In 1987 on the occasion of the 50th anniversary of the British Society of Gastroenterology Sir Francis Avery-Jones (1) wrote (perhaps a little exaggerating) in his introductory remarks: “In 1937 the alimentary tract was invisible, impalpable and inaccessible—except the top and the bottom”. Indeed, diagnostics in gastroenterology was very weak and uncertain at the beginning and even in the middle of the last century. Endoscopy and radiology, developing first apart and then together revolutionized the diagnostics and consequently the practice in gastroenterology. Endoscopy brought a new access to operative procedures alleviating the burden of open surgery as well. The method, apart from knowledge, needs personal skills and so new problems of postgraduate education and ethics appeared. Due to the enormous progress in science and in technology it has reached the present level of accuracy. Polish gastroenterology with its early achievements in gastric secretion (Leon Popielski, histamine), abdominal surgery (Ludwik Rydygier, first gastric resection), endoscopy (Jan Mikulicz-Radecki) and later research upon the neuro-hormonal brain-gut axis (Stanis³aw J. Konturek) tried to keep pace with the world-wide progress in this field. The Polish contributions to the growing knowledge and improving practice may be traced from the very beginning of the 20th century.

Keywords: Endoscopy, development, diagnostics, therapeutics, prevention.

INTRODUCTION

A series of splendid monographs (I. Modlin, F. Vilardell, J.M. Edmonson, W. S. Haubrich), reporting in details the development of endoscopy in various fields of medicine appeared at the turn of the last century (2-5). Digestive endoscopy can be neither reported nor commented on without regarding simultaneously the progress of the entire gastroenterology at its four levels: pathophysiology, diagnostics, therapeutics and prevention. Gastroenterology developed much later than other branches of internal medicine like cardiology, pulmonology, endocrinology, etc. In
practice, the first approach to the visiting patient is based on taking case history and physical examination. These two elements of medical approach, though of the first rank of importance, could yield only a rough suggestion as to the location and nature of the disease. For centuries the very fine structure of the alimentary tract and deeply hidden digestive organs were hardly accessible for examination, or for the study of their function. Thus, abdominal diagnostics remained highly inefficient and subjective, while quite often proper diagnoses were established during exploratory laparotomy or at the post mortem examination.

Early attempts to improve diagnostics

Evidence of histamine as the natural stimulus of gastric secretion was an important achievement of our physiologist L. Popielski. Another Polish scientist, W. Jaworski, professor of internal medicine at the Jagiellonian University in Kraków contributed markedly to the knowledge of digestive secretion under changing environmental conditions. Demonstration of gastric secretory function, learning the properties of gastric juice and other digestive juices in the middle of 19th century and development of techniques for their sampling, together with stool examination resulted in development of clinical tests and analytic procedures. The procedures kept the first place in diagnostics until the sixties of the last century, to nearly disappear in the last decades only.

A really important and still continuing progress in search for improvement in diagnostics of digestive diseases has brought the simultaneous development of techniques aiming to visualize the alimentary tract and the accompanying organs: endoscopy and radiology. Their never surpassed merit consists in creating the first possibility to penetrate precisely to the morbid lesion and to take safely biopsy samples, and so opening the way to the pathological verification, which at present is our fundamental criterion for diagnosis and disease systematics.

Radiology versus endoscopy

The origins of radiology and endoscopy date back to the end of the 19th century. Radiology developed and advanced more quickly on the beginning of the 20th century with a variety of technical improvements in X-ray apparatus, better and better contrast media, new sources of radiation and new ideas like isotopic scintigraphy, computed tomography and magnetic resonance. Now all of them are encompassed in the term of imaging techniques.

The aim of this chapter is to show how the idea and practice formerly limited to attempts has become a large practice of digestive endoscopy and how the method advanced and spread in the world and within our country in the 20th century.

Although limited examination of the oral cavity and attempts to look into the rectum were known in the ancient medicine, some audacious attempts to visualize the esophagus using the rigid tubes begun in the middle of the 19th century. The insertion of a nearly 15 mm metal tube, mimicking the sword-swallowers, was
obviously too much aggressive, highly uncomfortable, risky and demanding special skills of the executor, to be widely used in routine practice. In the first half of the 20th century esophagoscopy in Poland remained the domain of laryngologists for extraction of foreign bodies swallowed and retained in the esophagus. In between the two World Wars rigid recto-romanoscoppy was in the diagnostic usage in surgical rather than in medical wards.

The trials with rigid tubes obviously encouraged clinicians in Europe and in the United States like A. Kussmaul or many others (2-5) to try to look inside the stomach and to overcome the technical disadvantages: longer distance and longer time of examination than that needed for the esophagus, as well as the problem of proper illumination. Multiple studies remained troublesome and their result had no practical value.

J. Mikulicz-Radecki (Fig. 1), professor of surgery at the Jagiellonian University in Kraków (1882-1888), later working in Wrocław (former Wratlaysia, also known in the 19th century as Breslaw) was the first who succeeded in his attempts, thus leaving a distinct Polish trace in the field of endoscopy.

Before his Kraków and Wroclaw period he had collaborated with J. Leiter in Vienna and developed the first esophagoscope (1880) and the first gastroscope (1881) and he was the first explorer who was lucky to look into the stomach of a living patient and to see a gastric lesion (1881). That is why he is often named the “father of gastroscopy”. Fig. 2 is a reproduction from a paper describing his endoscopic device (6).

Mikulicz abandoned his earlier trials after breaking his cooperation with Viennese technicians and the method has to wait for about 30 years until highly talented inventors deeply devoted to the idea constructed new models. Since that time gastroscopy has gained its place in clinical application.

It was the merit of ingenious and very skillful R. Schindler (7), deeply engaged in construction and continuous improvement of the instruments. R. Korbsch (8) and G. Wolff also contributed to the production of new generation of gastrosopes and their three models together with the Schindler’s experience opened the way to practice. Although Schindler issued the first manual “Die Gastroskopie” (Munich, 1923) (7), the method cautiously put in trial in some European and American clinics was not easily and favorably accepted. The introduction of Wolff-Schindler semi-flexible gastroscope, although certainly more comfortable and safe, did not overcome...
either some skepticism as to the practical usefulness of gastroscopy in the digestive diagnostics. The Schindler’s handbook and atlas “Gastroscopy” (9) published later in Chicago (1937) and other manuals written by pioneers of gastrointestinal endoscopy: F. Moutier (1935) in France (10), E. D. Palmer (1949) in USA (11) as well as “Survey of Gastroscopic Accidents” by Palmer and Wirts (1957) (12) paved the way to promote endoscopy in diagnostics also among the European countries. It seems however that “Die Gastroskopie. Lehrbuch und Atlas” by Kurt Gutzeit and Heinrich Teitge (1937) (13) was for a long time the most popular manual in Europe. Schindler persecuted and condemned by Nazis emigrated to the United States. Apparently, the long “latent time” in this area of medicine was due to the Second World War and the period of post-war devastation in Europe. In those days gastroscopy was poorly accessible and underestimated because of the lack of trained endoscopists and radiology remained for a long time the predominant method for stomach and esophagus investigation.

Early clinical experience in Poland

The gastroscopy in Poland started in 1946. Rigid instruments of Schindler and Korbsch were used for several years by K. Gibiński in the 3rd University Medical
Clinic in Wrocław; they were later replaced by Wolff-Schindler’s semi-flexible endoscopes. Those old instruments as shown in Figs 3 to 5 are still kept in the Department of Gastroenterology of the Medical University of Silesia.

In that time the record of each examination was written instantaneously; in selected cases the picture seen in the ocular was colored by hand on a sheet of paper. Such drawing prolonged the time of examination for a few minutes only. The documentation was used for case reports and could be later projected and demonstrated or reproduced in medical press. The first manual written in 1953 in the Polish language, entitled “Outline of Clinical Gastroscopy” (14) was illustrated entirely with the documentation from our own (KG) experience (Fig. 6). Foreign early atlases and handbooks of endoscopy available at that time, for example by Schindler (1923, 1937) (7,9), Gutzeit and Teitge (1937) (13), Mašek (1951) (15), Chulkov (1952) (16), Smirnov (1960) (17) were illustrated in a
similar manner. Black and white photography was applied later, only for a short time, and with new lightening possibilities and more sensitive films was replaced by color photography. Fig. 6 comparing our pictures from the middle of 20th century with present photographs shows striking difference in quality due to improvement in optics, light source and camera.

Fig. 5. Wolff-Schindler’s gastroscope, semi-flexible, side-viewing, with an optic system of 48 lenses in the spiral tube (Collection: Department of Gastroenterology, Medical University of Silesia in Katowice).

Fig. 6. Three endoscopic pictures hand-colored directly from the ocular in the 50ties (A) and three modern photographs (B) (Collection: Department of Gastroenterology, Medical University of Silesia in Katowice).
Apart of impossibility of observation of the esophagus during insertion of the rigid or semi-flexible endoscope, the other disadvantages were “blind spots” in the stomach hardly accessible for inspection, like the subdiaphragmatic face of fornix of the stomach or inner cardia outlet. Pylorus could not be reached in all cases and the percentage of visualized pylori in a series of gastroscopies served as a measure of qualification of an endoscopist. Pylorus could never be passed through. In case of pyloric stenosis the content retained in the stomach created great difficulty to visualize gastric walls. In such case the endoscope had to be removed and the very uncomfortable examination repeated after extensive gastric lavage.

At that early time of the Gastroenterology Department in Wroclaw the endoscopic examination played a complementary role to obligatory X-ray examination of the stomach for hospitalized patients only. A separated Department of Gastroenterology headed by L. Plocker was opened in Warszawa in 1946. Having been trained in France, Plocker carried out endoscopy in that Department. At the same time in Poznañ S. Kubicki of the 2nd Department of Internal Medicine begun to perform gastroscopy. The contact between those centers in that time was limited.

After a year or two, when gastroscopy became a more frequent examination, the young doctors from our department showed interest and assisted in examinations. When we obtained semi-flexible Wolff-Schindler’s instruments in the early 50-ties, colleagues from other hospitals began to refer to us doubtful cases. Finally we began to perform endoscopy for other centers within an out-patient service financed by the district authority, but always lodging in our department. In the 60-ties some endoscopists trained in the Department of Internal Medicine in Bytom and Katowice began to introduce endoscopy to other hospitals. Semi-flexible instruments were used in our Department till the end of sixties (Fig. 7).

Semi-flexible Wolf-Schindler's gastroscopy was also available and used starting from mid sixties in several other university centers. I Department of Internal Medicine of Academy of Medicine, Cracow had endoscopic lab. led initially by L. Cholewa till 1963 and then by S.J. Konturek from 1964-1969, who closely collaborated with Dept. of Surgery (J. Oszacki) and Pathomorphology of Cancer Institute directed by A. Urban. Due to this collaboration, the conditions were created for interdisciplinary pathophysiological, endoscopic and pathomorphological research. It was succeeded in several reports on the relationship between gastric mucosal histology and secretory activity of this mucosa. This promising collaboration was interrupted with the creation of institutes including Institute of Internal Medicine in Cracow and the move of S.J. Konturek to newly founded Department of Clinical Physiology at the Institute of Physiology of Academy of Medicine, modernized due to generous research grant obtained from NIH by former postdoctoral fellow (Los Angeles, 1965-67), S.J. Konturek. Close collaboration with J. Oleksy and E. Sito from Department of
Medicine of Military Hospital, Cracow and the Department of Clinical Physiology of Cracow Academy of Medicine, directed by S.J. Konturek, realized several projects based on the endoscopy as described in Konturek’s chapter "Gastric secretion from Pavlov’s nervism…” (see pages 69-82 of this supplement). About 200 scientific papers were published, mostly in foreign journals such as Dig. Dis. Sci., Scand. J. Gastroenterol., Gut, Digestion, Gastroenterology, Am. J. Physiol. etc. The major achievements of this multidisciplinary GI research center, unique in Poland, the following major achievements were attained; 1. Testing newly developing agents (as part of preclinical studies) controlling gastric secretion including methyl prostaglandin analogs, ranitidine, polprazole, omeprazole, lanzoprazole and pantoprazole, which were then transferred to leaders of Polish Society of Gastroenterology (K. Gibinski, T. Popiela, A. Gabryelewicz) for multicenter Polish trails in phase II and III; 2. Examination of new experimental substances such as epidermal growth factor (EGF), transforming growth factor alpha, fibroblast growth factor, NO-derivatives of NSAID etc. to establish their mode of action on cellular and organ levels; 3. Creation of laboratory for radioimmunoassay of major gut hormones (gastrin, cholecystokinin, secretin, pancreatic polypeptide - PP, motilin etc.,) that was opened for local and international cooperation; 4. Development of noninvasive capsulated 13C-urea breath test (UBT) (W. Bielanski) as compared with rapid

Fig. 7. 2443 patients treated between 1954 and 1971 in our Department of Internal Medicine suspected of gastric cancer, and endoscoped mostly with rigid and semi-flexible gastrosopes. Rigid gastrosopes were slowly abandoned in late 50-ties, and replaced with semi-flexible ones. Since 1968 one fiber-optic side viewing gastroscope was used. Taking into account long time span covered and relatively small number of cases the data were summarized in three year periods.
urease tests made using gastric endoscopic biopsy samples for determination of active *H. pylori* infection and 5. Organisation of lab for molecular biology of gastric cancer and MALT lymphoma based of PCR of gastric biopsy samples obtained during endoscopy or surgery from gastroduodenal area for assessment of the expression of various hormones and enzymes involved in gastric cancerogenesis such as gastrin and its CCK-2 receptors, COX-1 and COX-2 enzymes, apoptotic proteins in gastroduodenal ulcerations and gastric cancer to detect the early gastric cancer and its progression. All these studies were possible due to application of modern equipment of endoscopic lab at the Department of Clinical Physiology (S.J. Konturek) and creation of *Helicobacter pylori* Center in Cracow with international collaboration [e.g. with endoscopic and molecular lab of Erlangen-Nuremberg University (EC Hahn)].

Another active endoscopic center was developed in Department of Gastroenterology of Bialystok Academy of Medicine led by A. Gabryelewicz, who, after successful postdoctoral fellowship at New York Blood Institute, received from A. Jurzykowski Foundation large financial support for buying most modern fiberoptic instruments for gastro-duodenoscopy, sigmoidoscopy and laporoscopy, all of ACMI production. These instruments have been used until now in the Department of Gastroenterology in Bialystok for both routine work and research exploration of the upper and lower parts of the gastrointestinal tract, especially focused on peptic ulcer pathogenesis and pancreatitis as well as their treatment. This unit was first to introduce the endoscopic control of severe upper GI bleeding, especially from the esophageal varices using the ligature placed with the help of endoscope.

Following creation of Academy of Medicine in Szczecin and development of Clinic of Internal Diseases (chairman; J. Napierko), the endoscopic laboratory first based on rigid instrument and then in 1972 modern fiberoptic gastro-duodenoscops were bought allowing for the endoscopic examinations in over 8000 cases per year. This lab was directed by K. Marlicz after his WHO training in England in the field of gastroenterology. The Endoscopic Club was organized to present more interesting cases found by endoscopists, the meeting being usually combined with invited Polish lecturers or foreign guests. During the last decade close collaboration was established with Department of Clinical Physiology, of Jagiellonian University, especially in the area of molecular biology of gastric and colorectal cancerogenesis with T. Starzynska as coordinator. Several publications related mostly to gastrin, COX, P53 and apoptotic protein in gastric cancer were published in distinguished journals and presented at international meeting (see Chapter of S J Konturek).

In mid 70s, T.Popiel developed at his Department of GI Surgery of Cracow Academy of Medicine (now College of Medicine of Jagiellonian University) one of the most spectacular endoscopic lab. T. Popiela, considering himself as a continuator of Polish pioneer in endoscopy (J. Mikulicz-Radecki) and gastric surgery (L. Rydygier) started operative and intraoperative endoscopy. As a result of this activity in this endoscopic center about 50000 endoscopies of upper
gastrointestinal tract, 1800 colonoscopies, 8300 endoscopic retrograde cholangiopancreatographies and other procedures were performed during 25 years of its existence. T. Popiela was first to point out the importance of intraoperative endoscopy toward the diagnosis of cholangitis and early detection of gastric and colorectal cancer. He presented very surprising data of high rate of detection (27%) of early gastric cancer.

The important contribution to the field of gastrointestinal endoscopy was provided by the Wroclaw Center of Gastroenterology and Hepatology Clinic of Academy of Medicine, created in 1970 by Z. Czyżewska. Since 1970, when Z. Kanpik and later L. Paradowski became active Chiefs of Center, the endoscopy unit bought the modern endoscopic equipment and this was combined with electrophysiological examination of the upper gastrointestinal tract and determination of the pressure and pH of the lower esophageal sphincter in healthy subjects and gastroduodenal ulcer patients. The pioneer studies included the examination of the effect of alcohol on the integrity of human upper digestive tract, mainly of esophageo-gastric mucosa assessed both, endoscopically and histologically. Modern methods of endoscopic surgery for the treatment of cholecystolithiasis and acute pancreatitis have recently been introduced in this Center.

Since the late 60-ties successively modernized generations (Fig. 8) of exclusively fiber-optic instruments, developed in 1958 by B. I. Hirschowitz (18), have been used in Katowice Department. The introduction of fiberscopes allowed us to increase the number of performed esophago-gastro-duodenoscopies (EGDs) to the top annual value of 7945 in 1986 (Fig. 9). Since that time the yearly yield has been slowly dropping. So has the patient’s waiting time for endoscopy. It seems that the lower numbers and the present trend are a reasonable result of saturation of the region with trained endoscopists and rising number of endoscopy units.

In the late 50-ties we introduced peritoneoscopy at Department of Gastroenterology in Katowice (Fig. 10).

The first one was performed with a thoracoscope, because thoracoscopy has been relatively common in our country since the late 30-ties, being used to

Fig. 8. Four generations of flexible endoscopes.
A. Gastro-fiberscope Olympus, used in the sixties; B. Similar model, ACMI, forward-viewing and provided with different control system; C. Colonoscope Olympus; picture appears in the ocular, possible attachment of the lecture-scope; D. Video-gastroscope Olympus, forward viewing, picture recorded by chip and transmitted to the monitor or large projection screen (Collection: Department of Gastroenterology, Medical University of Silesia in Katowice).
complete artificial pneumothorax introduced to treat pulmonary tuberculosis. Modern instruments for laparoscopy served us for many years never reaching such a degree of utility as upper tract endoscopy. With the use of increasingly better non-invasive imaging techniques (US, CT, etc.), the number of diagnostic laparoscopies decreased steadily from the peak reached in the early 70-ties (Fig. 11).

Fig. 9. Flexible esophago-gastro-duodenoscopies (EGDs) in the Katowice unit.

Fig. 10. Laparoscopy in the Department of Gastroenterology, Medical University of Silesia in Katowice.
In the 80-ties with development of imaging techniques laparoscopy dropped to the second place in diagnostics of the liver disease, while following the work of Cuban and French surgeons it began the splendid career in surgery.

Our instrumentarium is continuously changing, broadening our knowledge of digestive diseases and our every day practice experience. B. Hirschowitz demonstrated his “fiberscope” in 1958, but it took several years until it was commercially manufactured first by ACMI to become later widely available thanks to master Japanese industry.

Twenty years elapsed since the first trials with the Korbsh’s gastroscope before the Department of Internal Medicine in Katowice got the first fiber-optic gastroscope with side view, shortly later a colonoscope with direct view and direct viewing panendoscope. The Postgraduate Medical School in Warszawa and the University Medical School in Poznań got similar instruments, and subsequently many other university departments (Wrocław, Szczecin, Łódź) and public health care centers.

The 80-ties in the Department of Gastroenterology in Katowice were the years of expansion of more advanced endoscopic techniques, like diagnostic colonoscopy, endoscopic retrograde cholangio-pancreatography (ERCP), endoscopic ultrasonography (EUS), and therapeutic procedures (Fig. 12-14). In 1972 flexible sigmoidoscopy was introduced in Katowice. The first total colonoscopy was performed in Warsaw in 1973. The number of colonoscopies (Fig. 12) started to rise sharply in the early eighties and surpassed the number of rigid rectoscopies in 1989. Their number is still growing, while the rigid rectoscopies were almost totally abandoned in the late 90-ties.
ERCPs (Fig. 13) were started in 1973 and the first endoscopic sphincterotomy (ES) in Poland was performed in our unit in 1977. Therapeutic ERCPs (sphincterotomy with stone extraction, biliary and pancreatic stenting, etc.) started to dominate in the mid 90-ties and about the same time the use of
diagnostic ERCP begun to drop, as in the case of laparoscopy, due to the expansion of better non-invasive techniques. Within the few recent years, with the greatly improved availability of magnetic resonance cholangiopancreatography (MRCP), only one of every four ERCPs is done as the diagnostic procedure (Fig. 14).

First lower GI tract polypectomies were performed in Warszawa and in Katowice in 1976. Fig. 14 shows the real trend of contemporary endoscopy - the steady increase of therapeutic endoscopic procedures. In the year 2000, 25% of colonoscopies and 10% of EGDs in our Department were therapeutic.

It should be emphasized that numbers in figures 7, 9 and 11 to 14 show evolution in clinical application of endoscopy starting from the middle of the 20th century. The numbers do not represent the state of art in Poland but they refer only to

**Fig. 14.** Therapeutic endoscopy in the Katowice unit.

**Fig. 15.** The first Polish manual of gastroscopy.
one, the oldest endoscopic unit in Katowice, just as an example of many other centers in their development.

The current level of development of endoscopy could also be measured in numbers of endoscopists and endoscopy units. Almost thirty-five years after the introduction of flexible endoscopy there are over 100 units performing GI endoscopy in the province of Silesia, with 255 endoscopists (almost all of them are doing EGD, 150 colonoscopy and 20 ERCP). Their yearly workload recently reached over 72 thousands EGDs, 18 thousands colonoscopies and 2000 ERCPs. The diagnostic endoscopy became widely available in regional hospitals and outpatients clinics. However, the more specialized therapeutic techniques, ERCP, EUS and endoscopy in children still remain confined mostly to large academic centers.

Expanded teaching.

Realizing the need to promote the new method throughout the country, results from our observations and experience were frequently published in the Polish medical journals and presented at the national meetings and congresses of internal medicine. As mentioned earlier, the first Polish manual of gastroscopy (14) was written in 1953. Unfortunately, due to post-war devastation of the country and poor printing techniques in Poland that time we had to wait until the difficulties with color printing were overcome, so it was finally published in 1959 (Fig. 15). It
remained the only Polish handbook of gastroscopy for a long time.

With growing personal experience and with rapidly advancing technical progress, mostly fiber-endoscopy, we reedited the book in 1979 under the title “Gastrointestinal Endoscopy” (19) adding chapters on esophagoscopy, ERCP, laparoscopy and providing much better illustrations (Fig. 16). The 3rd edition enriched with many new techniques and with operative endoscopy appeared in 1991 and was entitled “Digestive Endoscopy” (20) (Fig. 17).

This last edition is now out-dated and the book should be rewritten.

In 1976 J. Sowa from Medical University in Kraków edited a handbook of laparoscopy and liver biopsy (21) (Fig. 18).
Many colleagues from other Polish university centers and Public Health Service visited our Department of Gastroenterology in Katowice for a various time to learn the method. In the years 1961-2002 excluding our clinical staff, we registered 425 doctor- and 249 nurse-trainees in endoscopy, some of them from abroad (Fig. 19). As evident from this figure the number of trainees was rising with the expansion of the unit and equipment.

Such form of individual training was introduced in 1983 in a selected number of endoscopic centers which were authorized to issue certificates of satisfactory experience of the trainee (Fig. 20). The intention was to avoid creation of small endoscopic units by inadequately qualified adepts.

This proposal (22) reported during the Session on Ethics in Gastroenterology at the European Congress of Gastroenterology in Lisbon (1984) was put in doubt by one of the leading European endoscopists asking how could we be assured that one self-trained and non-certified endoscopist would be worse than another bearing a certificate. Now, as we all know, the demands of certificate for various and multiple modern procedures is commonly acknowledged not only to minimize potential risk to the patient but also to avoid reports written by an inexperienced doctor and eventually misleading the referring physician.

World Organization of Gastroenterology (Organisation Mondiale de Gastro-Enterologie, OMGE) inspired by its President F. Vilardell (23) was probably the first world association duly appreciating the value of ethics both in scientific and practical development of gastroenterology. OMGE Committee of Ethics
consequently indicated and emphasized the danger menacing the patients from an uncontrolled expansion and application of new procedures, as well as the danger for national health services from the unbalanced financial burden (24).

In the year 2002 the Katowice center was accredited as an ESGE official training center for diagnostic and therapeutic GI endoscopy and in 2003 hosted the first ESGE grantee from Ukraine.

**From endoscopy room to ward of endoscopy**

In 1974 the present Department of Gastroenterology at the Medical University of Silesia in Katowice moved from the old building to the newly founded Central Teaching Hospital in Katowice-Ligota. Till that time it was incorporated in the 3rd Department of Internal Medicine out of which new departments were separated and detached: Department of Nephrology, Department of Cardiology, Department of Gastroenterology and Institute of Nuclear Medicine. In the new place the Department of Gastroenterology was equipped with 79 beds for inpatients, exclusively for digestive diseases; also it continued to run the Outpatient Department for patients referred from the Public Health Services, serving local population in the Silesian region. Many patients came also from the remote sides of the country. Such a situation enabled us to gather large clinical material as well as focus on selected topics. We have good cooperation with the Departments of Abdominal Surgery, Anesthesiology with Intensive Care Unit and the Department of Radiology fully equipped with angiography, helical computed tomography and recently with magnetic resonance; we have been also collaborating closely with the Institute of Nuclear Medicine and with the Institute of Pathology and its Unit for Bioptic Pathomorphology.

Our recently adapted Endoscopy Unit includes now several rooms: upper gastro-intestinal tract endoscopy, ERCP and operative endoscopy, colonoscopy, laparoscopy, patient preparation and recovery, equipment decontamination, registration, medical secretary and staff, archives and waiting room. Figs 21 to 27 show the gradually changing appearance of our endoscopy rooms.

**The rank of gastroenterology in the Health Care System**

The contribution of endoscopy to gastroenterology was obviously less definite in the field of pathophysiology, pathogenesis and prevention than in diagnostics and in therapeutics. It entailed big changes in practice of health care service, for example a nearly total disappearance of X-ray examination of upper alimentary tract and marked reduction of barium enema. Radiology has not lost its primary position because it developed other methods to examine the abdominal cavity. Precisely guided biopsy allows us to make the preoperative verification of malignancy and early detection of cancer of upper and lower part of the alimentary tract. Introduction of endoscopic ultrasonography permits to check the depth of the lesion found. The role of polyp as a precancerous lesion has been
established. In contrast to the earlier opinion, gastric cancer has been shown to occur most frequently in an ulcerative form. Large preventive measures by survey of selected groups of patients have been undertaken and have succeeded in limiting the cancer mortality. New morbid conditions like Mallory-Weiss syndrome or drug induced ulcer are recognized. Biopsy specimens of gastric
mucosa permitted to discover *Helicobacter pylori* and its role in the pathogenesis of peptic ulcer disease. The need for laparotomy, both exploratory and elective, has rapidly diminished. Many endoscopic procedures allow now to treat acute hemorrhage without urgent laparotomy, as well as to remove foreign bodies and polyps and to restore the patency of gastro-intestinal tract or bile ducts without referring the patient to surgery. Gastrectomy and/or vagotomy have stopped to be recommended as the best therapy for peptic ulcer disease. Hospitalization time of patients has diminished as well, while their safety rose. Results of progress may be found also in the health care policy. Unlike cardiology or oncology where the highest mortality is related to advanced age of patients, in gastroenterology burden of digestive disease is related to the productive mean age. This economic burden has been recognized and largely relieved now.

*The Polish Society of Gastroenterology*

There is no one-way relation of endoscopy to gastroenterology. They should be considered in terms of reciprocal relations. When describing development of
Fig. 24. Upper GI endoscopy with a fiber-optic instrument. Image is to be seen directly in the ocular. The lecture scope is attached for the simultaneous observation.

Fig. 25. Upper GI endoscopy with the video-endoscope. Picture projected via TV onto the screen.
endoscopic methods, we cannot overlook how gastroenterology - large medical discipline - has finally appreciated endoscopy after a long, difficult and reluctant delivery.

The efforts to create a World Organization of Gastroenterology between the 1st and 2nd World War failed to reach a definite success, for various reasons. National Societies of Gastroenterology in Europe existed only in Belgium, the United Kingdom, and France.

The National Society of Gastroenterology was also founded in Poland as soon as in 1909 (25). However after several years it ceased to exist. The first International Congress of Gastroenterology was organized in Paris in 1938 intending to join and coordinate the dispersed national efforts and research in this discipline. After the 2nd World War, the 1st World Congress of Gastroenterology was organized and held in Washington DC in 1958 thanks to efforts of the famous American gastroenterologist Henry L. Bockus, and E. D. Palmer - promoter of endoscopy in the USA. It was there that the firm basis for the World Organization of Gastroenterology was founded. Thanks to the support of the Polish Medical Alliance (Dr. A. Rytel, Chicago) one of the authors (KG) had the opportunity to attend that Congress. This big international meeting revitalized national societies as well as the Association des Sociétés Nationales Européennes et Méditerranéennes de Gastro-Entérologie (ASNEMGE).

Though our medical school in Katowice (named then the Silesian Academy of Medicine) was at that time the youngest medical university school in Poland, we

Fig. 26. Colonoscopy in our present colonoscopy room. Interesting pictures can be captured digitally directly into computer.
were directly engaged in the activities of the Gastroenterological Section of the Polish Society of Internal Medicine. Thanks to the efforts of K. Gibiński, in 1977 our Department organized in Katowice the Inaugural Congress of the newly founded Polish Society of Gastroenterology which was to replace the former Section and to continue its own work.

Seventy-one members of the Inaugural Congress declared access to the new Society. The Governing Board was elected by the General Assembly and K. Gibiński became the first President of the Society. Statutory rules were legalized. According to the statute only doctors with a degree of specialization in internal medicine, surgery, pediatrics, or pathophysiology, pathomorphology and radiology could be enrolled after ballotage at the Board. Thus the Society had an interdisciplinary character. The seat of the Society was established in Katowice and remained there for 10 years until the first president renounced the post and the next president was elected by General Assembly. Consequently the Board moved to Białystok (President: A. Gabryelewicz), then to Wrocław (Z. Knapik), Szczecin (K. Marlicz), Poznań (L. Hryniewiecki) to return back to Katowice in 1998 (A. Nowak). At present the Governing Board of the Society has its office in Wrocław with L. Paradowski as President.

![Fig. 27. Present view of our ERCP / therapeutic endoscopy room.](image)
In the meantime the divisions of the Society were organized in 11 university centers. Now, the Society has 1486 members in the country and is proud to have enlisted 42 Polish and foreign gastroenterologists as honorary members (Table 1).

Table 1. Honorary Members of the Polish Society of Gastroenterology

<table>
<thead>
<tr>
<th>Name</th>
<th>Nationality</th>
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<tbody>
<tr>
<td>R. Arendt</td>
<td>Germany</td>
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<td>J.R. Armengol-Miro</td>
<td>Spain</td>
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<td>H. Berndt</td>
<td>Germany</td>
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<tr>
<td>R. Cheli</td>
<td>Italy</td>
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<td>M. Cremer</td>
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<td>J.R. Wood</td>
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Officers of the Polish Society of Gastroenterology were several times elected to important posts in international gastroenterological societies. K. I. Gibiński served as the Vice-President of ASNEMGE during the years 1980-1984 and Vice-President of OMGE in the years 1982-1986. In the period 1994-1998, S. J. Konturek held the position of Vice-President of OMGE. A. Gabryelewicz was the member of the Governing Board of the International Association of Pancreatology in the decade 1981-1990. A. Nowak was a member of the Nominations Committee of OMGE in the years 1998-2002.

The following working groups are active now within our Society: Endoscopy, Pancreatic, *H. pylori*, GI Motility, Hepatology, and Molecular Biology. In 2002 the Section of Gastrointestinal Endoscopy Nurses and Assistants was established.

Three years before the Inaugural Congress of the Polish Society of Gastroenterology, in recognition of the growing role of the endoscopy method, a Working Group of Endoscopy was organized within the framework of the Section of Gastroenterology of the Polish Society of Internal Medicine. The Group was incorporated as the integral part of the Society by the General Assembly in 1978. In 2004 the Group will celebrate 30th anniversary of its uninterrupted activities.

The organizational frames of the Group enable the cooperation in training and education to promote the latest developments, exchange of the growing experience and undertaking joint projects in clinical research within the country, as well as on the international level.

All these activities helped enormously in modernization of medical practice and in implementation of preventive measures. Both, the Society and its Working Group of Endoscopy have firm links with the international organizations and remain in close relations with them.

*Endoscopy Group, Endoscopic Days and other endoscopic meetings*

Polish endoscopists have always tried to follow the world progress in diagnostic and therapeutic endoscopy. It resulted in yearly organization of scientific meetings of the Endoscopy Group in Katowice and organization of endoscopic workshops in which the participants could learn endoscopy from invited leading experts.

As it was mentioned previously, the Governing Board of the Gastroenterology and Metabolism Section of the Polish Society of Internal Medicine (chaired at that time by M. Górski) decided to set up the Endoscopy Working Group as from April 17th, 1974 and charged A. Nowak from Katowice with a task of organization and chairmanship. During the autumn 1974, the questionnaires and invitations were sent to all known endoscopic centers in Poland. Initially, 48 endoscopists from following centers expressed the willingness of participation in the activities of the Endoscopy Group: Białystok, Bielsko-Biała, Bytom (2 centers), Częstochowa (2 centers), Gdańsk, Katowice (2 centers), Kraków (4 centers), Kraśnik Fabryczny, Lubin, Lublin, Łódź (2 centers), Piotrków Trybunalski,
Poznań (2 centers), Racibórz, Szczecin, Tychy (2 centers), Warszawa (2 centers), Wrocław. It may be worth of noticing, based on data retrieved from the questionnaires, that in that time an initial average monthly workload of endoscopic unit at an academic center was about 50 EGDs, 3 colonoscopies, 3 laparoscopies, and one ERCP. On average, a unit possessed 3 fiberscopes and employed 4 doctors performing endoscopic procedures.

Next summer (1975), a working meeting of the Initiative Group (K. Bojanowicz, Władysław Fejkiewicz, Antoni Gabryelewicz, Kornel Gibiński, Marian Górski, Tadeusz Grabowski, J. Hasik, S. Kirchmayer, Z. Knapik, A. Nowak, J. Oleksy, J. Pokora, E. Rużyło) was organized to discuss the problems of organization of Endoscopy Group scientific program.

The first meeting of the Endoscopy Group (called later the “Endoscopic Day”) was held on September 11th, 1975 in the auditorium of Central Teaching Hospital in Katowice-Ligota. The topic of the meeting was the report on the development of endoscopy in Poland. The interesting endoscopic case reports were also presented. The case reports section has became a fixed element of the scientific program of all subsequent Endoscopic Days.

In 1976 the whole-day scientific program was organized during the 26th Congress of the Polish Society of Internal Medicine in Warszawa (it should be recognized as the 2nd Endoscopic Day; it was the only Endoscopy Group meeting held outside of Katowice). The main topic of the meeting was the round-table discussion on role of endoscopy in internal medicine - the aim of the symposium was to present the basic information on endoscopy (indications and contraindications, cost-effectiveness, etc.) to internists not involved directly in endoscopy. The case reports section at that time included also the reports on laparoscopy, bronchoscopy, and mediastinoscopy.

An important event in the life of the Endoscopy Group took place in November 1977. Having submitted the application for a membership of the European Society of Gastrointestinal Endoscopy (ESGE) the Group has became a member of this Society.

In the same month the 3rd Endoscopic Day was organized and it was devoted to GI tract neoplasms. In the case reports section first Polish reports on lower GI polypectomy (Eugeniusz Butruk) and variceal sclerotherapy (Jan Kulig) were presented.

Next year the first biliary stenting due to common bile duct cancer was reported (Jan Dzieniszewski). In the 1978 meeting the number of participants rose to 60 and then to 80 two years later. The program of the “Interesting Endoscopy Case Reports” section has become more and more popular, so that in the year 1980 more cases were submitted than could be presented. Next year (1981) brought the first report on therapeutic endoscopy in children (variceal sclerotherapy; Hanna Rondio).

The declaration of martial law in Poland in 1981 imposed great restrictions on organization and participation in any meetings including the scientific ones. In
spite of that, the 8th Endoscopic Day was organized and held on October 23rd, 1982, although merely 38 participants were able to attend. The debates commenced with the ceremony of handing over the Diploma of Honorary Member of the Polish Society of Gastroenterology to S. J. Konturek. The scientific program of the Endoscopic Day was concentrated on therapeutic endoscopy and the first Polish report on endoscopic sphincterotomy (A. Nowak) was presented. Case reports section included among others the presentation of Barrett’s esophagus (A. Bieganowski) - a disease which at that time had not acquired the widespread interest yet.

The next year meeting was the first one with the participation of a lecturer invited from abroad; it was J. Myren (Norway) who delivered the introductory lecture to the main topic of the meeting concerning of endoscopy in the elderly. The organizers were happy to note that the number of participants grew back to almost one hundred, although it meant the necessity to move the venue from the auditorium in the Central Teaching Hospital in Katowice to another place.

The 10th Endoscopic Day was organized on October 27th, 1984 in a larger auditorium of the Physician House in Katowice; the new auditorium was able to seat the much bigger number of attendees. Over 200 participants attending the meeting reflected the expansion of endoscopy in Poland and rapidly increasing interest of Polish doctors in this discipline. The first exhibition of pharmaceutical and endoscopic industry accompanying the Endoscopic Day was organized that year.

The 11th Endoscopic Day (October 19th, 1985) was the first one during which the leading topic moved from the presentation of possibilities and achievements in endoscopy to the widely understood quality assurance. It started from a presentation of a concept to unify the future endoscopy reports. J. Dzieniszewski, Z. Knapik and A. Nowak undertook the very important task to translate into Polish the terminology of World Organization for Digestive Endoscopy (Organisation Mondiale d’Endoscopie Digestive, OMED) edited by Z. Mañatka. Their report initiated very hot discussions. After many years it has become obvious that the Polish translation of OMED terminology significantly improved the quality of reporting in endoscopy in our country.

In the several subsequent years, thanks to cooperation with endoscopic and pharmaceutical industry and their support, it was possible to invite lecturers from abroad to present the achievements of European endoscopy to the Polish audience. The endoscopists who were participating in Endoscopic Days at that time were: Max Siurala and P. Sipponen (Finland) and K. Huibregtse (The Netherlands) - 1986, A. Kruse (Denmark) - 1987, M. Dohmoto (Germany), A. Vavrecka and P. Dite - 1988 (Czechoslovakia). Many of our eminent lecturers have became Honorary Members of the Polish Society of Gastroenterology, in recognition of their contribution to the development of endoscopy and gastroenterology in Poland.
Another attempt to unify endoscopy reports through computerization of endoscopy units throughout the country was undertaken in 1987 (A. Nowak); however the project failed due to technical and financial reasons. In 1987 also the representatives of Olympus company technical service proposed the Governing Board of the Polish Society of Gastroenterology the organization of lectures for endoscopy nurses and assistants in order to improve the maintenance of endoscopic equipment. The idea was realized next year, when the 1st Nurses and Assistants’ Meeting was organized on October 20th, 1988. The meeting prepared and chaired by Al. Noras (Chief-Nurse of Endoscopy Unit in Central Teaching Hospital in Katowice) was very successful. Over 300 nurses and assistants participated and the main topic was devoted to the preparation of patients for endoscopy. On the next day (October 21st, 1988), endoscopists gathered for their 14th Endoscopic Day which was opened by the lecture of Kornel Gibiński on ethics in teaching of endoscopy. The great need for such lectures was underlined in the following year when the issue of teaching and training in endoscopy became the main scientific topic of the 15th Endoscopic Day.

In April 1991 a meeting of quite new quality was organized in Katowice in cooperation with several departments of Medical University of Silesia (Gastroenterology, Radiology, Anesthesiology) (Fig. 28).

It was the first workshop with live transmissions of endoscopic procedures performed by first-class international experts that took place in our part of Europe. The workshop was organized under the auspices and with the strong support from the European Society of Gastrointestinal Endoscopy, thanks to the initiative and efforts of M. Crespi (Italy), the ESGE president at the time. He took

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**Fig. 28.** Cover of the program of the International Workshop on Advanced Digestive Endoscopy, held in Katowice on April 11-13, 1991. It was the first workshop with live-demonstrations of endoscopic procedures organized in the countries of Eastern and Central Europe.
part in workshop as one of the invited experts, together with J. D. Waye (USA), J-R Armengol-Miro (Spain), and Aksel Kruse (Denmark) (Fig. 29).

Almost 20 endoscopic procedures and 6 lectures were presented to the audience consisting of 180 participants, mainly from Poland, but also from Czech Republic, Slovakia, Hungary, Romania, and Serbia. The success of the meeting stimulated both the ESGE and the national endoscopic societies from Eastern and Central European countries to continue this activity. In the subsequent years similar workshops were organized in Czech Republic, Hungary, Slovenia, Croatia, Slovakia, Estonia, Romania, expanding also to North Africa and Middle-East. The endoscopic team of Department of Gastroenterology in Katowice participated several times in the organization and preparation of those workshops, sharing their experience acquired during the organization of our meetings in Katowice.

In 1991 the first Polish journal devoted only to endoscopy - *Acta Endoscopica Polona* (Fig. 30) - was established in Kraków (founder and Editor-in-Chief: T. Popiela), as an official organ of endoscopic sections of three societies: Society of Polish Surgeons, Polish Society of Gastroenterology and Polish Urological Society.

The 18th Endoscopic Day (December 4th, 1992) was honored by the presence of two invited lecturers: P. Dite (Czech Republic) and A. Vavrecka (Slovakia).

During the next meetings we observed the increasing number of presentations of innovative therapeutic techniques. It may be apt here to mention the reports on
photodynamic therapy in colonic cancer (J. Regula) and endoscopic cysto-gastro and cysto-duodenostomy (M. Smoczyński) in 1993, as well as the reports on variceal banding (A. Baniukiewicz) and self-expandable metal stents in palliative treatment of colonic cancer (T. Romańczyk) in 1994.

In the spring of 1994 (May 5th - 7th) the ESGE workshop with live transmissions was organized for the second time in Katowice (after Budapest in 1992, and Prague in 1993).

The second Katowice workshop (Fig. 31) gathered over 300 participants from eleven countries (Poland, Czech Republic, Slovakia, Estonia, Lithuania, Russia, Ukraine, Hungary, Slovenia, Croatia, Serbia) and 9 experts: J-R Armengol-Miro (Spain), D. G. Collin-Jones (UK), M. Cremer (Belgium), M. Crespi (Italy), A. Montori (Italy), J.-F Rey (France), T. Rösch (Germany), Laszlo Simon (Hungary), and Jerome D. Waye (USA) (Fig. 32).

They presented 6 lectures and 23 endoscopic procedures, including endoscopic ultrasound, difficult polypectomies, GI tract stenting with self-expandable metal stents, “mother-and-baby” cholangioscopy, etc. It must also be borne in mind that the organization of these two (1991 and 1994) workshops on advances in GI endoscopy played a very special and important role. They certainly helped to introduce the modern methods of teaching the GI endoscopy in our part of Europe and promoted the continuation of this idea in the other countries. Several smaller regional workshops devoted to the selected aspects of therapeutic GI endoscopy were organized later in Poland (Białystok, Katowice, Gdańsk, Warszawa).

Thanks to personal experience gained during organization of our meetings, the Katowice team also played the leading role in the construction of the set of guidelines for organization of workshops with both “live” and video endoscopic demonstrations, officially known as the ESGE bid-manuals (26,27).

In 1994 the Polish Society of Gastroenterology established its own journal “Gastroenterologia Polska” (founder and Editor-in-Chief: Z. Knapik). The journal (Fig. 33) became the very important place for publication of not only purely gastroenterological but also endoscopic papers.

In the year 1995, the Endoscopy Group of the Polish Society of Gastroenterology, as the second in Europe (after French SFED), accepted the
proposal of the international journal - *Endoscopy* (Figs 34 and 35) to be also the official organ of our Group and begun the close cooperation with the *Endoscopy* Editorial Board. It helped the Editorial Board to expand the journal in our country on one hand, and on the other, it allowed our Society easier access to the newest achievements in endoscopy, thanks to several years of complimentary subscription of the journal for the members of the Endoscopy Group. At present, Endoscopy is an official organ of endoscopic societies covering 23 countries in Europe, Asia and South America.

In 1995 the 21st Endoscopic Day moved again to a new venue - the Concert Hall of the National Symphony Orchestra of the Polish Radio. This was necessary due to a growing number of participants, exceeding the capacity of the

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**Fig. 31.** Poster inviting to the 2nd Katowice Workshop.

**Fig. 32.** The Faculty of the Second Katowice Live-Workshop. From left: M. Crespi (Rome, Italy), M. Cremer (Brussels, Belgium), D.G. Collin-Jones (Portsmouth, UK), A. Nowak, J.R. Armengol-Miro (Barcelona, Spain), J.D.Waye (New York, USA).
previous auditoria. Very important topic of endoscopic complications was discussed, with the special emphasis on the techniques aiming at minimization of the risk of endoscopy to patients.

In 1996, on the occasion of the 22nd Endoscopic Day, the Governing Board of the Endoscopy Group initiated a project to establish a section of gastro-intestinal endoscopy nurses and assistants to be affiliated with the Polish Society of Gastroenterology. After the series of working meetings and elections of regional delegates, the Section was finally established in 2001 (chairwomen: B. Łudzik, and M. Karczmarczyk). All appropriate amendments in the Statute of the Polish Society of Gastroenterology were adopted by the General Assembly during the 10th Congress of the Society in 2002 in Lublin and the nurses and assistants formally became the members of the Society.

In 1996 a new program section on novel endoscopic techniques was established; during its first meeting the reports were presented on EUS (E. Wierzbicka-Paczos), argon-plasma coagulation (J. Reguła), nose-endoscopy and endo-loop in endoscopic hemostasis (T. Marek) and laparoscopic treatment of achalasia and hernias (P. Pyda).

It should be pointed out that from the year 1997 our annual meeting has been renamed to “Endoscopic Days” as the one-day program changed to the two-day formula. This two-day formula has been continued until now. The meeting for GI endoscopy nurses and assistants is organized on the first day, while the physicians’ meeting is held on the second day. In addition to the annual meeting, on November 14th, 1997, a mini-workshop was organized with the participation of R. Dumas (France) and J. Devière (Belgium). R. Dumas presented also an invited lecture on self-expandable metal stents.

The working group on decontamination of endoscopic equipment chaired by T. Marek (acting under the patronage of the National Consultant on Gastroenterology, E. Butruk) prepared and distributed a document containing the guidelines for decontamination and re-processing of endoscopes and endoscopic accessories. The document discussed also certain issues on safety and endoscopy staff protection.
Although the document has not been approved as the official guidelines of the Minister of Health, it was a very important step towards safer endoscopy in Poland. After few years that have elapsed since the publication, it can be stated that the guidelines significantly improved the practice of decontamination of endoscopic equipment. The problem of decontamination of endoscopic equipment was also widely discussed at the GI nurses and assistants’ meeting in 1997.

The idea of presenting guidelines of practice in endoscopic units was continued next year (1998). During the annual meeting a set of lectures was devoted to important issues of the quality assurance in endoscopy, including equipment, personnel continuous education and training, indications and contra-indications, structured reporting, data management and computerization, ethical aspects (informed consent) and law (complications and malpractice). The nurses’ meeting, traditionally preceding the physicians’ day, also included a broad set of topics, connected with the role of nurse during endoscopic procedures and in gastroenterological and surgical wards.

The gastric polyps were the leading topic of the 25th Endoscopic Day (November 5th - 6th, 1999). The idea of presenting the guidelines was this time represented by a short symposium on Minimal Standard Terminology. Polish endoscopists were warmly encouraged to use the MST in their clinical practice. Interesting reports were presented on therapeutic endoscopy in children. A report on creation of the Polish Barrett’s Esophagus Register (J. Regula) was certainly worth of notice, as it represented one of the very few projects aimed at improvement in the knowledge of epidemiology of gastrointestinal system diseases in Poland.

The 9th Congress of the Polish Society of Gastroenterology was organized in Katowice in the year 2000 (June 15th - 18th). That was why we abandoned that year the usual autumn time of the meeting and the Endoscopic Days were held on June 17th and 18th as the integral parts of the Congress. These were certainly the Endoscopic Days with the greatest number of international speakers - A. Kruse
(Denmark), J.-F. Rey (France), K. B. Spencer (Germany), G. Farin (Germany), U. Schrimpf (Germany) and L. Simon (Hungary) took part with invited lectures. Faced with challenges of the passing and incoming millennium, the topics concentrated mainly on the latest advances in endoscopic technology, including imaging, computerization, and coagulation techniques. The guidelines on sedation and monitoring during endoscopic procedures were presented. The guidelines topic was continued during the session on standards in endoscopy unit organized on June 18th together with Section of Endoscopic Nurses and Assistants of the Polish Nurses’ Society; an invited lecture was delivered by the Secretary of the European Society of Gastroenterology and Endoscopy Nurses and Associates (ESGENA), D. Duforest (France).

In the same year Poland, following the ESGE initiative on the public awareness program of 1997, joined the European campaign against the colorectal cancer, as one of the first countries in Europe. The Warszawa center (E. Butruk) started the National CRC Screening Program financed by the Ministry of Health, using the colonoscopy as the best screening tool (28,29). The program is carried on in 27 centers throughout the country with about 30 000 colonoscopies performed up to now. At present, the Polish program is certainly one of the most important projects of this campaign in Europe, as only three countries (Poland, Italy, and Germany) use the colonoscopy as the primary screening tool.
In May 2001 the endoscopic workshop devoted to the use of diagnostic and therapeutic EUS in diseases of the pancreatobiliary area was organized by Marian Smoczyński in Gdańsk. The workshop gathered 200 participants from all parts of Poland. EUS procedures were performed by M. Giovannini (France).

The 2001 Endoscopic Days concentrated on the use of endoscopy as the preventive measure - the diagnosis and treatment at the earliest possible stages of various GI diseases. Presentations on NSAIDs-related colonopathy (J. Reguła) and sphincterotomy for acute pancreatitis with impacted stone in 9-year old girl (A. Nowak) were ones of the most interesting in the case-reports section. The nurses and assistants were deliberating at the same time on infection in endoscopy.

The venue of the 28th Endoscopic Days (2002) returned to Katowice-Ligota - to a newly built auditorium of the Medical Faculty of the Medical University of Silesia in Katowice. The idea of presenting the guidelines was continued; four working groups presented the sets of indications and contraindications to EGD, colonoscopy, ERCP, and EUS, while the fifth team concentrated on aspects of patients’ informed consent.

In November 2002 W. Łaszewicz organized in Białystok the hands-on training in endoscopic hemostasis using, developed by J. Hochberger, the Erlangen Active Simulator for Interventional Endoscopy (EASIE). EASIE, using the porcine stomach with an ingenious perfusion system, generates realistic bleeding episodes and it allows the performance of endoscopic hemostasis in conditions mimicking those encountered in a human. Three more training sessions were organized in 2003. Altogether, 28 teams of endoscopist and endoscopy nurse were trained during these meetings.

In May 2003 M. Giovannini (France) was once more the guest-expert of endoscopic workshop in Gdańsk. This workshop was focused on use of therapeutic EUS and therapeutic ERCP in the diseases of pancreatico-biliary area.

The topic of 29th Endoscopic Days (November 21st - 22nd, 2003) was dominated by the latest changes in the Polish health care system. Similarly as in the previous year, working groups prepared and presented the guidelines of performing endoscopic procedures in the out-patient or in-patient manner (one-day versus normal hospitalization), bearing in mind not only the cost-effectiveness but mainly the safety of the patients. The case reports section included interesting presentations on Whipple’s disease (H. Klincewicz, B. Kotowski) and endoscopic treatment in pancreatic necrosis and pancreatic duct rupture (M. Smoczyński). Endoscopic nurses and assistants dedicated their proceedings to ethical and legal aspects of endoscopy, pediatric endoscopy and the new therapeutic techniques.

The topics of all Endoscopic Days are listed in Tables 2 and 3.

Table 2. Scientific Meetings of the Endoscopy Group of the Polish Society of Gastroenterology

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<tr>
<th>Year</th>
<th>No.</th>
<th>Title</th>
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<tr>
<td>1975</td>
<td>(1)</td>
<td>The development of endoscopy in Poland</td>
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<td>1976</td>
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<td>Endoscopy in internal medicine</td>
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<td>1977</td>
<td>(3)</td>
<td>Endoscopic aspects of GI tract neoplasms</td>
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</table>
1978 (4) Malpractice in endoscopy
1979 (5) Anesthesia in endoscopy
1980 (6) Endoscopic complications
1981 (7) Vital staining in endoscopy
1982 (8) Therapeutic endoscopy
1983 (9) Endoscopy in the elderly
1984 (10) Duodenitis
1985 (11) Endoscopic terminology
1986 (12) Gastritis
1987 (12) Interventional endoscopy - diagnosis and treatment
1988 (14) Colitis
1989 (15) Training in endoscopy
1990 (16) Endoscopic aspects of GI tract neoplasms
1991 (17) Upper GI bleeding
1992 (18) Endoscopy in diagnosis and treatment of cholestasis
1993 (19) Helicobacter pylori and upper GI endoscopy
1994 (20) Colonic polyps
1995 (21) Complications of endoscopy
1996 (22) Standards in GI endoscopy: colonic polyps / acute cholangitis
  New techniques in GI endoscopy
1997 (23) Barrett’s esophagus
  Standards in GI endoscopy: Decontamination of endoscopic equipment
  New techniques in GI endoscopy
1998 (24) Quality assurance in endoscopy
1999 (25) Gastric polyps
  Minimal standard terminology in GI endoscopy
2000 (26) Sedation and monitoring in GI endoscopy
  New technologies in endoscopy
  Coagulation techniques in endoscopy
  Computers in endoscopy
2001 (27) Preventive endoscopy
  SEDATION for urgent endoscopic procedures
2002 (28) Indications for GI endoscopy
2003 (29) Therapeutic endoscopy: out-patient, one-day, or in-patient

All meetings included the program section of interesting endoscopic case reports

<table>
<thead>
<tr>
<th>Year</th>
<th>Meetings of the Section of Gastro-Intestinal Endoscopy Nurses and Assistants of the Polish Nurses’ Society and Polish Society of Gastroenterology</th>
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<tr>
<td>1988</td>
<td>(1) Preparation of patients for endoscopy</td>
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<td>Maintenance of endoscopic equipment</td>
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<td>1996</td>
<td>(2) Business meeting: organization of the section</td>
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<tr>
<td>1997</td>
<td>(3) Decontamination of endoscopic equipment</td>
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<td>Current prospects and possibilities of endoscopy</td>
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<td></td>
<td>The organization of endoscopy unit</td>
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<tr>
<td>1998</td>
<td>(4) Decontamination of endoscopic equipment</td>
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<td></td>
<td>Diseases of large bowel</td>
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<td>The role of nurse in gastrointestinal endoscopy procedures</td>
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</table>

**Table 3:**
At the end of 2003, the number of endoscopists being the members of the Endoscopy Group reached five-hundred and one. The present Governing Board is composed of president (A. Nowak), secretary (T. Marek) and treasurer (E. Nowakowska-Duława).

**Activities of Polish endoscopists in the international area**

Endoscopists from Poland actively participate in international congresses, symposia, and workshops organized in Europe and in the other parts of the World, they are engaged in multi-center scientific programs and publish the results of their endoscopic studies in international papers.

As early as in the 70-ties Katowice Department of Gastroenterology participated in the ASNEMGE Survey of Early Gastric Cancer in Europe (30,31). Later, T. Popiela led a multi-center study on diagnosis and surgical treatment of gastric cancer; the results of the study were presented in several papers (32,33,34).

A group of Polish gastroenterologist participated in the research projects organized by the OMGE Scientific Committee entitled “Acute Abdomen” (35), and “Inflammatory Bowel Disease” (36). It appeared (36) that incidence of the Crohn’s Disease in Poland was much lower than that of ulcerative colitis, contrary to the Western countries, although segmental ileitis was described sooner in Poland than in England. In the subsequent years a trend towards balanced incidence of both conditions was observed (37).

Large group of Polish gastroenterologists conducted their own trials or took part in many international trials upon new anti-ulcer drugs (38-45).

A definitely shorter time of ulcer healing was proved with weekly endoscopies repeated until demonstration of the cicatrix as the most adequate criterion of active ulcer healing. The ulcer could be cicatricized even in a few days (38). Such observation was obviously not possible in most clinical trials with endoscopy repeated after 4 or 6 weeks only.
In view of plenty of modern anti-ulcer drugs and their short-term effectiveness the need to study the natural history of peptic ulcer and its recurrence was postulated. In 1982 the Governing Board of OMGE decided to open a new project on “Natural history of peptic ulcer disease” and confined its monitoring to the Katowice Endoscopy Unit (46,47). Unfortunately, soon after announcing the project and accepting first applications, the project lost its background with the discovery of *Helicobacter pylori* and the surprising evidence of infectious character of majority of cases.

The team of GI Department of Medical Center for Postgraduate Education in Warszawa conducted extensive studies on colonic and gastric polyps, reporting e.g. on follow-up after polypectomy of juvenile polyps in children (48); polyps with invasive cancer (49); and small colonic polyps (50). They also reported the use of argon plasma coagulation for the additional treatment after piece-meal removal of large colorectal adenomas (51) and proved that gastric hyperplastic polyps had the potential to malignant transformation (52). In addition, they published several papers on clinical use of endoscopic ultrasound (53-55).

The team of Department of Gastroenterology in Białystok collaborated with Finnish partners in the studies on gastritis and gastric ulcer (56,57).

The pediatric gastroenterology center in Warszawa published interesting study (apart from already mentioned study on polypectomy in children (48) on the variceal banding as the primary prophylaxis of variceal bleeding in children (58), and pediatric team of Łódź reported the incidence and clinical features of Mallory-Weiss syndrome in children (59).

The Katowice unit was one of the first centers in the world where the ERCP and ES were used for the treatment of acute biliary pancreatitis (ABP). The lack of additional way of outflow of pancreatic juice through the absent or obliterated Santorini duct (60) as well as the biliary microlithiasis (61,62) were confirmed to be the important pathogenic factors in the development of ABP. The superiority of ES over the conventional management of ABP was proven in the randomized study (63-66). The method was widely accepted in Poland as well as in many centers throughout the World. The Department of Gastroenterology in Katowice organized the center of endoscopic treatment of acute biliary pancreatitis (as well as for acute cholangitis) holding the 24-hour emergency service. Based on the results obtained we developed our own prognostic system for patients with ABP treated with endoscopic sphincterotomy (Katowice system) (67).

The number of patients with acute pancreatitis treated endoscopically reached over sixteen hundred in 2003, with over 200 cases being the average for the last few years (Fig. 36).

The other topic of our interest in the recent years there was the use of linear array endosonography in the diagnosis of common bile duct stones (68,69).

Polish endoscopists were frequently invited to participate in international, multi-center scientific programs, for instance in GASTER project (70),
European Panel on Appropriateness in Gastrointestinal Endoscopy (71), International Study on Intestinal Metaplasia at Gastro-Esophageal Junction (72), etc.

The collaboration of Polish doctors with endoscopic centers outside Poland allowed them to participate in introduction of new endoscopic techniques like nose-endoscopy (73), palliative stenting in large bowel obstruction (74), the prophylactic use of endo-loops before endoscopic polypectomy (75), the use of oral 5-ALA for photodynamic therapy for GI cancer (76-78), etc.

Polish endoscopists were several times elected to important posts in international endoscopic societies - European Society of Gastrointestinal Endoscopy (ESGE), World Organization of Digestive Endoscopy (OMED) and European Association for Gastroenterology and Endoscopy (EAGE).

A. Nowak was the councilor of the ESGE Governing Board from 1984 to 1994, Vice-President from 1994 to 2000, President-Elect from 2000 to 2002; in 2002 he was elected President of the ESGE. In the years 1994-2000 he was also the chairman of the Education Committee of the ESGE. In the years 1990-1998 he served also as a member of the Information Committee of OMED and in the years 1998-2002 he was a member of the Education Committee of this organization. E. Butruk was the councilor of the Governing Board of the EAGE from 1995 to 2003. T. Marek is a member of the Research Committee (from 1997), Education Committee (from 2001) and Terminology Committee (from 2001) of the ESGE.

Fig. 36. Patients with ABP treated in the Department of Gastroenterology, Medical University of Silesia in Katowice.
Younger colleagues from the Katowice team also made their own contribution to the activities of the ESGE, working on the educational projects, comprising for examples ESGE CD-ROM on Complications of Endoscopy, modules of ESGE Video-Teaching Aids (GI bleeding - Module 3 and 18 (79,80) or ESGE guidelines (antibiotic prophylaxis before endoscopic procedures) (81).

Several Polish endoscopists were invited to the editorial boards of international endoscopic journals (Endoscopy: E. Butruk, T. Marek, A. Nowak, M. Polkowski, J. Reguła; Gastrointestinal Endoscopy: A. Nowak).

Many times Polish endoscopists were invited to participate in scientific committees of international congresses to be the reviewers of submitted abstracts or to deliver invited lectures and to moderate sessions during the congresses.

The Polish achievements in endoscopy were frequently recognized on the international area. The examples of such recognition may be the Dame Sheila Sherlock prize for the Katowice team, awarded during the European Congress of Gastroenterology in Hamburg in 1980 for the paper: “Early gastric cancer statistics and reality” (82), or the prize for manometric study on influence of various spasmolytic drugs on the motility of the sphincter of Oddi awarded during the European Congress of Gastrointestinal Endoscopy in Rome in 1988 (83).

CONCLUDING REMARKS

During the 80’s and 90’s the enormous progress in GI endoscopy was observed, including especially new therapeutic techniques. It was possible due technical progress in the construction of endoscopes and endoscopic accessories.

The use of video-endoscopes, allowing much better visualization of the GI tract, became widespread; the recently constructed video-endoscopes use both optical and electronic zoom. The enormous progress was also achieved in endoscopic picture acquisition, management and storage.

The development of better and better endoscopic accessories allowed the wide expansion of therapeutic endoscopy including complex management of GI tract strictures (bougie and balloon dilation, re-canalization and stenting), advances in endoscopic hemostasis (argon plasma coagulation, hemoclips, rubber banding of esophageal varices), endoscopic mucosectomy, photo-dynamic therapy, etc. Furthermore, in many advanced therapeutic techniques introduced in the last few years special emphasis was put on the techniques crossing the border between medicine and surgery. Today, it is a well-known fact that endoscopy and radiological imaging techniques have definitely changed the practice in gastroenterology in the last century.

This chapter dealing with the Polish traces in gastroenterology does not present the complete historical monograph of the Polish endoscopy in the 20th century. It presents the chronicle of events as they were seen by the authors, representing three generations of endoscopists with about 60, 40 and 20 years of
personal experience in clinical endoscopy, working together in the same Department of Gastroenterology.

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DIGESTIVE ENDOSCOPY FROM RIGID TO FIBER-OPTIC INSTRUMENTS; THE POLISH CONTRIBUTION TO THE DEVELOPMENT OF GASTROINTESTINAL ENDOSCOPY