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Clinical Study of Acinar Cell Carcinomas of the Pancreas

- Our 5 cases and a review of 5 cases reported in Korea -

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Purpose: A acinar cell carcinoma of the pancreas is a rare malignancy arising from exocrine cells and comprising about 0.2 to 1% of all pancreatic cancers. Acinar cell carcinomas are usually seen in elderly patients and show a poor prognosis due to frequent metastasis. So far, we have not found any report of a clinical analysis of acinar cell carcinomas in Korean.

Methods: The records of 5 patients of Dong-A University Hospital and 5 patients already reported on in other literature in Korea were reviewed. The clinical and radiohistologic characteristics, treatment and prognosis were analyzed.

Results: The patients consisted of 8 males and 2 female. The patients ranged in age from 25 to 68 years (mean, 49.3 years). Presenting symptoms were nonspecific, and jaundice was infrequent. The symptoms from increased serum lipase levels were present in 2 (20.0%) of the patients. The tumor was frequently located on the tail (6 cases, 60.0%) of the pancreas. The histologic finding showed an acinar arrangement of the tumor cells with a minute central lumen. Ultra-structurally, the tumor cells had a few zymogen granules. The mean size of the tumors was 7.5 cm. We found that 1 case among the 10 cases had an elevated CA19-9 level among 10 cases and no one had an elevated AFP or CEA level among our 5 cases. A radical resection was performed in 7 cases, and the mean survival was 44.0 months. The mean survival of the 10 cases was 35.4 months.

Conclusion: An acinar cell carcinoma is a rare type of pancreatic cancer and has a more favorable prognosis than a pancreatic ductal carcinoma. The clinical outcome and the radiohistologic characteristics were similar to those in other foreign literature, but the age, the tumor locations and the tumor marker (AFP or CEA) of the patients in this study were different from those of Caucasians. (*J Korean Surg Soc 2001;60:97-102*)

Key Words: Acinar cell carcinoma, Pancreas

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(acinar cell carcinoma) 0.2 1%
(1,2)
, , , , lipase
(3) 가
가
(4)
(1)
1977 Webb (4) 11 , 1992 Klimstra (1) 28
, Itoh (5) 29 , 2000 Cingolani (6) 5 ,
Ordonez (7) 4 1984
30 가 (8)
1983 , (9) , (10) , (11)
(12) 1

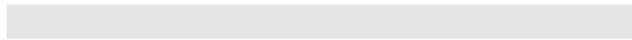
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5 5 1 CA19-9 10
 CEA 5 AFP
 2)



(Fig. 1) 가

1990 5 1999 12
 364
 5 , ,
 , 5



1)
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 , amylase/lipase ,
 Table 1 . 10
 8 , 2 25 68
 49.3 . 4 가
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 cm 19 cm 7.5 cm . Amylas
 lipase 3 lipase 2

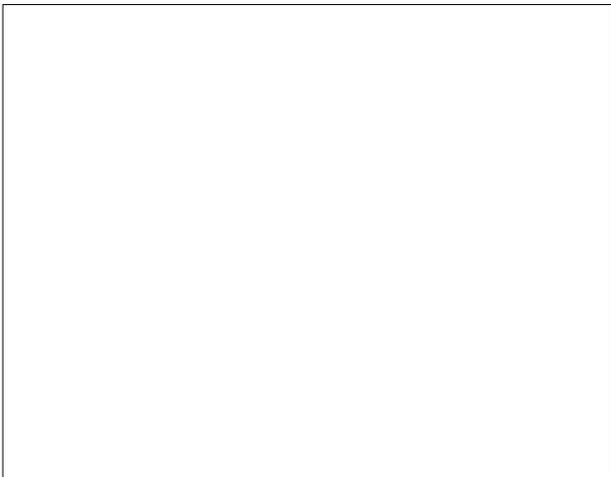


Fig. 1. Abdominal computed tomogram showing huge solid lesion occupying in distal pancreatic portion.

Table 1. Clinical characteristics of acinar cell carcinoma (ACC)

No S/A	C/C	preop Dx	loc	size (cm)	Amylase/lipase	Arthralgia skin lesion	Tumor marker	
1 M/54	jaundice	distal CBD ca	head	3	normal	-/-	?	K J Path (Vol 17. 1
2 M/59	indigestion	pancreatic ca	body	8	normal	?	?	J Korean Cancer A (Vol 27. 1995)
3 M/38	abd pain	pancreatic ca	tail	5	normal	-/-	AFP, CEA, CA19-9	J Korean Cancer A (Vol 28. 1996)
4 M/60	weight loss	pancreatic ca	tail	11	normal	-/-	AFP, CA19-9 (62.4 [†])	J Korean Surg (Vol 51. 1996)
5 M/68	LUQ mass	pancreatic ca with liver metastasis	tail	10	normal	-/-	AFP, CEA, CA19-9	J Korean Radiol (Vol 39. 1998)
6 M/53	LUQ pain	pancreatic tumor	tail	6.5	n'l/2400	+/-	CA19-9	Our case
7* M/54	LUQ pain	retroperitoneal mass	tail	19	n'l/709	+/-	CA19-9	Our case
8 M/39	Lt flank pain	head; chronic pancreatitis tail; mass, R/O malign	tail	3.5	n'l/976	-/-	CA19-9	Our case
9 F/43	epigastric soreness	pancreatic tumor with liver metastasis	body	6.2	normal	-/-	AFP, CEA, CA19-9	Our case
10 F/25	jaundice	pancreatic ca	head	3	normal	-/-	AFP, CEA, CA19-9	Our case

LUQ = left upper quadrant; CBD = common bile duct. * = recurrence cases; † = value.

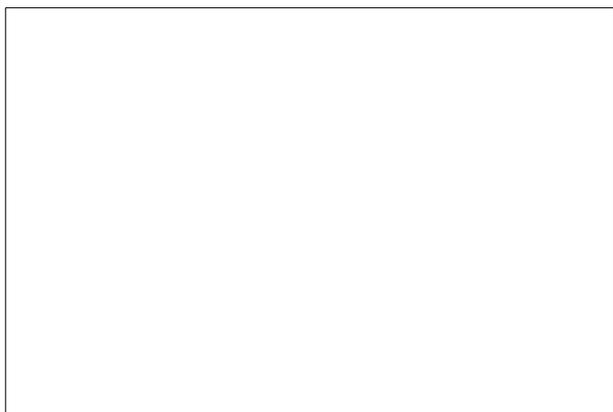


Fig. 2. Gross appearance of the specimen showing 18×19×1 sized pinkish, soft mass. On section, homogeneous, fri and fresh surface with diffuse necrotic change is fo

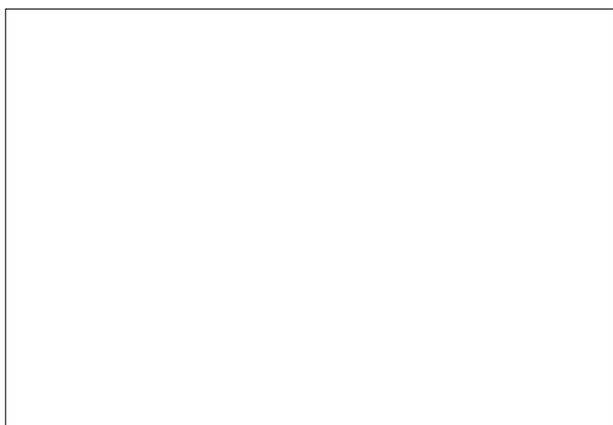


Fig. 3. Pathologic finding showing acinar arrangement of the cells with minute central lumen (H&E stain, ×100)



Fig. 4. Electron microscopic finding. The tumor cells have zymogen granules (×35,000).

Table 2. Treatment and survival

No	op name	CTx/RTx	Survival (month)
1	Whipple's op	?	?
2	SP	?	?
3	DP	Cisplatin #6	30
	SP		
4	DP	?	18
5	Open biopsy	?	?
6	DP	5-FU #2	3 (loss)
7	DP & T-colon resection	RT (5400 rad)	9
	Tumor excision	5-FU #2	
8	TP	5-FU #12	43
9	FNAB	5-FU #12	19
		RT (5400 rad)	
10	Whipple's op	5-FU #12	126 (aliv)

SP = subtotal pancreatectomy; DP = distal pancreatectomy; total pancreatectomy; FNAB = fine needle aspiration biopsy = radiotherapy; 5-FU = 5-fluorouracil. # = number of chemotherapy cycle.

3) 5 cm 가 (Fig. 2). (Fig. 3). (Fig. 4). zy mogen (Table 2) 4)

(eosinophilic cytoplasm)
 가 . H&E 5 7 15.5 ,
 가
 (solid pattern) 354
 (glandular appearance) . Ukei (22) 5-FU, mitomycin C, cisplatin
 (glandular pattern) (acini) (intra-arterial chemotherapy)
 (lumen)
 (trabecular pattern) 가 가 5
 가 18 . Vique (23)
 가 47가
 'prominantly acinar', 'prominantly solid', 'mixed acinar and solid' 3가

carboxyl ester lipase, pancreatic secretory trypsin inhibitor pancreatic phospholipase A2 (group I PLA2)
 가
 tissue peptide antigen (TPA),
 carcinoembryonic antigen (CEA), CA19-9
 . Prostatic-specific antigen (PAS)
 .(19)
 , 125 1,000 nm .(7)
 가
 .(20) Ueda (21)

. Klimstra (1) 26
 64% 18%
 , 18%
 . Webb (4)
 5 Klimstra (1)
 18 , Ordonez (7) 21.5
 .
 60 가
 .(1)
 7 (70.0%) ,
 가 1 .
 7
 44.0
 9 ,
 19 . 60

15.5 ,
 5 7
 354
 . Ukei (22) 5-FU, mitomycin C, cisplatin
 (intra-arterial chemotherapy)
 5
 18 . Vique (23)
 (hyperlipasemia) cystosteotonecrosis

CA 19-9
 AFP CEA
 1 5
 44
 1 10
 가

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