RADIOIMAGISTIC DIAGNOSTIC ALGORITHM IN PANCREATIC TUMORS

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Abstract

The purpose of this research difenes a more rapid and accurate diagnosis of pancreatic pathology, also the evolution of a diagnosed patient, the rate of morbidity and mortality.

Key words: pancreas, pancreatic tumors, pancreatitis, CT, MRI

INTRODUCTION

The Sectional Imaging created a tremendous impact in oncology. (Freelove, R & co). The complexity of the therapeutic protocols claimed the need for accurate pre-treatment evaluation but a closer post-treatment monitoring (Maccioni F & co), in order to assess the degree of response, to detect early recurrence or treatment complications. Throughout this period, the contribution of imaging represents the key element.

It is extremely important that the specialist, either the oncologist, radiotherapist or surgeon to know the indications and limitations of each method of investigation, their ignorance can lead to an over or underestimation method or unsupported indications "to see what it is" (Pearse A, & co, Mayer, J.R & co).

The indication for further exploration lies without a doubt in the specialist's duty and to its development he must pay attention to possible complications related to transportation, anaesthesia (Reber, HA), the use of contrast substances, or genetical, or even the process of being exposed to ionizing radiation (Arslan, a & co, Horton KM & co). Last but not least, we must consider the price, cost/benefit ratio can be decesive or even final (Midwinter, M.J&co).

The type of examination method used, the evaluation and interpretation of the image, the responsability falls upon the radiologist (Bassi, C. & co). The interpretation of the results should, however, not be made in the absence of complete clinical data. The attitude of "let's see what the radiologist sees" without providing clinical data is worthless and condemned as equally as dangerous is the interpretation of the images by the "all mighty" clinician in the absence of the radiologist (Solcia E&co,

Chiti A&co). The radiologist must know the clinician's needs and specify in the examination report all the data required, which usually can not be obtained by other means of investigation.

The radiologist's place in the team establishing the diagnosis and providing oncological treatment is that of an equal partner. The information he brings is very important, sometimes essential. (Ramage JK & Co, Maccioni & co).

MATERIAL AND METHODS

The study included a total of 50 patients examined at Oradea Pelican Imaging Center, between January 2013 and December 2013. These patients presented pancreatic pains and were investigated in the Radiology and Imaging section. All patients from the refered group were subjects to clinical, anamnestic, instrumental, laboratory investigations. Special intestigations were, also, conducted.

When the investigations were planned, these criterias were taken into consideration: diagnosis of disease (clinical-radiological) multifactorial etiology, evolutionary stage and complications.

RESULTS AND DISCUSSION

Social indicators study conducted in our group does not differ from the information existed in the literature. The structure regarding the gender of our patients is shown in Figure 1.

Figure 1

The general acceptance is that the incidence of disease is predominant in the male patients (65%) rather than female patients (35%).

When age (and sex) were taken in consideration, we had the following outcome, presented in Figure 2:

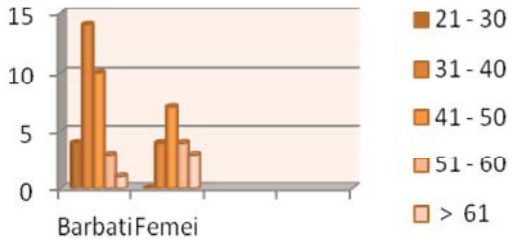

Figure 2

It may be supposed that pancreatic tumors occur in all age groups, but the most affected are those aged between 31-60 years.

With this study, we want to find out the incidence of pancreatic tumors, their type, the time and service addressability of the patients in the Radiology and Imaging department.

The study of the obtained parameters provides data on how rapidly evolves a pancreatic tumor due to industrialization, stress, nutrition and also creates a base for figuring out the cost/efficiency for the management of these disorders.

The structure depending on the area of origin is shown in Figure 3:

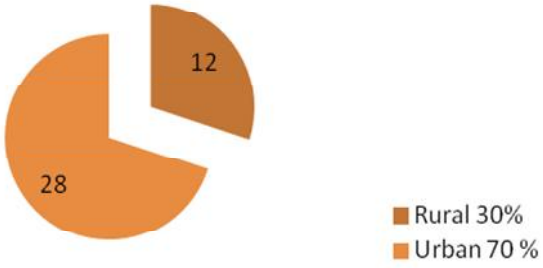

Figure 3

The results indicate a higher addressability of the urban population to medical services.

The presence of pancreatic tumors based on blood type is shown in Figure 4.

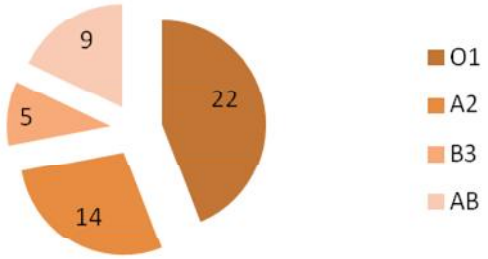

Figure 4

At the selection of our patients we have taken in consideration removing those with severe comorbid associations. In Figure 5 is shown the frequency of the types of pancreatic tumors.

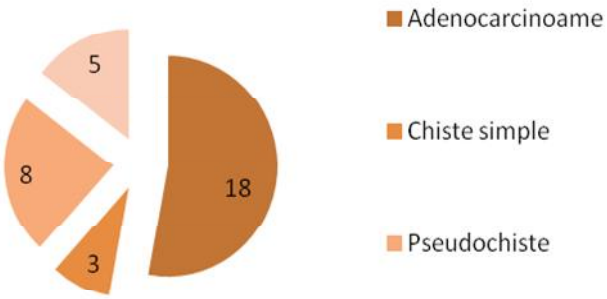

Figure 5

The classification of tumors based on topography indicates that 42.5% of all formations discovered occurs in the cephalic and 12.5% at corporeocaudal.

Formations located in the cephalic region are mostly adenocarcinomas while corporeocaudale formations are divided almost equally in cyistadenomas or cystadenocarcinomas.

Out of all patients whom were subjects in our study, 9 presented liver metastasis and 4 patients had vascular invasion.

Loco-regional lymphadenopathy were revealed at 7 patients and extra and/or intrahepatic biliary expansion was descovered at 11 of the patients; all of them presented a tumor located in the cephalic area. Figure 6 shows the share of tumor complications in patients investigated during this study.

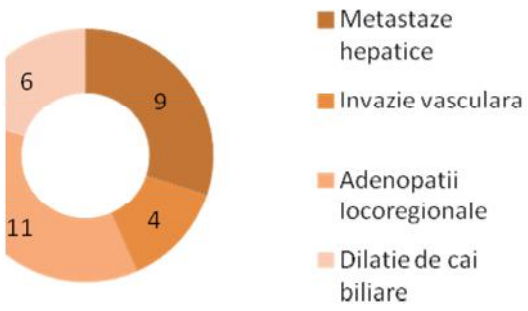

Figure 6

CONCLUSIONS

1. The radioimagistic examination represents a key element in diagnosing and monitoring of pancreatic tumors, along side the clinical examination (evaluation).
2. Ultrasound evaluation represents a choice in screening pancreatic tumor formations.
3. For an exact diagnosis as a proper finding of the pancreatic tumor formations other types of investigations such as (CT, MRI or PET-CT) are required.
4. The sooner a diagnosis is being made, the better and more favourable a looks for patient.
5. The highest percentage of cases of pancreatic tumor is found in the age group 31-40 years, men.
6. Simple (mild) pancreatic cysts are better found in patients up to 30 years of age.
7. It's important that the two diagnosis: radiological and histopathological to be linked together.

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