New trends in pancreatic cancer: "early pancretic cancer" - Case report

*DESIREE PANTALONE, § GABRIELLA NESI

*From *Istituto di Clinica Chirurgica e D.C., and §Istituto di Anatomia e Istologia Patologica, University of Florence, Florence, Italy*

Pancreatic cancer is one of the leading causes of cancer death. Although the incidence is comparatively low (10%), the death rate is high. Peak incidence is in the 7th and 8th decades of life. The overall 5-year survival rate varies between 1% and 5%.

In Italy, it is the 4th leading cause of cancer death in men, and the 6th in women. Despite the introduction of new technologies, pancreatic cancer survival has not improved. Delay in diagnosis is the main factor and can be attributed to various causes: the early clinical features are vague and non- specific.

Screening of an asymptomatic population is not an option because no high-risk group has been identified yet and, additionally, no simple, cost-effective, non-invasive and highly sensitive test is available and applicable on a large scale.

Surgical resection remains the only treatment with curative potential but the majority of patients are unresectable at the time of diagnosis. Recently, some authors suggested the definition of "early pancreatic cancer" as a small tumor (< 2 cm) confined to the pancreas which has the highest survival (19-41% for radical pancreatectomy).

In this study, we report the clinical history of a woman who underwent surgery 5 years ago for pancreatic cancer measuring less than 2 cm. The patient is currently in good health with no evidence of recurrences.

Conclusively, it is our opinion that the effort to better define a curable stage of pancreatic adenocarcinoma represents an adequate therapeutic approach. Genetic research is the right approach to identify a population at risk to detect early pancreatic cancer so that early diagnosis will be a true possibility instead of a future prospective.

KEY WORDS: Early pancreatic cancer - Pancreatic adenocarcinoma

Address reprint requests to: Dr. Desiree Pantalone, Clinica Chirurgica Generale e D.C., Viale Morgagni, 85 Careggi, 50134 Firenze, Italy.

Pancreatic cancer is one of the leading causes of cancer death. Although the incidence is comparatively low (10%), the death rate is high. Twenty-eight thousand cases occur in the United States each year, accounting for 26,000 deaths. It represents the 10th most common malignancy and the 5th leading cause of cancer death in the United States. Peak incidence is in the 7th and 8th decades. The overall 5-year survival rate varies between 1% and 5%.[1,2,3]

In Italy, it is the 4th leading cause of cancer death in men, and the 6th in women.[4,5]

Despite the introduction of new technologies, pancreatic cancer survival has not improved. This is not surprising because the efficiency of these investigative tools does not significantly influence the timing of patient presentation and, hence, the stage of the disease. Delay in determining the diagnosis is the main factor and this can be attributed to various causes:[1,6,7] the early clinical features are vague and non-specific. Symptoms are often misunderstood by both the patient and physician, suggesting other more common diseases or even stress-correlated disorders of the gastrointestinal tract.

Screening of an asymptomatic population is not an option because no high-risk group has been identified yet and, in addition, no simple, cost-effective, non invasive and highly sensitive test is available and applicable on a large scale.

Surgical resection remains the only treatment with curative potential but the majority of patients are unresectable at the time of the diagnosis.[8]

Recently, some Authors suggested the definition of "early pancreatic cancer" as a small tumor (< 2 cm) confined to the pancreas. Indeed, some surgeons report a 5-year survival rate of 19-41% for patients undergoing radical pancreatectomy with the highest survival in patients with small (< 2 cm) tumors.[9, 10] These data support the hypothesis that surgical excision of small tumors will improve the 5-year survival rate.

In this study, we report the clinical history of a woman

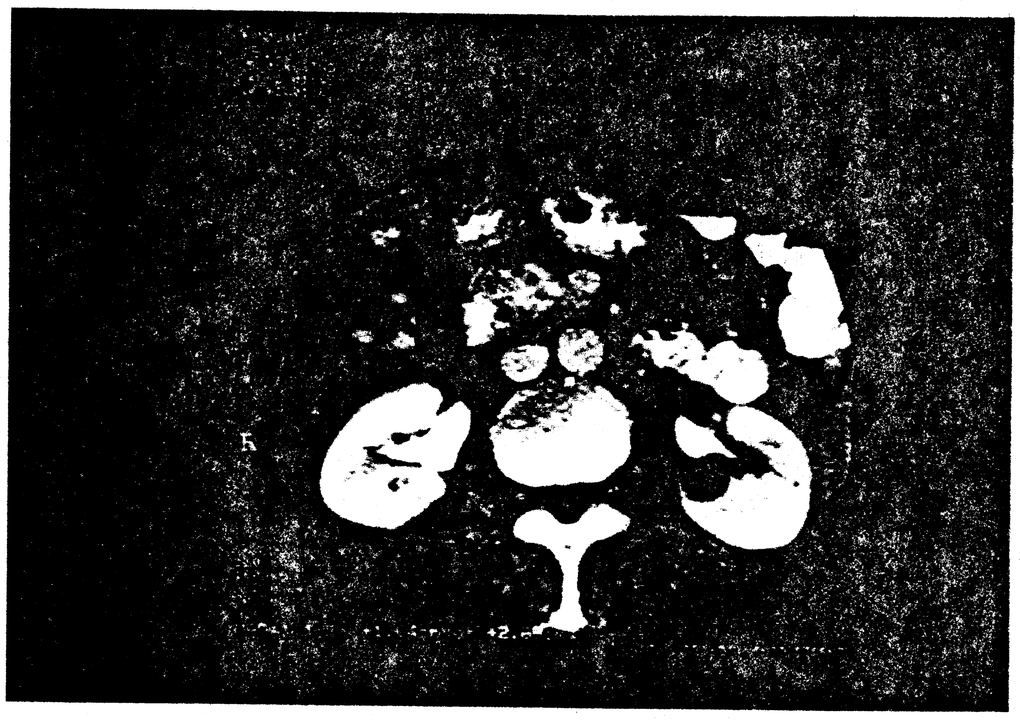

Fig. 1. - CT scan demonstring the presence of pancreatic mass in the body.

Fig. 2. - CT scan (particular of the mass).

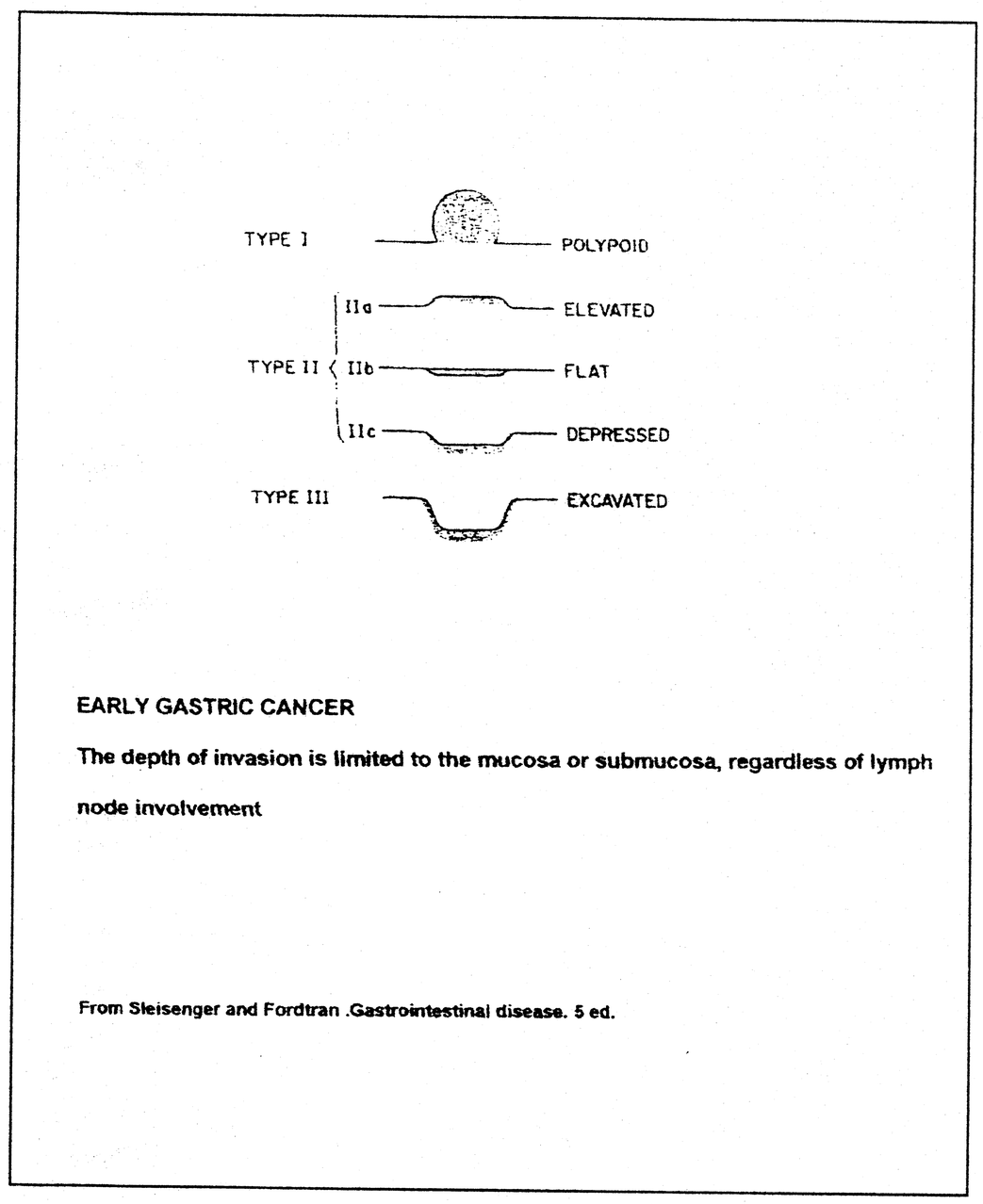

Fig. 3. - Early gastric cancer.

who was operated 5 years ago for pancreatic cancer measuring less than 2 cm. She is currently in good health, without evidence of recurrence.

Materials and methods

Case report. A 65-year-old female presented with complaints of abdominal pain, radiating to the back (DX- L I-L II) and a recurrent history of nausea. Her past surgical history revealed an appendectomy at age 14 and a cholecystectomy at 57. Physical examination showed abdominal diffuse discomfort, but no palpable mass was appreciated.

An ultrasound scan demostrated a tumor measuring 2 cm in diameter, which obstructed Wirsung's duct. CT scan confirmed the presence of a pancreatic mass arising in the body (Fig.s 1 & 2). No lymph node involvement was detected by either US or CT scan. Admission laboratory data were normal. A duodenopancreatectomy was performed and the pathologic diagnosis revealed ductal adenocarcinoma, moderately differentiated, confined to the pancreas. The regional lymph nodes were free of tumour (T1 N0 M0 according to the UICC classification, and T1 N0 Rp0 Pv0 So M0 according to JPS classification). At present, the patient enjoys good health and is disease-free at more than five years post-surgery.

Discussion and conclusion

It is well known that pancreatic cancer is a common and deadly disease, rarely cured. Review of the past 50 years of surgery reveals dismal results and minimal impact on survival. Long-term survival in patients with histologically proven adenocarcinoma of the pancreas is virtually confined to those patients undergoing curative resection.[11,12] Moreover, in some series of small tumors, the 5-year survival improves as much as 35%.[13,14,15]

"Early pancreatic cancer" presents some differences

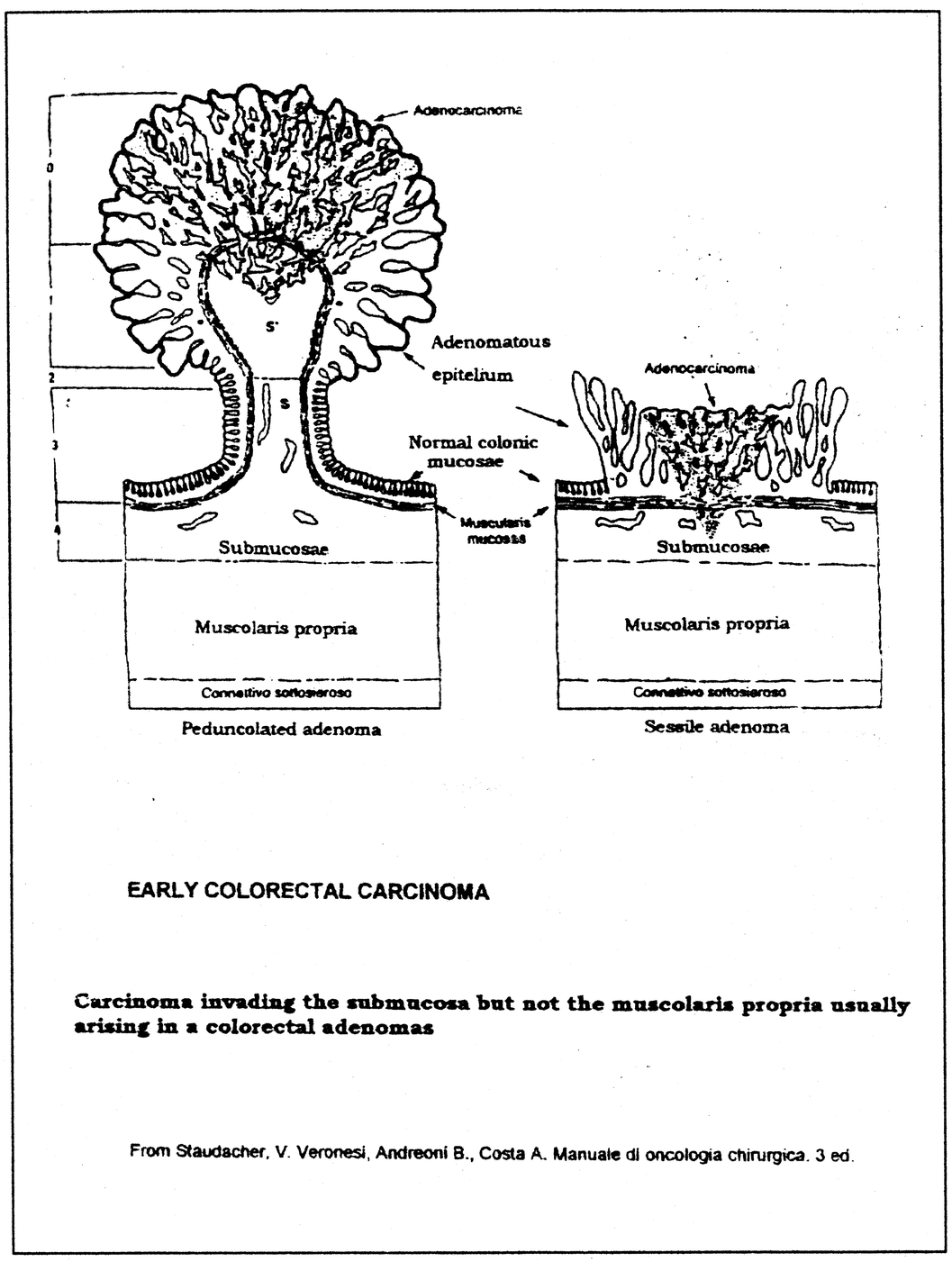

Fig. 4. - Early colorectal carcinoma.

TABLE I. - *TNM stage grouping.*

STAGE I	T1	N0	M0
	T2	N0	M0
STAGE II	T3	N0	M0
STAGE III	T1	N1	M0
STAGE IVA	T4	Any N	M0
STAGE IVB	Any T	Any N	M1

UICC Classification, 5th ed., 1997

from "early gastric cancer" or "early colorectal cancer" which have been defined in comparison with some histo-

TABLE II. - *Japanese Pancreas Society staging.*

	Tumour size, cm	Lymphonode metastasis	Anterior capsular invasion	Retro peritoneal invasion	Portal vein involv.
STAGE I	T1, < 2cm	N0	S0	Rp0	Pv0
STAGE II	T2, 2 to 4	N1	S1	Rp1	Pv1
STAGE III	T3, 4 to 6	N2	S2	Rp2	Pv2
STAGE IV	T6, > 6	N3	S3	Rp3	Pv3

Kobari M et al., J Am Coll Surg 182:24-32, 1996

logic features (Fig.s 3 & 4).[16,17]

"Early pancreatic cancer" is defined according to tumor size and lymph node involvement, without correlation to the architecture of pancreatic tissue. The survival rate and disease-free interval convalidate this definition.[18] In fact, a survival rate of 35-41% is an encouraging result for a tumor that has a rate of 5% total survival.

According to the UICC, this "early cancer" is classified as stage I[19] (Fig. 5) referring to both T1 (tumor size of 2cm or less in greatest dimension limited to the pancreas) and T2 (tumor size of more than 2 cm in greatest dimension limited to the pancreas) with no lymph node metastasis. The JPS classification indeed defines the "early pancreatic cancer" as stage I (T1 N0 Rp0 Pv0 S0 M0) (Fig. 6) Probably, the JPS classification is more accurate in the definition of "early pancreatic cancer". The difference between these two classifications also depends on the different trend of lymphoadenectomy between the Western world and the Far East countries. In any case it seems reasonable to consider this lesion as an "early" one and perhaps it represents the only curable condition at this time. Moreover, recent data suggest that chemoradiation represents a logical attempt to improve outcome in patients with pancreatic cancer. Additional refinements, including more potent radiation sensitizers (for example Taxol or gemcitabine vs 5-fluorouracile), may further increase the usefulness of chemoradiation.[20,21]

Conclusively, we think that the effort to better define a curable stage of pancreatic adenocarcinoma represents an adequate therapeutic approach. Basic research on genetic features is probably the right way to identify a population at risk to detect early pancretic cancer. Thus, we hope that the early diagnosis becomes a true possibility instead of a future prospective, so that when the patient queries "what about my jaundice" or "what will be the prognosis", instead of despair we hope to be optimistic, because the cancer would be detected at a curable stage.

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