

Membership shall be terminated by failure to pay the annual dues for 3 consecutive years according to the bylaws. The eligibility of each country to have a national representative depends upon the number of the country's members.

The number of national representatives who will be elected to attend the next assembly (Chicago, September 1989) will be decided by the number of members of each country as of December 31, 1988. Those who have failed to pay but wish to keep membership are urged to remit. (M. Kijima)

ISDE Scholarship

★ Scholarship Committee Meeting ★ 1990 Scholarship

In 1989 Scholarship, 7 applicants from all over the world applied. The Scholarship Committee Meeting will be held on March 3rd, 1989 presided over by Prof. Siewert (Chairman). After strict evaluation, recipients will be decided and will inform all members.

The Scholarship Committee Meeting will decide the outline of the 1990 Scholarship, at next Scholarship Committee scheduled on March 3rd, 1989, so outline of it will be appeared on the next issue of newsletter of ISDE—No. 6 July 1st, 1989.

Recent Publications

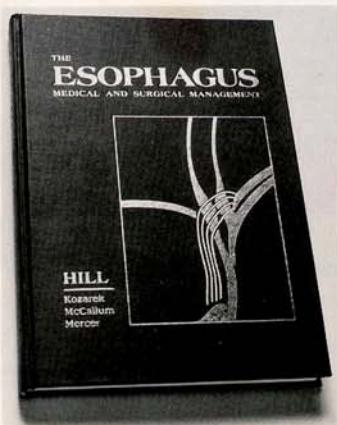
The Esophagus: Medical and Surgical Management Edited by Lucius Hill, Richard Kozarek, Richard McCallum, and C. Dale Mercer
W.B. Saunders company, 1988

The principal author, Lucius Hill is well known for his Hill operation for hiatal hernia. The subtitle "Medical and Surgical Management" presents the focus of this book, which deals mainly with benign esophageal disease, especially reflux disease.

According to the increase in gastroesophageal reflux disease, it is growingly important that the wisdom of both physicians and surgeons should be available to all who are concerned with diseases of the esophagus as Dr. Welch has stated in the Foreword of this book.

The book consists of twenty-six chapters with many beautiful illustrations arranged well throughout. All the information presented is particularly useful. The first several chapters present an overview of the history, anatomy, physiology, symptoms, and functional evaluation of the esophagus. The next ten chapters or so are devoted to describing reflux disease and motility disorders. Both medical and surgical approaches are discussed extensively. Other benign diseases and carcinomas of the esophagus are also covered. Finally, the current use of laser technology and sclerotherapy are reviewed with authority.

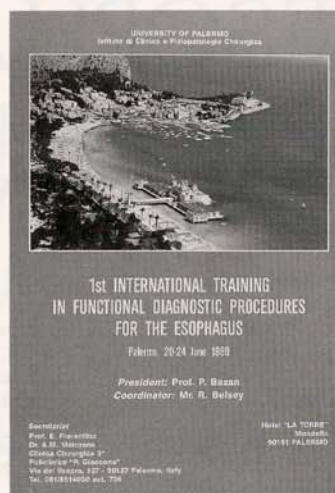
The text is valuable for both medical and surgical practitioners who are concerned with diseases of the esophagus.
(K. Yoshino)



Congress News

★ 1st International training in functional diagnostic procedures for the esophagus

Site: Palermo, Italy
Date: June 20-24, 1989
President: Prof. Pietro Bazan
Coordinator: Mr. Ronald Belsey
Deadline for subscription: May 20, 1989
Tel. 091-6514030 ext. 736
Topic: Practical demonstrations of functional tests for the esophagus, 24h pH monitoring, motility studies.



★ The 33rd World Congress of Surgery International Surgical Week

Site: Toronto, Canada
Date: Sept. 10-16, 1989
Deadline: Dec. 15, 1988
Congress President: Jose F. Patino, M.D.
Language: English
Scientific Program: Free paper, Workshop, Video, Poster

★ 6th World Congress of Bronchoesophagology

Site: Grand Hill, Ichigaya, Tokyo, Japan
Date: Oct. 15-18, 1989
President: Tetsuzo Inoue, M.D.
The National Defense Medical College

★ XXVII International Biennial Congress of the International College of Surgeons (ICS)

Site: Sao Paulo, Brazil
Date: Sept. 9-12, 1990
Congress President: Wilson M. Pollara, M.D.
Sao Paulo University

The Office of the Secretariat,
The Institute of Gastroenterology,
Tokyo Women's Medical College, 8-1 Kawadacho Shinjuku-ku Tokyo 162,
Japan
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ISDE News Editor-in-Chief; Hiroshi Watanabe, M.D.

Call for papers

A new journal

Diseases of the ESOPHAGUS



OFFICIAL JOURNAL OF "THE INTERNATIONAL SOCIETY FOR DISEASES OF THE ESOPHAGUS" (I.S.D.E.)

Editorial Board

Editor in Chief: G. Castrini; Honorary Editor: K. Nakayama; H. Akiyama (Japan), C.G. Bremner (South Africa), J.A. Curto-Cardus (Spain), T.R. Demeester (U.S.A.), A. Duranceau (Canada), F.H. Ellis (U.S.A.), M. Endo (Japan), F. Fekete (France), Z. Gerzic (Yugoslavia), R. Giuli (France), V. Guarner (Mexico), G. Heberer (West Germany), G.J. Huang (P.R.C.), K. Inokuchi (Japan), G.G. Jamieson (Australia), M. Kasai (Japan), S. Kobayashi (Japan), B. Launois (France), T. Lerut (Belgium), O.H. Mammoni (Argentina), H.R. Matthews (U.K.), E. Moreno Gonzalez (Spain), S. Mori (Japan), K. Nabeya (Japan), M.B. Orringer (U.S.A.), W.S. Payne (U.S.A.), A. Peracchia (Italy), H.W. Pinotti (Brazil), J.M. Sheh (Taiwan), W.N. Shrikhande (India), J.R. Siewert (West Germany), D.B. Skinner (U.S.A.), S. Stipa (Italy), J. Terblanche (South Africa), R.J.S. Thomas (Australia), John Wong (Hong Kong), G. Zannini (Italy).

The aim of this new journal is to collect original papers on anatomy, physiology of normal esophagus and of epidemiology, etiopathogenesis, physiopathology, pathology, diagnosis, medical and surgical therapy, adjuvant therapies, nutritional aspects of esophageal diseases in pediatric and adult patients.

The journal should serve the international surgical and medical community for the transfer of information relating to theory, research and practice in esophageal diseases.

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