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Original Research Paper

Medicine

PANCREAS TUMORS IN CHILDREN - EXPERIENCE OF 8 CASES

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ABSTRACT

Objectives: Describe the main types of pancreatic tumor, location, surgeries performed and survival in children diagnosed with pancreatic tumor undergoing surgical treatment.

Method: A retrospective analysis was performed in 8 pediatric patients with pancreatic tumors undergoing surgical treatment.

Results: The data of our study reported diagnosis of Papillary Cystic Solid Tumor (Frantz's Tumor) in 87.50% of all pediatric pancreatic tumors of the study, with respect to the location 62.50% were located in the head. The age of presentation ranged from 12 to 15 years of age and there was a predominance over the female gender with 6 cases versus 2 cases in male. Survival was 100%, with no evidence of residual disease, with a follow-up range of 8 months to 12 years 4 months. The tumor size had variability between 6 centimeters and 16 centimeters in diameter.

Conclusion: Pancreatic tumors are very rare in early stages of life. Frantz's Tumor is the most common, preferably occurring in female adolescents. The choice of surgeries was based on the topography and volume of the tumor and the relationship with adjacent organs. Surgical treatment should focus on the complete removal of the compromised parenchyma.

KEYWORDS : Pancreatic, tumor, Frantz, Neuroendocrine. Quito, Ecuador

INTRODUCTION

Pancreatic tumors in children are very scarce, just according to approximately 2% legal literature in prevalence of all tumors at this age.

The most frequent is the Solid Cystic Tumor (Frantz tumor) which is benign and rarely causes metastasis, another variety less frequently present are neuroendocrine tumors; These can be functional (insulinoma the most frequent) and non-functional.

A specific diagnosis with complementary studies and clinical compensation is very important if required (in the case of a functioning tumor), with a clinical stage, possible presence of metastases, tumor infiltration into adjacent organs, presence of necrosis, etc.

The prognosis is very varied, depending on the type of tumor (benign or malignant, Functional or Non-Functioning), degree of differentiation and especially the expertise of the medical staff in charge.

Surgery with resection-free margins is the treatment for benign tumors.

METHODOLOGY

We conducted a retrospective study of 8 patients with pediatric pancreatic tumors undergoing surgical treatment, who were given post-surgical follow-up.

The information obtained from the digital medical records was analyzed using the Excel statistical package.

RESULTS

The data of our study reported diagnosis of Papillary Cystic Solid Tumor (Frantz's Tumor) in 87.50% of all pediatric pancreatic tumors of the study, 12.50% corresponds to Non-Functioning Neuroendocrine Tumor of the Pancreas; its location corresponds to 62.50% in head, 12.50% in head and body, 12.50% in body and 12.50% in tail. The Surgeries performed 50% correspond to Tumorectomy, 12.50% to caudal Pancreatectomy, partial Pancreatoduodenectomy, Cholecystogastroduodenectomy and

Duodenopancreatectomy (Whipple Surgery) respectively. The age of presentation ranged from 12 to 15 years of age and there was a predominance over the female gender with 6 cases versus 2 cases in male. Survival was 100% (all patients alive) without evidence of residual disease, with a follow-up range of 8 months (the least follow-up) up to 12 years 4 months (the highest follow-up). As an important fact, it should be noted that the tumor size varied between 6 centimeters and 16 centimeters in diameter.

TABLE 1. Pancreatic tumors, descriptive analysis

VARIABLES		N	%
	Frantz Tumor	7	87.50
HISTOPATHOLOGICAL	Non-functioning Neuroendocrine Tumor	1	12.50
	TOTAL	8	100
	Head	5	62.50
	Head and Body	1	12.50
LOCATION	Body	1	12.50
	Tail	1	12.50
	TOTAL	8	100
	Lumpectomy	4	50
	Pancreatectomy	1	12.50
SURGERIES	Partial Pancreatoduodenectomy	1	12.50
PERFORMED	Cholecystogastroduodenectomy	1	12.50
	Duodenopancreatectomy (Whipple)	1	12.50
	TOTAL	8	100
	Female	6	75
GENDER	Male	2	25
	TOTAL	8	100

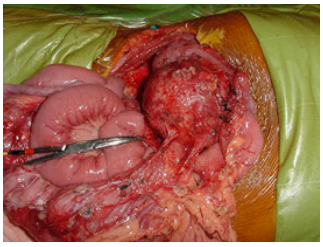

FIGURE 1. Pancreatic Tumor (Trans-surgical)

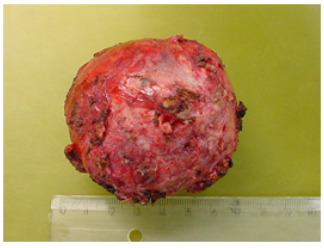

FIGURE 2. Resected Pancreatic Tumor

DISCUSSION

Pancreatic tumors in children and adolescents are not very common, the signs and symptoms of presentation are very variable, can be located in any segment of the pancreas or located in more than one. The diagnosis is mainly given by imaging findings; by abdominal ultrasound where it is possible to assess the consistency of the tumor, by Computerized Axial Tomography (CT) and / or Nuclear Magnetic Resonance (NMR) where it is possible to better assess the topography, volume, consistency and relationship with other organs and thus determine the type of surgery to be performed.

Surgery with resection-free margins were the treatment for this entity, obtaining 100% survival rates. These data are compatible with those reported by the literature.

CONCLUSION

Pancreatic tumors are very rare in early stages of life. Cystic Solid Papillary Tumor (Frantz's Tumor) is the most common and occurs preferably in female adolescents. The choice of surgeries was based on the topography and volume of the tumor and the relationship with adjacent organs. Surgical treatment should focus on the complete removal of the compromised parenchyma being this is objective for healing.

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