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RESEARCH ARTICLE

MUCINOUSCYSTADENOMA OF THE PANCREAS:DIAGNOSIS AND SURGICALTREATMENTWITH OR WITHOUTSPLENECTOMY OF 2 CASES

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Abstract

Mucinous cystadenoma of the pancreas: diagnosis and surgical treatment with or without splenectomy of 2 cases. Mucinous pancreatic cysts are cystic tumors that come in three forms: benign called mucinous cystadenomas, malignant called mucinous cystadenocarcinoma and transient form called \"borderline\". In our study, based on two cases we have reported two mucinous cystadenomas. - Mucinous cystadenomas are often discovered between Thirty and forty years with a female predominance. They are usually located at the caudal pancreas. They are usually A symptomatic. In rare cases, they are manifested by epigastric pain, sometimes jaundice and a palpable mass in the case of large tumor. These tumors at risk of malignant degeneration are unique generally surrounded by a collagenous connective capsule and limited by a cylindrical top mucus secreting epithelium. There is generally no communication with the pancreatic ducts. Tumor markers and mucins are high. Treatment is based on surgical excision. The prognosis is usually favorable. - All our patients benefited from a curative surgical , with anatomopathological examination of the excised specimen. The histological types found were 2 cases of mucinous cystadenomas. The proper medical care of these tumors requires a multidisciplinary decision-making approach including the visceral surgeon, biologist, the radiologist, and the oncologist. The success of the treatment is conditioned by the quality of the medical care and the post- therapeutic monitoring of patients.

Introduction:-

Cystic pathologies of the pancreas are very rare lesionswhich can beclassified pathologicallyinto 3 groups [1]. Cystictumors of the pancreas:represented in particularly by mucinouscystadenoma (MC) and serouscystadenoma (SC), intra-papillary and mucinousducts of the pancreas (ITPMP) as well as pseudopapillarytumors and solids (PPTS). Non-neoplasticcysts are presented by lympho-epithelialcysts, the hydatidcyst, retentioncyst and pseudocysts of thepancreas [1]. Cystadenomamucinous (CM) is a localizedcystic mass, filledwithmucin and surrounded by a fibrouswalllined by a well-differentiatedcolumnarmucinousepithelium. It is a weaktumormalignancy, but the possibility of carcinomatous transformation recommendssurgicalresection [2]. The aim of thisworkis to report the therapeutic management of two cases of Mucinouscystadenoma of the pancreascollected at the visceralsurgerydepartment at the militaryhospital

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of instruction Mohamed V of Rabat.

Materials and Method:-

Observation No. 1

This is a 32-year-old patient, married and mother of 2 children, from Rabat, hospitalised in our training for hematemesis. The patient has no notable pathologicalhistory. The history of the disease dates back 3 weekswithrecurrentepisodes of hematemesiswithmelena, accompanied by epigastralgia at type of gravitywhichgraduallyincreases in intensity, thisevolving in a context of alteration of the state general, asthenia and unquantifiedweightloss. Clinicalexaminationfinds a conscious patient OMS 1 ASA 1,Mucocutaneouspallor, epigastrictenderness, no palpable abdominal mass, no HSMG. The rest of the clinicalexaminationisunremarkable. The abdominal scan reveals a large cystic mass of the tail of the multi-partitionedheterogeneouspancreasmeasuring 115 x 97 exerting a mass effect on the structures adjacent and compressing the splenicvein. The CEA levelis 3.7 ng/ml and CA19.9 is 5.7 IU/ml. The amylasemia and lipase levels are normal. The preoperativeassessmentis normal. The patient benefitedfrom an open leftspleno-pancreatectomywith drainage of the spleniccompartmentusing a Redon drain. The postoperative course was simple, the patient was put on heparinprophylaxis and antibioticprophylaxis. Shewasdischargedin 6 dayswith prescription for analgesictreatment; influenza, pneumococcal and anti-meningococcal more than one PPI. The pathologicalexaminationreveals a mucinouscystadenoma in low-grade dysplasia.

Observation No. 2

This is a patient aged 34, married, resident and originallyfrom el Jadida, hospitalized in our training for epigastralgia. The patient has no notable pathologicalhistory.

The history of the disease dates back 3 monthswith pain in the lefthypochondrium of the type heavinesswithscapular irradiation exaggerated by copiousmeals. This evolving in a context of deterioration of general condition, asthenia and unquantifiedweightloss. The clinicalexaminationfinds a conscious patient OMS 1 ASA 1, No mucocutaneouspallor; CNC, slightepigastricsensitivity , without palpable abdominal mass or HSMG. The rest of the clinicalexaminationiswithout particularity. Ultrasound shows the presence of a large multi-lobularanechoic formation approximately 100 x 70mm projecting at the level of the corporeo-caudalpancreatic area of whichitforms part and extending in front of the spleen. Abdominal scan reveals a cystic mass, well-limitedovalvoluminousfluidestimated at 10 cm in height and 9.5 cm in long axis transverse and 7.5 cm long supero-posterior axis whichseems to be at the expense of the caudal pancreas, this mass presents a multilocularappearancewith fine internal partitions withoutenhancement significantaftercontrast injection suggesting a mucinouscystadenoma. The dosage of amylasemia and lipasemia are normal. The preoperativeassessmentis normal. Abdominal MRI highlights evidence of a well-limitedcystic formation, measuring 95x80mm withdiscreetcontrastenhancement at the level of the partitions. Echo endoscopywithcytopuncture shows a corporealcysticlesion of 10 cm at the longest axis withintracystic septa and probably mucus suggesting a mucinouscystadenoma. The patient underwent a leftcorporeo-caudalpancreatectomywith open splenicpreservationwith drainage of the spleniccompartmentusing a Redon drain. The postoperative course was simple, the patient was put on heparinprophylaxis and antibioticprophylaxis. Shewasdischargedin 6 dayswith a prescription for analgesictreatment and PPI. The exam pathologyreveals a mucinouscystadenoma.

Discussion:-

Mucinouscystadenoma of the pancreas corresponds to a benigntumor at risk of degenerationmalignantwithmucinous content and size greaterthan 2 cm. It is a primarytumor of the pancreasquite rare, whichrepresents 10% of pancreaticcysticlesions and 1% of all pancreatictumors. The tumorislocated in the caudal pancreasin 90% of cases. The averageage of discoveryis 50 yearsoldwith a clearfemalepredominance. The averagelesion size at diagnosisis 10 cm. [3,4,5]. Macroscopically, the tumorappears in the form of a single spherical mass, with a smooth surface and a fibrouspseudocapsule of variable thickness and occasional calcifications. The tumors are unilocular or multilocular, withcysts of a few millimeters to severalcentimeters in diameter [6]. The different grades of dysplasia are noted and can oftencoexistwithin the sametumor. Mucinouscystadenomaisclassifiedintothreecategories:Mucinouscystadenomawithlow-grade, intermediate and high-grade dysplasia. In mucinouscystadenomawithlow-grade dysplasia, the columnarepitheliumpresentsonly minimal architectural and cytologicalatypia, with a slightincrease in size of the nucleilocated at the base, and mitoses are absent [6].

Mucinouscystadenomawithintermediate grade dysplasiapresent architectural atypia and moderatecytology, withpapillary projections or intussusceptions resemblingcrypts, cellular pseudo-stratification caused by crowdednuclei, and occasionalmitosis[6]. Mucinouscystadenomawith high-grade dysplasia are characterized by cytologicalatypia, with the formation of branchedpapillaewithirregularbudding, nuclear stratification withloss of polarity, mitoses are frequent and can beatypical [6]. Thesetumorsrequire a thoroughhistologicalexamination, withadequate sampling and careful monitoring. Clinically, in the face of anycystic mass of the pancreaswithoutpreviousclinicalhistory ofalcoholism, abdominal trauma or acute or chronicpancreatitisis a tumorcysticpancreasuntilprovenotherwise. Cystictumors of the pancreas are oftendiscoveredincidentallygiventheirclinicallatencies, as is the case for examplewithcystadenomamucinouswhichisasymptomaticin 9 to 45% of cases [7,8,9,10] but it can alsoberevealed by symptomswhich are nonspecificin 80% of cases [7,10,11]. Mucinouscystadenomaoccursalmostexclusively in women and mostoftenpresent in middle age. The most commonis the body, the tail of the pancreas. Mucinouscystadenoma can progress to cancer of the pancreas, but the riskisverylow. A recentstudy of 90 cases of mucinouscystadenomaresectedrevealedthatonly 10% of themhad high-grade dysplasia or cancer of the pancreas [12].

In mucinouscystadenoma, abdominal pain is of variable intensity and itsonset can beoldespecially in the caudal locations. [8,13]. In ourstudy, pain wasfound inourtwo cases in the form of gravity type epigastralgia and punctuated by meals in one single patient withscapular irradiation and differentintensity. Weightlossisobservedin 24% of cases, whichisrecent, moderate and unquantifiedwhereitisseenin 10 to 46% of cases. [8,10,13,14,15,16]. In ourstudy, weightlosswaspresent in all cases but not quantified. Digestive disorderssuch as diarrhea and constipation are not found in ourseries. The clinicalexaminationfinds a palpable mass whichisfoundin 10 to 46% of cases. It's about a mass of variable size, of gradualappearance, in the epigastrium or lefthypochondrium, rounded or bumpy, firm, stiff on palpation, dull on percussion, sometimespulsatingwith a murmurfunctional on auscultation [14]. An epigastric mass wasfound in both patients. Jaundice cholestaticwas not found in ourseries. Complications such as acute pancreatitis recurrent by compression or secretion in the Wirsung canal can beobservedin 12 to 20% cases in mucinouscystadenoma, [17,30,18,19] hemoperitoneum due to intraperitoneal rupture can reveal CS or TPPS, digestive bleedingespecially in cystadenocarcinomaconsequence of protal hypertension or gastric or duodenal invasion. In ourstudyhematemesis and melenawerefound in only one patient. On the radiologicallevel, Mucinouscystadenomasappear on ultrasound as anechoiclesions, limited and surrounded by awall. They can beuniocular or multilocular and containinternal partitions. [1,23,24,28,149.]

In the second patient, we note the presence of a large multi-lobularanechoic formation approximately 10 cm projecting at the level of the corporeo-caudalpancreatic area of whichforms a body and isextending in front of the spleen. The benefit of abdominal scanning is important. Therefore, before the injection ofcontrastproducts, the CM are rounded, welldefined and hypodense. After injection of the productcontrast, the cysticwallisenhancedwhichisthinwith the hypodense contents of the lesion. With the first patient the abdominal scanner reveals a large cystic mass in the tail of the multi-partitionedheterogeneouspancreasmeasuring 115 x 97 exerting a mass effect on the structures adjacent and compressing the splenicvein. For the 2nd patient, a mass wasidentified as a fairly large, well-limitedovalfluidcystestimated at 10 cm in height and 9.5 cm of major transverse axis and 7.5cm of major supero-posterior axis whichseems to be at the expense of caudal pancreas. This mass has a multilocularappearancewith fine internal partitions withoutsignificantenhancementaftercontrast injection Suggesting a mucinouscystadenoma. This injection makesiteasy to identify the existence of nodularthickening or microcystswithin the wall.

Partitions exist in both patients. In ourstudy, thereis no dilation of Wirsung, neither the common bile ductnor the right and lefthepaticductsbecause the location is corporeo-caudal. MRI shows lesionsthat are hypo or hyperintense on T1 due to mucus and hyperintense on T2 [25]. In ourstudy, itiscarried out in a patient whodemonstrated the level of the tail of the pancreas a well-limitedcystic formation, showing a clear T2 hypersignal, a T1 hyposignal and several partitions delimitingloci. It measures 95x80mm with a verydiscreetcontrastenhancement at the level of the partitions, and a locus which shows a moderate T1 hypersignal whichmayindicate an internalreshuffle. Echo endoscopy has no indication in the case of imagingtypicalradiological on the other hand, it shows a verywellidentified image with a thickwall, the presence of mucus can beevoked in the presence of hypoechoicmaterialinside the cyst, not communication with the Wirsung channelunlike TIPMP [9,21,22,32]. In ourstudyitiscarried out in a patient withcytopuncturewhoshowed a corporealcysticlesion of 10 cm at the longest axis

withintracystic septa and probably mucus suggesting a mucinouscystadenoma. The study of the citrine yellowliquid sent for objective biochemicalanalysis String test positive. The intracystic dosage of tumor markers isoftenhigh (ACE —401ng/ml ; CA19-9—-;50.000u/ml).These data do not allow us to assume the benign or malignant nature of mucinouscystictumor. The determination of M1 type gastricmucins in intrafluidcysticistheoretically high. Cytologicalexamination of the punctureﬂuid can reveal the presence of mucicarmin+ epithelialcells, their absence does not allow us to confirm the benignity of the tumor. Indeed, the concordance betweencytology and the diagnosis of cystictumoris 40 to 90% of cases [26,27,28]. Arteriography shows that the CM are hypovascularized in the center and hyper vascularized in the periphery. [20,22,28]. Retrogradecholangiopancreatographyisusuallyindicated to differentiatebetween a pseudocyst and a mucinoustumor [28]. On a biologicallevel, the assessmentisoften normal with the exception of ductal, biliary, or Wirsung compression [29].Thisis the case in ourstudy.

Therapeutic care aims to treatlesions, preventdegeneration (borderline T) and avoid complications (acute pancreatitis). For cystadenomamucinous, given the certain risk of malignant transformation, itisnecessary to completelyremove the cystictumor at the cost of pancreaticresection. This regularresection can bedifficult, particularly in cephalic locations for high-risk patients. If the tumorgrowsoutside the parenchyma, a completelumpectomywithout sacrifice of the parenchyma can beperformed. [33,34,35,36] To improve the R0 resection rate, Strasberg et al. havemodified the technique of Distal pancreatectomy, proposing a radical antegrademodularpancreatosplenectomy (RAMPS) [41]. Results for thisprocedure (RAMPS) show a retropancreaticmargin rate negative (R0 resection) higherthanso-called standard spleno-pancreatectomy [42,43]. It's the case of a patient whounderwent open leftsplenopancreatectomy. The Results to short term are those of controlledpancreatic excisions. Pancreaticfistulasaremain intra-abdominal complications whichoccurin 9% to 53% of cases. In what relates to surveillance;thereis no consensus on monitoring recommendations for postoperativecystictumors of the pancreas. An assay of serumtumor markers, combinedwith an annualultrasound and/or CT scan. Post-operative monitoring issystematic for 12 months in case of benigntumors, and 6 months for malignanttumors by Pancreatic MRI. The prognosis of cystictumors of the pancreasisgenerallybetterthanthat of pancreaticadenocarcinomas anddiffersdepending on the type of tumor. Non-invasive mucinouscystadenomas carry no risk of recurrenceafterresection and also no risk of developing cancer. Their monitoring is not necessary. [37,38,39,40]. While invasive mucinouscystadenomaspresent a considerablerisk of recurrencewhich varies between 36 and 86% at 5 years. The survival rate at 5 yearsis 56 to 76%. [37,38,40].

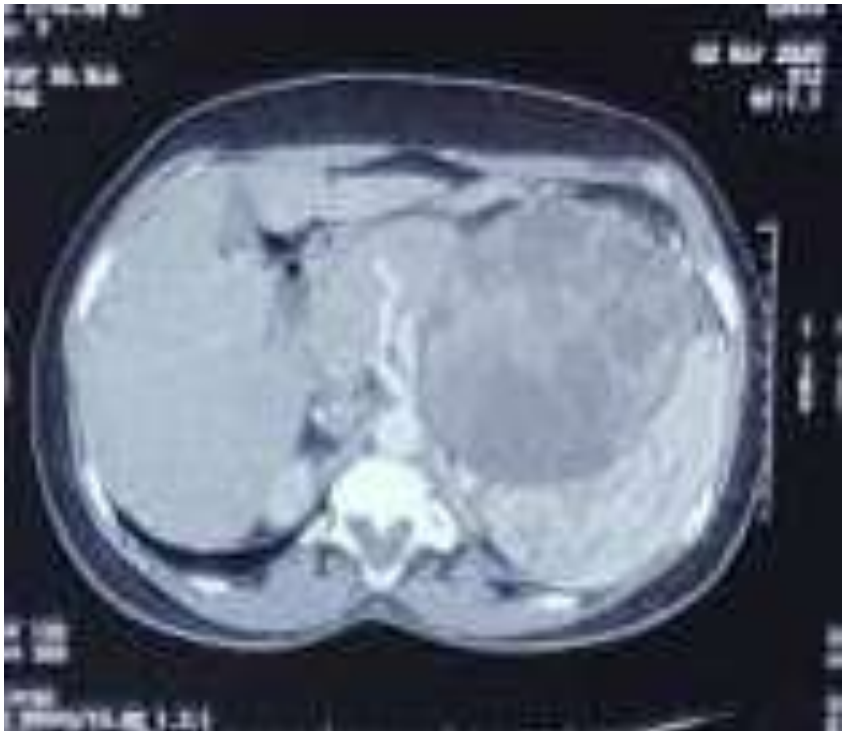

Figure 1:- Abdominal scan showing a large cystic mass in the tail of the multi-partitionedheterogeneouspancreas (patient1).

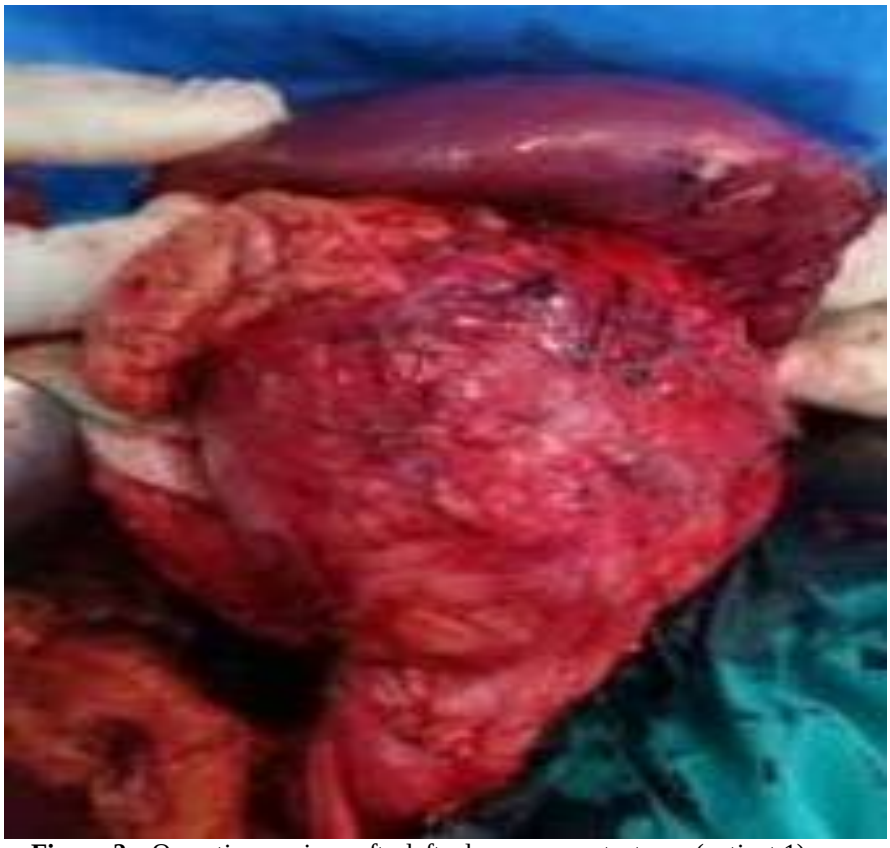

Figure 2:- Operativespecimenafterleftspleno-pancreatectomy (patient 1).

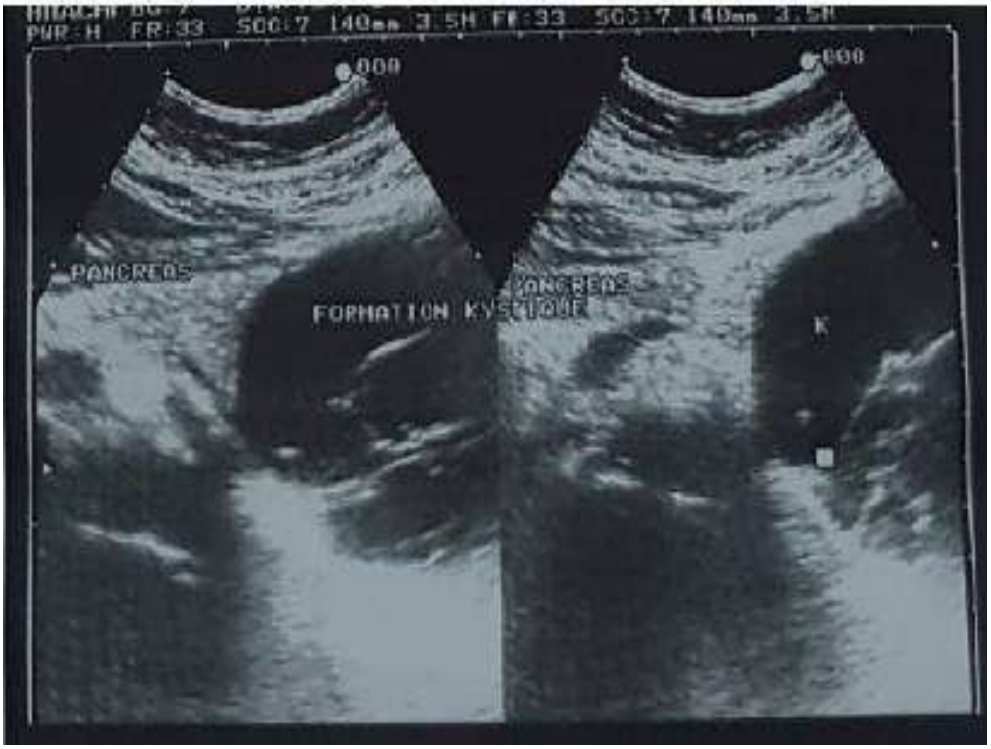

Figure 3:- Ultrasoundshowing a large multi-lobularanechoic formation of approximately 10 cm projecting to the corporeo-caudalpancreatic area (patient2).

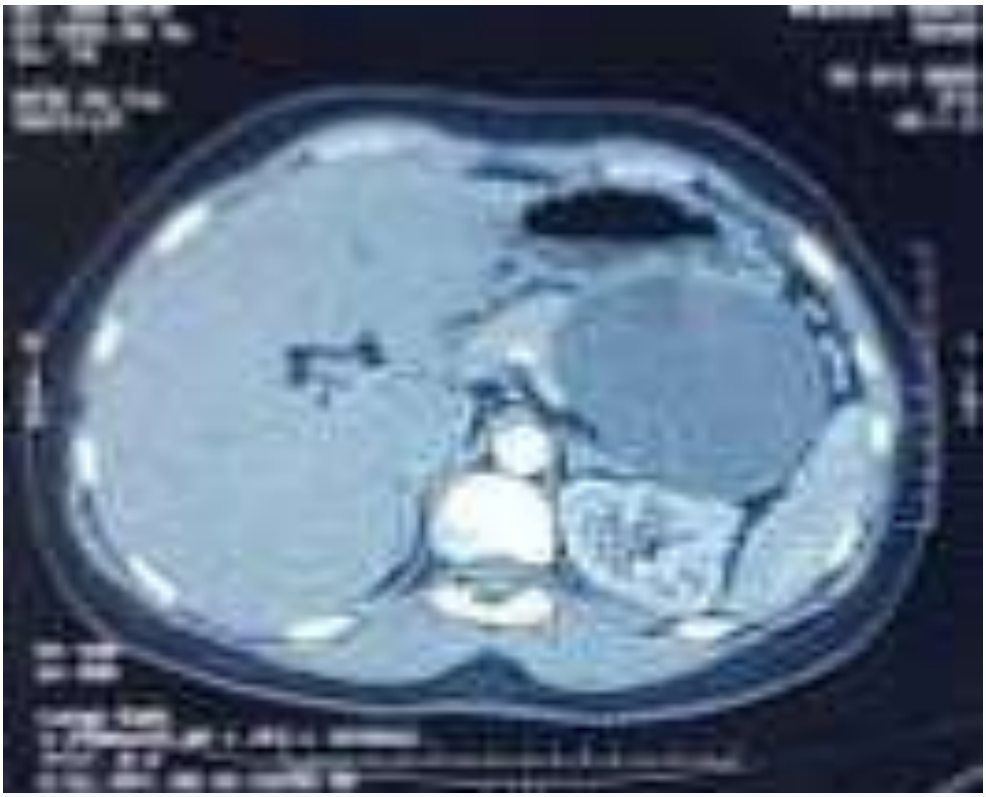

Figure 4:- Abdominal scan showing a well-defined, voluminousovalfluidcystic mass whichtakes on a multilocularappearancewith fine internal partitions suggesting a mucinouscystadenoma(patient2).

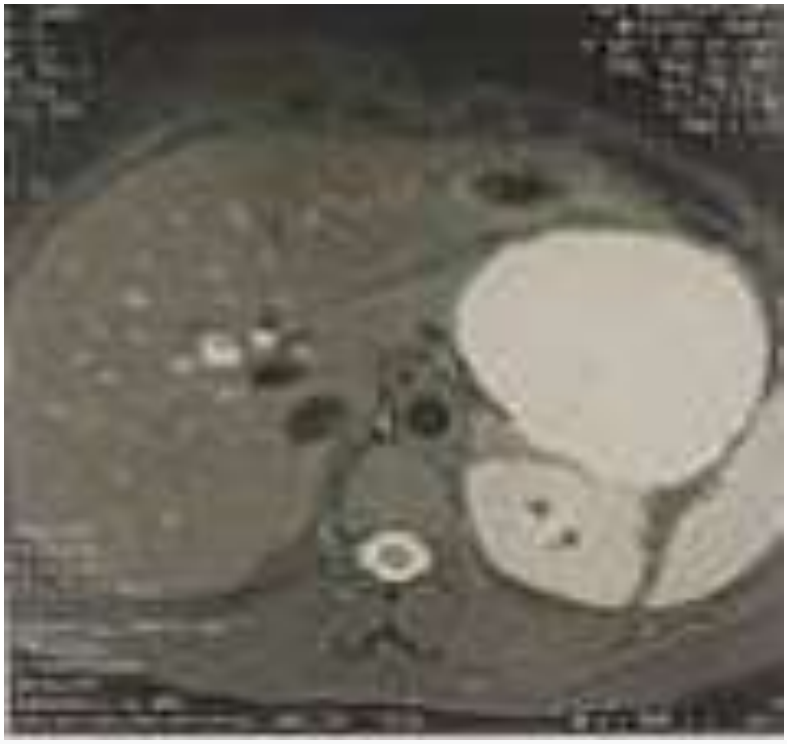

Figure 5:- Abdominal MRI showing a well-definedcystic formation in the tail of the pancreas, T2 hypersignal, T1 hyposignal and several partitions delimitingloci.(patient2).

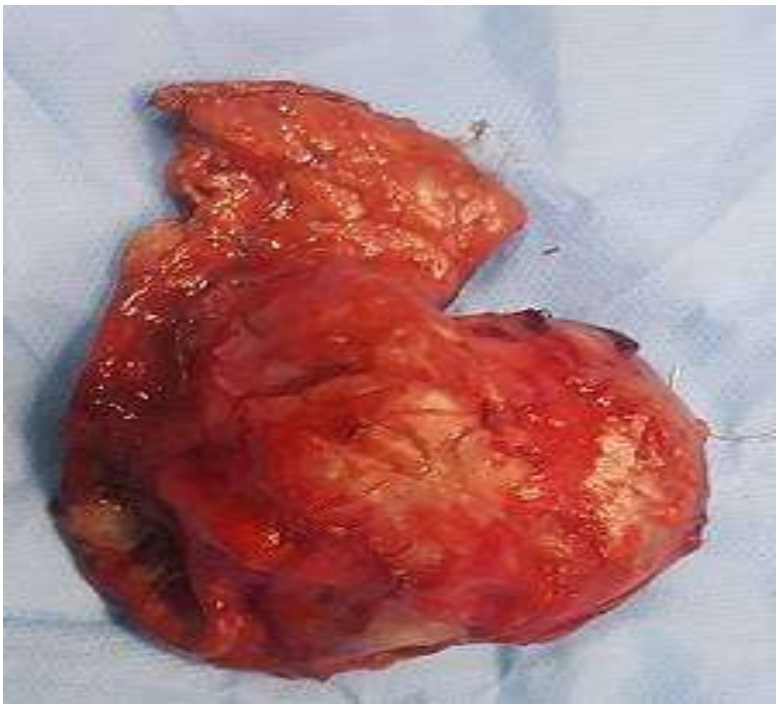

Figure 6:- Surgicalspecimenaftercorporeo-caudalpancreatectomywithpreservation of the spleen(patient2).

Conclusion:-

Mucinouscystadenomas of the pancreas are rare lesionscharacterized by muteness clinical, whichrequiresearlydiagnosisbased in addition to clinicalimaging, endoscopy, biology and especiallyhistologywhichmakesit possible to specify the degree of malignancylesions, given the risk of degeneration of benignlesions and the increase in chances of healing of malignantlesionstreatedearly. Obtaining a precisepreoperativediagnosisis important becauseit conditions the therapeuticapproach and decision-making support. Thus the diagnosisestablished, a surgicaltreatmentbased on a simple excision going as far as pancreatectomy or even a splenopancreatectomy must beinstituted, except in the case of the presence of metastaseswhere palliative treatmentisrequired. All our patients benefitedfrom curative surgicaltreatmentwithexaminationpathology of the excision part.

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