Jaudice syndrome in general and obstructive jaundice in particular, have multiple causes etiopathogenic. This paper proposes radio-imaging evaluation of patients with obstructive jaundice caused by biliary obstruction in order to study the morphology and analysis of the effects of biliary obstruction on liver parenchyma and biliary tract and the importance of their association with other morbid entities. The paper also aims to support and detail the contribution of radio-imaging tests to establish an optimized therapeutic approaches tailored to the etiology, and the specifics of each case to obtain a significant prognostic improvement.

1. The study group

The study group consisted of 240 patients hospitalized in different sections of Tg-Cărbunești Hospital and Universal Hospital Bucharest (Prof. Dr. Gheorghe Iana) from 01/01/2006 to 05/01/2010. Patients were selected for inclusion in the study based on clinical suspicion of a biological syndrome and obstructive biliary ultrasound splitting the different grades and topography of the biliary dilatation. In order to support or refute the suspected diagnosis, and complete diagnostic data, patients were ask Clinic of Radiology and Imaging Universal Hospital Bucharest, where, according to the etiology of obstructive syndrome and features of each case were subjected to a series of radio exploration whose input-imaging in the diagnosis and evolution of the case subject of this paper

In terms of distribution by sex, study group consisted of 441 men (59.6%) and 299 women (40.4%).

The average age group of patients studied was 59.79 ± 13.67 years, minimum age is 10 months and a maximum of 91 years. The average age of men in the group was 58.93 ± 12.89 years for women and 61.05 ± 14.66 years.

Most patients were referred Radiology and Medical Imaging Laboratory during the period in which they were hospitalized in Tg.Cărbunești, mostly from hospital wards. Place of origin of patients for the period of radio-imaging investigations detailed in the table below:
Table 1. Place of origin of the patients in the study group

<table>
<thead>
<tr>
<th>Department</th>
<th>Number of patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Medicine</td>
<td>126 (52.6%)</td>
</tr>
<tr>
<td>General Surgery</td>
<td>60 (25.0%)</td>
</tr>
<tr>
<td>Cardiology</td>
<td>10 (4.0%)</td>
</tr>
<tr>
<td>Neurology</td>
<td>20 (8.3%)</td>
</tr>
<tr>
<td>Ambulatory</td>
<td>24 (10%)</td>
</tr>
</tbody>
</table>

All the 240 patients were investigated by ultrasonography (U.S.).

Of this number 211 (88%) of patients have benefited from exploring computer tomography (CT) abdominal native to most, accompanied by examination after intravenous injection of iodinated contrast substance.

Magnetic resonance imaging (MRI) was performed in 48 patients (20%). A total of 19 patients (8%) received all three methods mentioned radio-imaging (U.S., CT, MRI).

At a total of 22 patients was performed followed by biliary drainage transhepatic cholangiography. Abdominal ultrasound is usually diagnostic imaging modality of first choice in the exploration of the biliary tract. This is because the reliability of the method in detection of biliary dilation, accessibility, low price and noninvasive method.

2. METHODS OF INVESTIGATION

ULTRASOUND

In general, exploration of biliary ultrasonographic examination was part of the abdomen. Examination of liver and bile ducts was performed in most cases with a 3.5 MHz convex probe, with the patient supine and lateral position, according to the possibility of highlighting optimal upper abdominal. In some patients with lower weight status, upper abdominal examination was performed with a high frequency probe (5 MHz), providing a high spatial resolution. 5 MHz probe examination could not be achieved in all patients because of low penetration power of that probe.

The system used in most cases was: Kishon 8800. Examination was performed in most cases glucose.

Upper abdominal exploration began with the patient in supine position by exploring right quadrant axial and sagittal plane to explore the journal gallbladder (across) and long (longitudinal). To view infundibulare area, a scan was performed right quadrant rebordul plane perpendicular to the rib. If it has detected the presence of calculus cholecystitis, the
patient was mobilized (most often by examining change in supine position in semidecubit or left lateral decubitus) to facilitate change calcurilor position by the action of gravity.

Ultrasound has continued to highlight the common hepatic duct at the hepatic hilum, the assessment dimensions, permeability and topography, as well as view images of any intraluminal lithiasis. Tried to measure the size in the common hepatic duct crossing the portal vein, considering the limit Get top of its normal size this area, a value of 6 mm. Tried to systematize the assessment exam layout and size intrahepatic bile ducts, where they become visible by the presence of dilatation of the intrahepatic biliary liver parenchyma was carefully scanned to detect and possible intrahepatic biliary dilatation of isolated, segmental appearance. Lower primary biliary route was pursued at the hepatic hilum, infralilar and pancreas of head. At this level, to delimit it from other structures for lumenal neighborhood association has been frequently used color Doppler exploration. At this level, pancreatic cephalic region was systematically examined for possible splitting of expansive processes located here, which is responsible for the overall dilation of the biliary tract.

**COMPUTER TOMOGRAPHY**

Patients were examined on your Dual HiSpeed received a conventional sequential exploration, dynamic or, in selected cases, spirals. All types of purchases began by conducting an exploratory phase native continuous sections. Their thickness was 10 mm and 5 mm sequential acquisitions at the wound.

Except for a negligible number of patients who have a history of intolerance to products resulting from iodinated contrast, all patients received CT examination performed with injection of iodinated contrast media. The amount of contrast substance was administered 2ml/kgc.

After starting the injection, scanning was started after a waiting time of 25S when using sequential acquisitions of 25-30s and if you use a spiral.

After injection of iodinated contrast, abdominal was viewed through multiple phases of vascular differ according to the conventional acquisition system used was limited to a single postcontrast abdominal passage, while the dynamic used two phases: one of these dynamic early other sequential late. Patients explore a spiral acquisition system have benefited from view by performing abdominal vascular three phases: blood pressure, after the waiting time mentioned above, centered in the upper abdomen, liver and pancreas parenhimele on a second portal phase at the . 40-50s at the beginning of iodinated contrast injection, which has viewed the entire abdomen from the diaphragmatic domes to the promontory of vascular sacred and a third phase (late), centered on parenhimului liver. The patient will be subjected to investigation by the CTH is required under antibiotic protection, performed with analgesia. Patient is in supine position. All maneuvers performed during this investigation is performed in strict aseptic conditions.
The ultrasound or fluoroscopic guidance control is catheterized as dilated biliary tree, the previous midline. It uses a Chiba needle catheterization. It punctures skin from the right hypochondrium, the needle pointing to the most affordable catheterization dilated bile duct, allowing easy advancement of the guide inside the bile duct.

The maneuver is continuous injection of iodinated contrast direct intrahepatic biliary tree, iodinated contrast media should contain at least 300 MGL / ml.

It considers the degree and extent of dilation and the site of biliary obstruction. In hilarious obstacle is sometimes necessary consequent clouding of the right and left biliary tree. CTH obstructive jaundice is indicated in the balance in general and especially in jaundice products the proximal bile duct obstruction. Another indication is the obstructive jaundice which Endoscopic retrograde cholangiopancreatography can not be performed.

In certain situations, CTH may be followed by a therapeutic gesture visa. In the event that the patient's clinical condition does not allow a therapeutic approach for an increased invasiveness (especially by surgery), the maneuver is limited to an external biliary drainage installation path of a puncture of the biliary drainage catheter, catheter What is sutured to the skin. The role of this catheter is to remove the excess of bile, thus achieving biliary decompression shaft.

In conclusion, CTH offers an alternative diagnosis, while the choice of surgical procedure in a row, but also an established therapeutic option in biliary drainages: preoperative (doiea then, during the time to perform the operation after decompression. In selected cases, biliary drainage may be tempted internalization by trying to decrease the biliary tree and biliary dilation) or palliative (that attempt to improve the condition of patients with high levels of bilirubin in the blood, patients ineffective Billy).

In the process prior suspicion pancreatic tumors, CT has efectutuat after the oral administration. 500-1000ml water.

In selected cases, early acquisition was followed by implementation of sections multiplanare.

Results

Between 01/01/2006 to 05/01/2010, the total number of investigations conducted by CT, 240 patients were evaluated for obstructive jaundice (IO) of various etiologies.

A total of 20 patients in the study group (240 patients) received mixed exploration radio imaging by CT and magnetic resonance.
Clinical diagnostic radio-imaging is the examination of obstructive jaundice of different etiologies, as shown in the table:

**Distribution of cases of obstructive jaundice (IO) by exploring the clinical diagnostic radio-imaging.**

<table>
<thead>
<tr>
<th>Referring diagnosis</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obstructive jaundice that indicated incomplete</td>
<td>76</td>
<td>31.7%</td>
</tr>
<tr>
<td>+ IO pancreatic head tumor</td>
<td>37</td>
<td>15.4%</td>
</tr>
<tr>
<td>Colangiocarcinom + IO</td>
<td>19</td>
<td>7.9%</td>
</tr>
<tr>
<td>IO + hepatic tumor</td>
<td>28</td>
<td>11.7%</td>
</tr>
<tr>
<td>Jaundice</td>
<td>16.</td>
<td>6.7%</td>
</tr>
<tr>
<td>Chronic Pancreatitis + IO</td>
<td>6.</td>
<td>2.5%</td>
</tr>
<tr>
<td>IO + hepatic metastasis</td>
<td>6.</td>
<td>2.5%</td>
</tr>
<tr>
<td>Liver cirrhosis + IO</td>
<td>3</td>
<td>1.3%</td>
</tr>
<tr>
<td>Acute pancreatitis + IO</td>
<td>3</td>
<td>1.3%</td>
</tr>
<tr>
<td>Other</td>
<td>46</td>
<td>19.2%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>240</td>
<td>100%</td>
</tr>
</tbody>
</table>

Of the 240 patients examined radio-imaging, 90 patients (37.70%) were diagnosed with jaundice referring, of which 77 patients (31.9%) were diagnosed with obstructive jaundice, 13 patients (5.30%) were diagnosed with jaundice, 3 patients (0.4%) and jaundice postoperatively and 1 patient (0.4%) is referring diagnosis of cholestasis.

Neoplasms of the pancreas accompanied by a diagnosis of obstructive jaundice is referred to 55 patients (22.9%), of which 38 patients (15.7%) are sent with the diagnosis of pancreatic head tumors, 15 patients (6.4%) with a tumor of the pancreas, 3 patients (1.3%) with pancreatic tumor and liver metastases, 2 patients (0.8%) with pancreatic tumor and operated 1 patient (0.4%) with cirrhosis of the liver and pancreas head tumor.

Another cause of obstructive jaundice is colangiocarcinomul, met diagnostic reference to 19 patients (7.8%), colangiocarcinom surgery in 6 patients (2.4%), associated with central colangiocarcinom angiocolitis in 2 patients (0.8%) colangiocarcinom central drainage by stent transtumoral 2 patients (0.8%), Central colangiocarcinom operated and relapsed in 1 patient (0.1%) and colangiocarcinom with liver metastases in 1 patient (0.1%).

Neoplasms located in the gallbladder is accompanied by obstructive jaundice in 6 patients (2.5%), 1 patient (0.5%) are investigated postoperatively, and 1 patient (0.5%) liver metastases are suspected.
Liver tumors associated with obstructive jaundice is referring diagnosis in 18 patients (2.6%), 4 patients (1.5%) had liver metastases, 4 patients (1.5%) are operated liver tumors, 4 patient (1.5%) with liver tumor was colecistectomizat and 1 other patient (0.4%) is a tumor of the liver HIL.

Liver hydatid cyst (CHH) may be another pathogenic factor for obstructive jaundice, found in 3 patients (1.1%). Of these, 2 patients (0.8%) in CHH is fistulising ducts in two patients (0.8%) CHH was operated on 1 patient (0.4%) operated to re cidivat CHH and the CHH 1 patient was treated.

The presence of calculi in the biliary tree may also cause obstructive jaundice. In 6 patients (2.6%) of the study group, diagnostic reference metry is bile duct stones (CBP) in 4 cases (1.5%), intrahepatic stones in five cases (0.7%) and cholelithiasis in 1 cases (0.4%).

Among many factors of icteru's etiopathogenic include obstructive pancreatitis. Of the 7 cases (3.1%) radioimagistic examined, 4 cases (1.6%) had a referral diagnosis of chronic pancreatitis, 3 cases (1.1%) acute and creative pan 3 cases (1.1%) of pancreatic pseudocyst.

Obstructive jaundice may have a multitude of factors and hence multiple etiopathogenic referring diagnoses (suspected), for example, hepatic hydatid cyst (4 cases, 2 cases were cracked in the bile ducts cyst), congenital cyst of common bile duct (in 2 cases), liver abscess or abscess developed subfrenic postcolecistectomie (each in one case, cavemom portal (in one case).

Ultrasound performed in group of 240 patients found the study revealed, in various degrees, dilatation of intrahepatic biliary (IHBD) and / or extrahepatic (EHBD) (indirect ultrasound sign of obstructive jaundice), but in many cases revealed and pathogenic factor of biliary obstruction (ultrasound sign of obstruction directly) represented in varying percentages of cases the tumor, inflammation, stones, congenital, postoperative, with various locations in the upper hemiabdomenului in general and Bilio hepato-pancreatic region in particular.

Ultrasound mention of this in 113 cases (47%) of dilations Liar two ways, of which 70 cases (29.2%) has overall biliary dilatation (IHBD and EHBD) and 45 cases (18.8%) shows dilatation of intrahepatic biliary (IHBD).Among patients with biliary global expansion (IHBD and EHBD), 2 patients (0.3%) presents aerobilie and 1 patient (0.1%) has liver metastases. Of the 132 patients with ultrasound diagnosed intrahepatic biliary tract dilatation (IHBD), 3 patients (0.4%) had liver metastases.

Colangiocarcinom diagnosis of central (hilar bile) is suggested by ultrasound in 37 patients (5%") and in 1 patient (0.1"") ultrasound examination performed after surgery (for CCK hilarious) and a suspected tumor recurrence.

Exploration of patients with obstructive jaundice include thorough exploration of pancrea Sulu. Thus, at the pancreas, an ultrasound reveals the tumor in 174 cases (23.5% o). Of these, 117 cases (15.8%) an ultrasound reveals the cephalic pancreatic tumors and in 57
cases (7.7%). Reveals the one pancreatic tumor, without prejudice to additional data, the certainty, the location in a certain segment of the pancreatic tumor process.

Localized pancreatic inflammatory processes may also cause dilatation of the biliary tree. Ultrasound diagnosis in 12 cases (1.6%) chronic pancreatitis and in 7 cases (0.9%) of acute pancrea very nice, calm.

Malignant liver tumors, primary or secondary, are outlined in AR coefficients by ultrasound in 64 (8.7%) with biliary tract dilatation. On 13 pa insufficiency (1.8%) only reveals the liver ultrasound with liver metastases biliary tree dilation.

In 14 cases (1.9%), dilatation of biliary ultrasound is suspected to be caused by local evolution of a malignant tumor of the gallbladder, of which a total of 3 patients (0.4%) presented liver metastases at the time of examination.

Lithiasis can cause obstructive jaundice, biliary tree and is recovered by ultrasound in 21 patients (2.8%), of which 17 patients (2.3%) were diagnosed with MBD stones, 3 patients (0.4%) with intrahepatic stones and 1 patient (0.1%) of PBC associated with lithiasis and gallbladder.

Hepatic hydatid cysts are incriminated in the etiopathogenesis of obstructive jaundice, based on ultrasound, in 7 cases (0.9%), of which the two situations is fistulising CHH in biliary tract.

In a few cases, the ultrasound reveals the common bile duct and cyst, 2 cases (0.3%); ampulom-1 case (0.1%).

Abdominal lymphadenopathy detected by ultrasound in 7 cases (0.9%) are also incriminated in the etiopathogenesis of obstructive jaundice.

In terms of U.S. age groups most affected are often ascending order 70ani 60 (78 patients), 50 60 years (62 patients), 70-80ani (57 patients) and 40-50 years (43 patients). The remaining age groups studied have a lot of damage at a rate much reduced.

Ultrasound examination of obstructive jaundice of tumor etiology determined in 99 cases (41.2%). Inflammatory etiology is incriminated in 12 cases (5%), the lithiasis in 7 cases (3%), congenital in 4 cases (1.6%). At a total of 118 patients (49.2%) ultrasound can detect biliary dilatation without being able to detect the location of the obstacle. CT examination shows that the main factor causing the IO tumor present at 130 patients (54.1%). Lithiasis is incriminated in 24 patients (9.8%) and inflammatory factor is present in 21 patients (8.6%) with OI, congenital diseases in 4 patients (1.8%). In a number of 61 patients (25.6%) etiology is not specified in the IO after CT examination.

In MRI examination, the division into groups incriminated etiologic factors is as follows: - the tumor is responsible for producing IO in 129 cases (53.7%) - lithiasic factor is that in 34 cases (14.1%)
- Inflammation in 21 cases (8.7%)

- Congenital disorders are incriminated in 5 cases (2.0%).

At a total of 52 patients (21.5%) MRI exam can not specify etiologic substrate.

CT examinations show the location of the most common etiopathogenic factors of obstructive jaundice in pancreatic level in 66 cases (27.6%). At a certain percentage of patients showed distal obstruction CT location is at: preampular in 10 cases (4.0%), ampullary in 7 cases (3.1%), pancreatico-duodenal ulcer in 5 cases (2.0%). Distal obstruction, without prejudice to additional data related to membership in a particular tumor - gan, is mentioned in 54 cases (22.5%). Locating the cause of obstructive jaundice, the liver is recovered CT in 26 cases (11.0%) and at infrahepatic in 17 cases (7.2%).

For a number of 4 cases (1.8%), computer tomography examination can not determine the level of obstruction (the result is inconclusive) and 4 patients (1.5%) is double the level of obstruction.

MRI is a non-invasive method of exploration that can provide additional information about the premises obstruction. Below is hepatobiliopancreatic topography of the region at different determinants of obstructive jaundice.

Furthermore, MRI examination without further details about the morphology of tumor obstruction, obstruction can determine both the number, length and their premises. Examination revealed by MRI in 90 cases (37.6%) with biliary obstruction headquarters location hilarious, and in 36 cases (14.8%) with hepatic localization. A process infrahepatic is criminalized in 32 patients (13.4%). Exploration by MRI can differentiate truish at the distal head, as follows: pancreatic location is in 11 patients (4.7%) from 7 pa ampullary location insufficiency (2.0%) preampulară location every 5 patients (2.0%) and pancreatic-duodenal localization in 1 patient (0.4%). In a number of 31 patients (12.8%) MRI exam performed their patients with obstructive jaundice can not detect with certainty based distal obstruction.

In terms of the number of obstructions to visibility on the biliary tree, exploring MRI can differentiate the presence of one or more locations, namely: the presence of one factor determining localization of obstructive jaundice is mentioned most frequently in 132 patients (55%), a dual localization is present in 6 patients (4.0%), and the presence of multiple localizări is recovered in 11 patients (7.4%). In three cases is that the presence of extensive obstructive multiple levels. In a patient with obstructive jaundice by MRI examination can not detect the premises (the) obstruction.

After the CT and MRI examinations can establish a correlation between sensitivity of each method to detect the level of obstruction. This correlation is performed in those pa ergy which were conducted both investigations, CT and MRI.
CT scan locates at the distal biliary obstruction in 16 patients and MRI examination defines the most common sites of obstruction as follows: four with obstruction distal location, location 3 with hilarious, 3 and 2 pancreatic multiple levels.

CT scan reveals the five patients with biliary obstruction in the liver, and MRI examination described in 4 of the 5 patients hepatic localization of obstruction and in 1 patient describes multiple levels of biliary obstruction.

CT scan locates biliary obstruction in 27 cases at hilarious. MRI examination confirmed the presence of 21 hilar biliary obstructions, two cases had distal obstruction, two each in the liver and intrahepatic that a case is infranstitial obstruction.

CT locates at 4 infranstitial biliary obstruction. MRI confirmed two cases infranstitial local horizon, in case the location is the liver, and another is hilarious.

Location is recovered at pancreatic CT in 3 cases. MRI locates the lesion, each in one case at: infranstitial, preampular and pancreas.

CT examination of the head obstruction in 2 cases at preampular and MRI examination confirmed the location of a patient preampular obstruction, and the second patient at the head infranstitial.

Thus, CT can provide valuable information regarding the nature factor jaundice. Nature of malignant biliary obstruction ranks first in the study group, as revealed in a number of 121 cases (50.5%), nature is under investigation lithiasis in 19 cases (8.0%), and the inflammation in 18 cases (7.7%).

In a number of 82 patients without exploring CT data sufficient to indicate the nature of biliary obstruction (obstruction can be affirmed that the substrate is not specified).

Radio-imaging Exploration seeks to establish the nature of pathogenic factor causing dilation biliary tree, as shown by the data presented below.

In terms of exploration and MRI, obstructive jaundice of tumor that is most frequently encountered in 77 patients (51.7%). In 30 patients (20.1%) can be detected with certainty factor causing biliary obstruction (which is interpreted as unspecified substrate). Gallstone cause of obstructive jaundice is seen in 14 patients (9.4%), and substrate in the flame is found in 9 cases (6.0%).

Postoperative obstructive jaundice is detected in 7 patients (4.7%), lymphadenopathy tumor causes jaundice in 3 patients (2%) and congenital changes are responsible for jaundice in 2 cases (1.3%).

MRI exploration highlights the often complex etiopathogenic substrate. Thus, it highlights the association of variable factors tumor, stones, inflammatory, congenital, in one (0.7%), maximum 2 cases (1.4%). Vascular cause of jaundice is liable only in one case (0.7%).
Biliary Obstruction etiology is varied, with different locations and different mechanisms of action, but with the same effect: obstacle to the duodenum, biliary drainage, followed by increased levels of total bilirubin and conjugated bilirubin fraction.

The CT examination may be a correlation between the level of obstruction and the obstruction of pathogenic substrate. Thus, at ampullary biliary obstruction is likely tumor in 10 cases and 10 cases in nature is - certain CT examination. Biliary obstruction with dual layer (double location) is more often the cause tumor (4 cases), followed by inflammatory etiology in two cases. Adenopathy substrate, stones or postoperative dual meet each location in one case.

Location of obstruction in the liver is also a varied etiology, namely: 44 cases are tumor obstruction, 10 cases with congenital obstruction of the question, and 9 are concerned inflammatory obstruction.

At issue is obstruction of the hilar tumor in 89 cases, postoperatively in 9 cases (with tumor recurrence Bilio-digestive anastomosis or inoperative) and CT in 19 cases of unspecified nature. Infradistance obstruction in 16 cases is likely tumor and adenopathy in 12 cases.

At pancreatic etiology most frequently incriminated biliary obstruction is the tumor in 141 cases, followed by etiology in 29 cases flamatorie. Pancreatoc-duodenal ulcer etiology at the offending tumor is often observed in 10 cases.

CT locates at preampullary obstruction in 26 patients: in 10 cases is likely gravel, three choices each tumor and inflammatory, CT 10 being unknown etiology.

According to CT scan results can be achieved by age distribution of the main etiopathogenic categories of IO. Thus the age distribution of the CT examination is superimposable over that obtained after exploring the U.S.. The age group with the highest incidence is 60-70ani IO (211 patients). Next downward age groups that Pele 50-60 years (145 patients), 70-80ani (135 patients) and 40-50ani (87 patients).

IO inflammatory processes are responsible for the increased frequency in the range 40-50ani (14 cases), the number of patients 50 to 60 years is similar (12) and in age groups 60-70 and 70 included 9-80ani and 8 patients.

Lithiasis is incriminated in the production substrate IO groups most often age 60 and 70-80ani 70ani, they are covered 15 and 11 patients. 40-50ani age groups 60 years and 50 contain the same number of patients (8).

IO determining tumor pathology is present more frequently in the age group 60 70 Y.O.(when IO produces 114 cases), age groups 50 to 60 years and include a 70-80ani similar number of patients: 74 and 73 patients.

Most frequently causes abdominal lymphadenopathy IO to 60 years age groups 50 (7 patients) and 60-70ani (5 patients).

IO surgery occurs more frequently in the age group 60 70ani (7 patients). For age groups 50 to 60 years and 40-50ani, obstructive biliary pathology affecting approximately the same number of patients (4 and 3 patients).
Biliary obstructive pathology affecting, according to a study conducted more frequently male. Thus, abdominal lymphadenopathy are incriminate to produce IO to 10 women and 13 men. IO causes congenital pathology in an equal number of patients (6 women and 6 men). Pro-inflammatory disorders are the result complained of IO to 14 women and 36 men. IO gallstone determine the 23 women and 29 men. IO substrate is associated with tumor from 329 patients, of which 133 women and 196 men.

Exploration MRI was performed a number of 149 patients with OI, MRI examination of the distribution by age-modifying factors are as follows: age group with the highest incidence of OIs, MRI examination is 60-70 ani (with ergy 41 pa). Follow with a very close age groups of patients: 50-60 years (28 pa - ergy), 40-50 ani (27 patients) and 70-80 ani (26 patients). For the age group 30-40 ani number of patients with IO drops to 14.

Congenital disorders (in number of two explored by MRI), it leads to two IO opposite age groups: 0-10 ani (1 case) and 70-80 ani (another case).

Inflammatory substrate is diagnosed as a key factor in the production of IO, with the largest scope inches for age 60 and 70-80 ani 70 ani, each with 3 patients. In ranges 20 and 40-50 ani 30 ani enter one single patient.

IO lithiasis is frequently concerned in the age group 70-80 ani (6 patients). Pele Gru age 60 years 50, 60 and 80-90 ani 70 ani include two patients each.

IO determinant of substrate affects tumor in descending order the following age groups: 25 patients 70 ani 60th, 40th 50 ani with 21 patients, 50 to 60 years with a total of 15 patients. Effect on tumor incidence decreases towards the extremes of the range IO to be pre Zenta 6 patients aged between 30-40 ani and 9 patients in the range 70-80 ani.

Is incriminated in the etiology of inflammatory pathology IO 4 women and 5 men.

IO question lithiasis is diagnosed in 4 women and 10 men in the study group.

Processes involved in tumor etiology IO are present in a total of 29 women and 48 men.

Exploration IO patients postoperatively, demonstrating its emergence as a strictly postoperative complication in 4 women and 3 men.

Studying carefully the information provided by CT, we can draw conclusions reval look for different pathologies offending obstruction in producing obstructive jaundice. Thus, lymphadenopathy detected in 16 cases, appear to cause a sudden obstruction (by abrupt stenosis) in all cases.

Congenital stenosis causes a sudden illness in 11 cases and progressive stenosis in one case. Substrate in flame found in 50 cases the CT examination, the terminal is termed a sudden obstruction in 26 cases and a gradual obstruction in 24 cases. Gallstone disease in 51 cases causes a sudden obstruction in a case not a gradual obstruction.

19 patients were diagnosed with obstructive jaundice to postoperative CT examination. Abrupt stenosis in 8 patients, the other 8 patients stenosis is gradual, and in three cases the stenosis is difficult to classify in one of the categories listed above. CT biliary obstruction
tumor is recovered in 105 cases, 93 of them creating an abrupt stenosis, 11 a progressive stenosis and 3 patients stenosis is difficult to define.

In a number of 53 patients with biliary obstruction of unknown etiology, a total of 61 sudden obstructions are looking stenosis, 95 are gradual obstruction, stenosis and 11 patients had a nondescript characters.

The morphologically, CT reveals the two types of lesions causing obstructive jaundice: some produce a sudden stop in the way of bile flow (stenosis sudden) and other causes gradual narrowing of the bile duct with its wedging out (gradual stenosis). Ste sudden noza is seen in 173 patients (71.9%), the gradually being seen in 61 cases (25.5%). in 6 cases (2.6%), stenosis have a nondescript appearance, but may be assigned to one of two categories above (they look not specified).

CT criteria for each type of stenosis is partly based on their well-studied and can appreciate the appearance of stenosis.

Depending on the location factor to jaundice the biliary tree, and secondary, depending on the mechanism of jaundice, it can detect two types of obstruction: the origin extrinsic and intrinsic origin biliary tree.

As mentioned earlier in the book, all patients entered the study group (all 240 patients) received ultrasound exploration (U.S.). In 105 patients, after ultrasound, to diagnose the cause of malignant biliary obstruction. The most frequently incriminated in 92 patients (38.4%) are cephalic pancreatic tumors. In 45 patients (18.7%) ultrasound suspected a pancreatic tumor, but without mentioning the pancreatic region affected. Liver tumors are criminalized etiology of obstructive jaundice in 41 cases (17.1%), of which 2 cases (0.7%) ultrasound described a cystic hepatic tumor. Colangiocarcinoma located on the right and left channels hepatic, at their convergence, or the common bile duct, and that the cause of obstructive terului 11 patients (4.6%), according to ultrasound. Gallbladder tumors affecting biliary pathways, with subsequent biliary obstruction in 10 cases (4.3%). Liver metastases are incriminated in the etiology of biliary obstruction in 6 cases (2.3%), and the presence of abdominal adenopathies is responsible for obstructive jaundice in 6 cases (2.3%). In descending order of frequency, the following logical entities are incriminated in the etiopathogenesis pato obstructive jaundice: 2 cases with abdominal tumors (0.7%); ampulomul, hemangioma tumor liver and retroperitoneal being criminalized in one case each (0.3%).

Tumor has a high factor in etiopathogenesis of obstructive jaundice. Process tumors Bilio the hepato-pancreatic region, but also in neighboring organs, can result in the same result, namely obstruction of the biliary tree.

The total number of patients entered in the study group, to 54.1% of patients CT examination was diagnosed obstructive jaundice (IO) of that tumor. Pancreatic tumor process (especially neoplasm of the pancreas head) is the determining factor of IO in 101
cases (42.2%) is due to an IO colangiocarcinomul 66 cases (27.7%), hepatic tumors
determines IO 33 cases (9.3%) and lymphadenopathy are criminal tumor IO etiology in 16
cases (4.5%).

Hilar biliary obstruction level and he is responsible for the occurrence of OI, affecting
the biliary tree at this level may be intrinsic or extrinsic. Damage to extrinsic bile duct tumors
can occur through the neighborhood and included sun evolves to CBP - Beaze in the
tumor. Thus, the CT scan were diagnosed in 14 cases (4%) tumors with invasion subhepatic
hilarious and IO row and in 10 cases (2.8%) tumors of the gallbladder with local
development and IO

Biliary tree distal tumor location, cause obstruction and is accompanied by the
appearance of it from the 113 patients (47%) with distal concerned IO, 102 (42.4%) were
diagnosed with cephalic pancreatic tumor, 6 patients (2.6%) with the cutoff region tumor, 5
patients (2.0%) with pancreatic-duodenal tumor and 1 patient (0.3%) with tumor-duodenal
ampulo.

The origin of the tumor is uncertain in 4 cases (1, 1%). Incriminated in the etiology of IO
are dual localized tumors: liver and gallbladder in 2 cases (0.6%), liver and amputation in
one case (0.3%), liver and pancreas all in one case (0.3%).

Exploration MRI contribute to the diagnosis of obstructive jaundice that tumo agencies
and election administrators in 80 patients (53.7% of the group of patients examined by
MRI). Maximum incidence of MRI exploration colangiocarcinomul submit, present in 35
patients (43.6%). in descending order of frequency are recorded IO origin: liver tumors in 16
patients (20.0%), extrahepatic tumor in 12 patients (15%), pancreatic tumor in 4 patients
(5%) and lymph tumor origin in 3 patients (3.8%).

Tumor location in the ampoule Vater and gallbladder are encountered with MRI
exploring each in every two cases (2.5%). Only one patient (1.2%) shows that IO at duodenal
tumors, and the subhepatic at a double level of obstruction (in the liver and bile ducts).

Analysing separately depending on the substrate damage, age groups, we see most
commonly affected age groups of a certain pathology to produce IO complained. U.S.
detected tumor pathology, frequently cited in the IO production, distribution by age group is
represented above.

Most commonly affected age group is, in this study, the 60-70ani (94 patients). Next
group 60 years 50 to 82 pa-ergy, 70-80ani group of 66 patients and 40-50 years with 39
patients, after which the incidence of OIs than drops to other age groups.

CCK affects preference, according to the results obtained by ultrasound examination,
5G-60 years age group (11 patients), in group 40-50ani are included 9 patients in group 80-
90ani are 7 patients, and 60-70ani group are six patients.

Cephalic pancreatic tumor pathology affecting the preferred age group 50 to 60 years
(39 patients), is downward age groups: 60-70ani (33 patients), 70-80ani (28 patients) and 40-
50ani (10 patients).
Malignant tumors of the gallbladder are incriminated in the etiology of a number of IO in 8 cases in group 60-70ani in 4 cases in group 70-80ani and a 40-50ani case groups and 50-60 years respectively.

Malignant liver tumors determined by examining the IO and the U.S. are found in 20 patients in the age group 60-70ani, 7 patients in group 70-80ani, 6 patients in group 50-60 years, but are also found in three patients in group 30ani age 20.

Gender distribution of the processes responsible for IO tumor, shows a predominance of the disease in males.

Pancreatic tumors (both located cephalic and those who do not have a strict ultrasound localization, but is accompanied by IO) are present in 60 women and 114 men, among the strictly localized pancreatic cephalic affecting 44 women and 73 men.

CCK also affects males more frequently, with a ratio f/m 17/23.

Gallbladder tumors are distributed IO incriminated in producing a small inequality between women and men, affecting eight women and six men.

Liver tumors affect a greater proportion being male, with a ratio f/m 21/29.

Incriminated in the production of tumor lymphadenopathy are detected by exploring U.S. IO 6 men and a woman. The age group with the highest incidence, according to results of CT examination is 60-70ani (39 patients). Damage is still lower for age groups: 50 to 60 years (27 patients), 70-80ani (23 patients) and 40-50ani (12 patients).

CCK are found by exploring CT in 35 patients in the age group 60-70ani on 21 patients in group 70-80ani. Under 60 years the presence of CCK is found in fewer, was present in 16 patients in Group 50 and 11 patients 60 years of age group 30-40 year and 40-50ani.

Malignant liver tumors are involved in producing IO CT detected more frequent as the age range 40-80ani, with a maximum 60-70ani (12 patients). Multiple liver tumors involved in the production of I.O. MRI are more commonly diagnosed in the age group 50 to 60 years (3 patients).

CT of pancreatic tumors are detected with a higher incidence in the age range 50-70ani, distributed as follows: 55 patients in group 60-70 years and 41 patients in group 50 60 years. Outside this range, decreases the incidence of pancreatic tumors, being present in 29 patients 70-80ani group and 13 patients in group 40-50ani. Exploration MRI detected a total of 4 cases of pancreatic tumors IO responsible for age 30-and 80-90ani 40ani

Pancreatico-duodenal tumors affecting four patients in the age group 50 to 60 years and 2 patients in group 60 70ani.

Malignant tumors of the gallbladder are detected by CT in 6 patients aged 60 70ani and 2 patients aged 80-90ani.

Extrahepatic tumors are more common in the study, CT examination, the age range 50-80ani, with the following distribution of cases: six patients aged 70-80ani, four aged 50 and three aged 60 years 60 70ani.
Abdominal lymphadenopathy are present at each five patients aged 50 to 60 years and 60-70ani.

Ampullary tumors are detected CT number of 3 to 60 years age ranges 50 and 70-80y.o, and 4 found in patients aged 40-50ani.

MRI analysis in the exploration pipes dențiază predominant age group affected 60 70ani (which includes those 24 patients with tumor recovered CT IO). Follow 40-50y.o age groups (18 patients I.0. The cause tumor), 50-60 years (16 patients), and age groups 70-and 30-40 80 pre Zinta a very similar incidence (10 and and 9 patients).

Thus the central CCK is involved more frequently in the production of IO in the age group 60 70y.o.(10 cases) are the age group 40-50y.o. 9 cases and 50 age groups 70-80 years and 60 years each with 6 cases .i Have mentioned the presence of a CCK in the age group 0-John.

Liver tumors in a total of 16 detected by MRI, are distributed as follows: 6 in 60-70ani age group, 5 in group 40-50ani and 3 in the age group 50 to 60 years.

MRI examination detected in 4 cases involved in the etiology of pancreatic tumors IO, broken down by age groups as follows: 3 patients in group 60 70ani and one patient in group 40-50 years. MRI reveals the two cases of ampullary tumors are responsible for producing IO cadreață in the age groups 60 and 70-80ani 70ani (one patient in each group age).

Gallbladder malignancy is found in 2 cases, MRI in the range 60-70 years.

Extrahepatic tumors, detected in 12 cases by MRI exploration, are present in the three cases in the age group 50 to 60 years and the number of cases in part by two age groups 40ani 30th, 40th and 70th 80, 50y.o.

According to the results obtained by MRI, male gender appears to be most affected in the group of 149 patients examined by this method.

So central is the presence of CCK in the proportion of 14/21 f / m, extrahepatic tumors ratio f / m 5 / 7 MRI detected liver tumors at a rate f / m 7 / 9, and pancreatic tumors in number 4, MRI detected are all men.

Explore MRI made a number of 149 patients in the study group, IO reveals the tumor in 76 cases concerned. Of these, 68 are by sudden obstruction of the biliary tree and a number of eight cases by progressive obstruction.

Pancreatic tumors (4 cases), lymphadenopathy tumor (two cases), ampullary tumors (two cases), duodenal tumor (1 case) MRI detected a sudden obstruction are responsible for the biliary tree.

MRI diagnosed 34 cases CCK causes sudden biliary obstruction in most cases (33 patients), while a patient is one reveals the gradual stenosis.

Liver and extrahepatic tumors diagnosed in most cases an MRI produce sudden biliary tree stenosis (11 of 15 sudden IOprin stenosis and 10 of 11 extrahepatic tumors).
**Correlation between U.S. substrate Tumor - CT**

After examining U.S. 112 were diagnosed tumors of the pancreas, of which 76 were localized in the pancreas of head and the rest of 36 pancreatic tumors could not establish membership in a particular segment of the body, for various reasons. The U.S. 76 localized tumors of head pancreatic CT scan following are located as follows: 58 of head pancreas, five are diagnosed as being central CCK (hilarious), 4 tumors are low - Caliz pancreatico-duodenal ampullary level 3, 2 are liver tumors, etc.. The 36 pancreatic tumors are detected as CT: 28 tumors of the pancreas, 3 ampuloame, a pan-tumor-doudenală creatico etc.

Liver tumors (31) detected by ultrasound (U.S.) examination and CT are redistributed as follows: 10 are central CCK, 10 are liver tumors, pancreatic tumors and the remaining four each have a different location.

CCK total of 23 stations are diagnosed by U.S.. CT found 20 central CCK, an extrahepatic tumor and two tumors of the pancreas.

U.S. detected 11 tumors of the gallbladder (VB) and CT are characterized as: 5 colecist tumor, a central CCK, a liver tumor, an extrahepatic tumor, a tumor of the pancreas, in one case associated with a hepatic tumor a gallbladder, and another is about multiple liver tumors.

**Correlation between U.S. substrate tumor - MRI**

In four of the patients with pancreatic tumors detected by examining the cephalic U.S., MRI gives a pancreatic event location, and in three cases an extrahepatic tumor location.

U.S. reveals the central CCK in 13 cases and MRI exploration sets with greater reliability the following locations: July CCK central 3 liver tumors, a tumor of the gallbladder, extrahepatic tumor and a CCK of CBR.

The U.S. detected 10 liver tumors, the head MRI tumor after CUN follows: 5 are liver tumors, three are central CCK and in one case the tumor and lymph nodes are diagnosed with a tumor that extrahepatic.

Depending on the mechanism of action of etiopathogenic factors, it reveals the obstructive jaundice occurred through a direct effect of these factors on the biliary tree (the work by the primary mechanism) and jaundice occurred through an indirect effect on the primary factors of biliary tree (secondary mechanism).

The study revealed 156 cases in CT (64.9%) of obstructive jaundice occurred through the primary mechanism, 24 cases (9.8%) occurred through the mechanism of jaundice secondary and 1 cas (0.3%) and jaundice occurred by associating the above mechanisms
Radio-imaging examination in IO has as its objective the establishment of headquarters out obstruction, and providing data related to the morphology of the process that led IO. The data are provided in radio-imaging examinations helps determine the level of obstruction and to describe its features. Such as tumor barrier may have multiple aspects calizări IO, depending on the organ or anatomical segment to which it belongs.

Indirect signs seen in the syndrome of obstructive biliary imaging is the dilation of the biliary tract: intrahepatic, extrahepatic, or associated (global dilation).

In the group of patients studied, imaging tests could detect the presence and type of existing dilatation.

In 141 patients (58.6%) of biliary dilatation is associated: the intra-and extrahepatic (global expansion). In 48 patients (19.8%) intrahepatic biliary dilatation observed overall and in 23 patients (9.5%) segmental dilatation of intrahepatic biliary tract.

The central biliary dilatation is detected in 14 cases (6.0%), and in 6 cases (2.3%) dilation is observed only CBP.

Biliary tree dilatation is accompanied in 1 case (0.3%) VB expansion. For a total of 8 cases (3.5%), radio-imaging investigation without sufficient data to characterize the type of biliary obstruction.

Biliary dilatation layout analysis based on MRI images obtained by exploring, shows the number of interested bile, the biliary dilatation, the question of systematic or dilations, with segmental or global distribution, localized or diffuse.

MRI reveals the: in 24 cases (50.3%) overall IHBD dilatation in 10 cases (20.8%) a global expansion of the biliary tract (IHBD and EHBD) in 5 cases (11.4%) localized dilatation (segment) of biliary dilatation IHBD and central in 4 cases (7.4%). the lower rates are found by exploring MRI: CBP dilatation in 2 cases (3.4%), dilatation of the right or left IHBD in 3 cases (2.0%) and in two cases (1.3%). in one case (0.7%) is recovered central biliary dilatation associated with a dilated intrahepatic biliary dilatation of intrahepatic segmentary respectively accompanied by dilatation of gallbladder (VB).

Linking the results of CT and MRI examinations contribute to the characterization of the biliary dilations increased accuracy in terms of dilated bile ducts, but also their distribution in the liver parenchyma and biliary tree.

In 22 patients CT examination reveals the overall biliary dilatation (IHBD and EHBD), which locates them as MRI exploration: 13 expansion are global (and EHBD IHBD) in 5
cases are dilated intrahepatic global MRI in two cases recovered only dilatation of CBP and how a case is central or multiple biliary dilatation essentially of bulk.

The 20 cases with dilated intrahepatic comprehensive MRI examination are classified as follows: 15 cases with dilated intrahepatic are global one and two with dilated intrahepatic segmental dilatation respectively essentially of bulk multi-looking, and in one case an expansion reveals the Global biliary (IHBD and EHBD).

At a total of 10 patients with biliary obstruction CT detected segmental dilatation of IHBD. Examination reveals the MRI performed after the expansion to be distributed as follows: 6 patients intrahepatic dilation is global in two patients is dilated intrahepatic segmental and the other 2 patients with biliary dilatation is global (and EHBD IHBD).

Pathogenic substrate of biliary obstruction, biliary dilation hence, it will be in partnership. Depending on etiopathogenic substrate, the location of the biliary tree or neighboring organs and the number of factors that determine DILA fathers IO occurs with a certain topography biliary intrahepatic and / or extrahepatic, which can be detected by CT investigation.

Malignant processes, with localization in the hepatic-pancreatic Bilio or neighboring organs, but secondary to the biliary tree obstruction, it causes dilation of the different segments as follows: of the 105 patients diagnosed with malignant tumors detected CT, they produce up to 58 patients overall biliary tree dilation (IHBD and EHBD), 81 patients overall intrahepatic dilation, dilation of the intrahepatic segment 43 patients, 10 patients had a dilated biliary tract dilatation central and 8 patients have PBC.

IO inflammatory processes in 50 consecutive patients, 26 cases occurring in the global dilation (IHBD and EHBD) of the biliary tree, in 9 cases IHBD expansion of global expansion in 5 cases of segmental IHBD, 7 and 2 central biliary dilatation of bile duct dilatation.

IO question lithiasis, in 50 patients investigated by CT, is characterized by dilated bile ducts following location: 40 cases with biliary dilatation global (and EHBD IHBD), 7 cases with central biliary dilatation, 2 cases of IHBD global expansion, and in one case of bile duct dilation is present, or IHBD segment, or dilation of the gallbladder.

Lymphadenopathy, inflammatory or tumoral causes IO in 16 cases, 2 cases being central biliary dilatation, 5 cases with global expansion (IHBD and EHBD) and 9 cases are IHBD global expansion.

Depending on the location of the tumor process involved in biliary obstructive pathology, it reveals the level at which the bile ducts are dilated.

Lymphadenopathy in 16 patients revealed tumor in 9 cases produce an expansion of global IHBD in four cases a global expansion (IHBD and EHBD) and in three cases produce dilation of the central biliary tree.
Ampulomas determined in 8 patients overall biliary dilatation (IHBD and EHBD) and bile duct dilatation in a patient. Biliary ampuloduodenal tumors occurs at global expansion. Cavernoma (1 case) determines the overall biliary dilatation.

CCK (98 patients) depending on the location and to a lesser extent the evolutionary stage, causes dilation in 48 cases IHBD overall appearance in 19 cases overall dilation of the biliary tree (IHBD and EHBD) IHBD segmental dilatation in 17 cases, central biliary dilatation in 7 cases and in one case the cause localized dilatation of CBP.

Liver tumors (34 patients) associated with IO are răspunzătoare in 19 cases a segmental dilatation of IHBD in 11 cases by an expansion of global IHBD, 2 patients results in an overall expansion in 1 patient and a central expansion.

Extrahepatic tumors (14) determines the overall IHBD dilation dilation in 11 patients and 2 patients overall.

Substrate double tumor, mixed, and ampullary liver, liver and pancreas, biliary tree causes global dilatation. Assign a different hepatic tumors with lo-calizare the gallbladder in 2 cases causes a global expansion of biliary-patice intrahe. Multiple liver tumors, detected in 4 cases as pathogenic factor of IO, is associated in three cases with segmental dilatation of IHBD and in one case with a central biliary dilatation.

140 cases of pancreatic tumors producing an overall expansion of the biliary tree and only four cases of bile duct dilatation. Pancreatogo-duodenal tumors occur in all seven cases overall biliary dilatation.

RP tumor affecting the entire biliary tree, with its overall dilatation.

Gallbladder tumors in 7 cases causes a global intrahepatic dilation and in one case dilated central or segmental intrahepatic.

CT examination in obstructive biliary pathology may indicate that pathological changes associated impaired vascular territory for anatomical region-Bilio hepato-pancreas. Morfopatogenice Such changes are described in 10 patients (1.5%) of the studied group.

The reported presence of portal vein thrombosis in 5 patients torso (50%) of the group being studied. Ram left portal vein thrombosis is detected in two patients (20%) and venous thrombosis of both arms (right and left) without including the trunk and portal vein is present in 1 patient (10.0%).

Other present and described the changes consist of dilatation of vascular thrombosis, portal vein and spleen, each present in one patient (10%).

Changes in vascular imaging detected and played above are all associated with tumor pathology responsible for biliary obstruction syndrome (CCK, pancreatic tumors, liver or cephalic).
Examination of patients with I. O. IRJV1 The question tumor highlights and venous vascular damage in this area, particularly portal vein thrombosis. Of the five cases - CELAT with impaired portal vein, 2 patients (40%) had a trunk of portal vein thrombosis, also two patients (40%) had extensive portal vein thrombosis and one patient (20%) were diagnosed with thrombosis of ram left portal vein. Effect on portal vein in the present study is related to obstructive biliary pathology that tumor. CT examination reveals the involvement of the territory and a portal in 10 cases, represented by the CCK (3 cases), liver tumors (3 cases), pancreatic tumors (all three cases) and a patient with extrahepatic tumor.

Dilation of the portal vein is observed in one case, a patient with liver tumor.

Trunk of portal vein thrombosis is recovered in 5 cases: 2 patients with CCK, 2 patients with pancreatic tumor and one patient with liver tumor. Branches of portal vein thrombosis is recovered from a patient with liver tumor. Ram left portal vein thrombosis is detected CT in 2 patients, one with CCK and the second with extrahepatic tumor.

Malignant tumor of the pancreas cause splenic vein thrombosis.

Pathogenesis of tumor pathology involved in IO may be associated with damage to the venous territory trombozarea thorium at this level, with varying degrees of extension. Thus, exploring - MRI reveals the evil in 4 patients diagnosed with IO tumor etiology, portal vein thrombosis, 2 patients decelându extensive damage is a portable system. Nat determin pathological portal vein thrombosis in these cases was the liver and pancreatic malignant tumors.

As pathological changes associated ascites is present, detected by CT in 11 patients. In 9 of the 11 patients ascites is present in a tumor context, the ascites were encountered in 8 patients and CT in a patient diagnosed as abdominal collection.

Out of the five patients with vascular changes, 1 patient (20%) is detected by a hilarious cavernom, 1 patient (20%) have splenomegaly and splenic vasculature disorders, and another patient only splenomegaly (20%).

One patient (20%) with biliary obstruction syndrome presents changes in the vascularity of ischemic liver segment 4, changes after surgery for CCK. Another patient has abnormal vascularization in the system port changes hearing against a tumor hepatomegaly.

Imaging is useful both for establishing the diagnosis of OI patients with subsequent therapeutic conduct and to monitor their post-therapy.

MRI examination performed in patients operated for IO different etiologies, depis resets the pathological changes in appearance Bilio-digestive anastomosis. Thus, 8 patients with such changes, 6 patients (75%) have an anastomotic stenosis Bilio-di management (imaging with clinical suspicion of tumor recurrence) and in 2 patients (25%) reveals the changes to be Bilio mouth-digestive anastomosis with inflammatory infiltration issue.
Discussion

This paper aims to study the contribution of diagnostic imaging in patients with obstructive jaundice (IO), in determining the optimal therapeutic conduct in each case, and post-therapy monitoring of these patients.

In the study group was selected on the basis of clinical and biological criteria. Ultrasound was performed in all patients in the study group (100%), continuing diagnostic approach, patients were investigated by radio-imaging non-invasive methods, ie computerized tomography and magnetic resonance imaging.

With regard to sending patients to explore imaging reason, most patients have been address of the service profile of the Institute Fundeni Clinical diagnosis of obstructive jaundice or with no definite etiology specify in advance either the cause of obstructive jaundice turnorală. Thus, no more than 38 patients (15.8%) of patients referred for an investment performance - NCB radioimagistice suffering from a cephalic pancreatic cancer, the percentage whose pancreas was overall head of a malignant tumor process amounting to 55 (23.1%) of the total 240 patients admitted in the study group.A percentage of that. 5% of patients were referred serve ity of radiology with a diagnosis of biliary obstruction secondary liver tumor, similar numbers of those who have been diagnosed with jaundice, but whose obstructive etiology, hepatitis or prehepatică was not certified at the time of radio-imagistic exploration.

Inflammatory pathology in the pancreas plays the dominant role in the etiopathogenesis of biliary obstruction radioimagistic detected, 6 (2.7%) of the cases investigated pancreatitis presenting pathology [tabloloul dominating pathogenic substrate of chronic pancreatitis, 4 cases (1.6%)].

In total, the substrate of tumor patients to explore radioimagistică addressability was 114 (47.7%) patients, given only subjects whose etiology was unknown turnorală obstruction before exploring U.S., CT or MRI. in the same vein, inflammatory pathology responsible for biliary obstruction was incriminated in the diagnosis of sending no more 41 (5.5%) of patients.The remaining 112 (46.7%) of patients was divided between those with obstructive substrate was not specified on a strict clinical and laboratory extraimagistice (77 patients, ie 31.9%) and 36 subjects (14.8%) with other pathologies at least suspected, in addition to the turnorală or inflammatory. There is relatively low value of jaundice suspected inflammatory etiology (as cited in the literature values) and a slight overestimation of the tumor of its substrate, in a significantly increased percentage of the cause of jaundice was considered insufficient do - case the document to be affirmed.We believe that this is due to a combination of factors, among them is the heterogeneity of the diagnostic methods of clinical jaundice in the different provenance of their patients, without the existence of an algorithm at the level of unit investigation. In addition, overestimation of tumor etiology at the expense of other causes (including inflammatory) seems to have intuited the injury severity substrate or suspected overpricing on a clinical-biological approach in order to precipitate a more detailed
diagnosis and, consequently, the country set up a treatment more rapid and specific real cause of the disease. Finally be very nice, calm amenable frequent lack of specificity and laboratory characteristics of inflammation since generating icterogenic biliary obstruction, which artificially augmented reference other diagnostic groups in the etiology of inflammatory damage.

Regarding ultrasound evaluation of obstructive jaundice, the highest percentage of patients did not benefit from its detection of a case on a strictly generating ultrasound, 118 pa total link efficiency of 240 (49.2%) were sent to complete diagnostic balance radioimagistic by CT or MRI based on detection of biliary dilation intra, extra or the two combined liver. The most common etiology of obstructive jaundice recovered ultrasound was the tumoral (99 cases, representing 41.2% of the total 740 subjects), followed by inflamato-cation (12 patients, representing 5.0%) and lithiasis (7 cases, ie 3.0%). It is noteworthy that among the causes of obstructive jaundice of tumor, pancreatic neoplasm deals posted first place with 56 patients (57.0%), from which pancreatic cephalic location occupies the first place, with 37 patients (38.4% ). Among inflammatory etiologies, chronic pancreatitis (4 patients, ie 1.6%) is most frequently causing jaundice inflammatory way. Of the above figures, it is noted percentage increased abdominal ultrasound detected no definite cause obstructive biliary ultrasonographic (49.2%). The cause of this high percentage of detection without the possibility of biliary obstruction DESCO - peririi put it on account of their substrate inhomogeneity ultrasonographic exploration protocol suitable obstructive biliary pathology. Also note the relatively high frequency between tumors colangiocarcinoma was responsible for icterogenic biliary obstruction, 36 patients (4.9%), however, showing a slightly lower frequency of liver and pancreatic tumors.

In terms of exploring computer tomography (CT) based on high specificity and sensitivity of the method, the rate of CT examinations with substrate unspecified percentage drops to identified in the U.S., from 25.6% (61 patients). In parallel, the number of exams that identifies pathogenesis- of malignant biliary obstruction : 50.5% (121 patients). On account of significant reduction in the number of examinations without definite identification of the cause of obstruction, jaundice increases the relative number of those lithiasis (8% - 19 patients) and inflammation (7.7% - 18 patients).

Magnetic resonance imaging (MRI) of the biliary tract reveals a relatively stable compared with CT in the share of ICT in the diagnosis of the cause jaundice tumor (51.7%, representing in this case 25 patients). Rates unspecified sum tests with biliary obstruction on the substrate falls below the level observed in magnetic resonance CT, as in this case of 20.1%, ie 10 out of 48 patients studied by this imaging method. The study reveals a relatively stable share of obs trucțiilor biliary lithiasis or inflammatory cause, an increase (however slight) of gallstone detection efficiency, detected pathogenic factor with a relatively low yield in CT.

Cephalic pancreatic neoplasms between tumors detected tops U.S. responsible for biliary obstruction. The maximum frequency of occurrence is in the 6th decade (22.7%). The same decade represented - Zinta and maximum range colangiocarcinoma prevalent (27.5%). Men are overrepresented in impaired tumor visualized consecutive U.S. biliary
obstruction in most segments its etiological. The biggest differences arise cephalic pancreatic cancer (pre-ance in men 62.4%) and in pancreatic neoplasms extracefalice (percent male: 71.9%).

In terms of CT, most patients with biliary obstruction by tumor that is found in the range 50-80 years, peaking between 60-70 years (36 patients, representing 34.7% of all tumors in charge of obstruction and 54% of pa biliary obstructive biliary tologia bands that age). Pathology lithiasis has a maximum frequency in the range of 40-70 years, peaking in the 7th decade and giving a pre-inflammatory substrate - ance increased in the range 40-70 years, peaking in the 6th decade. Pathology was rated tisfăcător CT shows a maximum frequency of occurrence in the range 50-70 years, while the share of cases investigated CT biliary obstruction in these age groups.

Regarding the age distribution of cases evaluated MRI obstructive jaundice, stackable frequency distribution is described CT appearance.

CT and MRI explorations reveal an increased prevalence in males of most groups of pathology responsible for biliary obstruction. The biggest difference between the sexes in CT (predominantly male) are observed in tumor obstructive jaundice (59.6% men). MRI for exploration, tumor etiology male predominance of 62.3%, non statistically significant difference.

As regards the relationship between cause biliary obstruction and its level of MRI detected, it is noted increased frequency of cases of substrate hilarious tumors (37 patients out of 48 patients undergoing MRI exploration, representing 67.3% of the total hilar obstructions and 48.1% of those obstacles biliary tumor). As mentioned in the paragraph on the correlation between the level of biliary obstruction detected by MRI compared to CT, we note the presence of a small number of patients with pancreatic tumors causing obstructive jaundice (only 3.9% of biliary obstructions visible tumor MRI). Instead, there is a relatively large number of patients with liver tumors causing obstructive jaundice: 14 patients (18.2% of total tumor pathology icterogene investigated pathology MRI and 63.6% of hepatic localization investigated MRI). in other news, it is noted the effectiveness of the method (IRM) to detect the number and location of gallstone disease, 28.6% of total bile calculii view MRI is located in the distal main bile duct, they are also responsible for 21.1% of obstructions primary biliary bile MRI identified. 83.3% of multiple biliary obstacles are caused by multiple gallstone, which is 35.7% of total bile calculii discover MRI. It should be noted that even if MRI exploration remains an unspecified substrate localization of hilar obstruction at a rate of 21.8% (representing 40.0% hilarious location of all cases of obstructive jaundice unspecified MRI), while location of the bile duct is evaluated with a MRI to CT significantly increased efficiency (percentage of cases unrated MRI: 20.0% vs. 59.3% in CT).

How icterogen factor action on the biliary tree may be direct (primary mechanism) or indirect (secondary mechanism: compression, invasion of the biliary tree by con tiguitate etc.). Exploration CT found a number of 156 cases (64.9%) in shareholders nate factor directly from the biliary tree, while 24 (9.8%) mechanism is secondary. 25% of cases have a way icterogenă CT with unspecified action. The increased sensitivity of the method in May,
higher assessed MRI exam CT examination of the nature of the mechanism of jaundice, weight reducing mechanism unspecified.

Regarding the etiology of biliary obstruction radioimagistice studied by the three methods mentioned, the weight reduction observed with unknown etiology cases investigated by the company improve thanks me ever more elaborate (ultrasound - CT - MRI). in parallel, highlights a growing share of other categories reactive etiological biliary obstructions (tumors, inflammation, stones).Such as congenital biliary obstruction by a percentage remains relatively stable in each of the methods mentioned radioimagistice.

All cases of portal vein thrombosis were identified in the study that tumor, with a similar frequency colangiocarcinom, liver and pancreatic tumors. Half of them were found in the trunk of portal vein thrombosis, as an epiphenomenon of the underlying disease. Similar to explore CT's MRI reveals the portal thrombosis in obstructive jaundice cause liver and pan-creation. Damage splenoportal axis represented a major decision factor in determining subsequent therapeutic measures nature (adapted surgical tumor rezecabilitate criteria).

In addition to pathology involving purely portal, explorations CT and MRI are able to provide details about other types of abnormal vascularization, as reflected in collateral vessel molecular features, splenomegal, or appearance and that gadolinofiliei iodofiliei parenhima the abdominal organs.Thus, exploring CT identified the presence of ischemic vascular bed layout at spleen or liver, splenomegal and liver cavernom hilarious. In addition, MRI examination has the ability to differentiate vascular imaging based on the combination of elements for this type of exploration parenhima perfusion abnormalities and inflammatory vascular disorders with presumed substrate.

Identifying the presence of abdominal fluid, ascitic type or intraperitoneal abdominal collections, was undertaken to explore both U.S. and CT, ascites identifying only those cases whose etiology was tumor type. in our study group, pancreatic tumors and ascites colangiocarcinoamele have brought relatively equal proportions. Other causes responsible for the occurrence of ascites in patients with OI were the liver tumors, pan-creatico duodenal and abdominal tumors with invasion of the right hypochondrium secondary bile ARBO resume.

A component of the study consisted of consecutive biliary obstruction evaluation of their surgical intervention in the region predominantly hepato-pancreatic-Bilio.Most obstructions - CT detected their postoperative bile appeared as restenozi bile of various causes in patients with neoplastic diseases stenosed bile (61.2%).It should be noted that in one case, biliary obstruction consisted of a pancreatic tumor arising. A total of 8 cases of biliary obstruction were the tory postope tumor recurrence (25.7%) - colangiocarcinoame tumors, cholecystitis, pancreatitis and pancreatic-duodenal region). in a number of 4 cases (12.9%), bi liar obstacle appears benign tumors and postoperative complication.Exploration MRI may suspected, before a patient with obstructive jaundice damage Bilio mouth-digestive anastomosis, inflammatory mechanisms of tumor involvement (tumor recurrence or continuation of privatization processes of evolution - of tumor after partial surgical extirprării it.In most patients with obstructive jaundice after surgery by affecting mouth Bilio-digestive anastomosis, tumor was suspected the existence of a substrate responsible for obstruction.
Conclusions

1. The paper deals with a radio-imaging perspective of the patient with obstructive jaundice problem trying to determine the contribution of the detection methods of obstructive jaundice etiopathogenic factors and their role in the characterization methods of defining elements and associated biliary obstruction.

2. Patients included in the study were sent to the Department of Radiology and medical imaging held Bucharest University Hospital to complement the diagnostic approach and imaging methods: ultrasound, computerized tomography and magnetic resonance imaging. In selected cases, some subjects received one-invasive method of visualizing ZIVA biliary tract, most often filled with bile drainage way. All patients in the study had some form of biliary obstruction.

3. At baseline, most patients suffered from biliary obstruction tumoral, clinical diagnosis established on the basis of biological or unspecified cause biliary obstruction.

4. Most of the tumor etiopathogenesis of obstructive jaundice was the pancreatic neoplasm.

5. Etiopathogenesis of inflammatory biliary obstruction icterogene was represented in most cases the location of pancreatic substrate having chronic pancreatitis.

6. Abdominal ultrasound (U.S.) imaging examination performed as a first choice in the analysis of biliary obstruction had a maximum sensitivity in detection of biliary dilation, but was relatively low efficiency in the description of the syndrome generating cause obstructive jaundice.

7. Exploring computer tomography (CT) has the ability to discriminate against U.S. high efficiency etiopathogenic categories icterogenă biliary obstruction, accurately identifying the etiological types increased biliary occlusion, rather than exploring the persistence of a number of exploration remain inconclusive CT, or investigating a substrate on a strictly impossible to cut CT.

8. In terms of MRI investigation, this imaging method show to be moderately more efficiently than CT in detecting explore etiopathogenic factors of biliary obstruction, with an increased sensitivity to CT in the detection of gallstones, regardless of level.

9. According to data from CT and MRI integration exporârilor results, overall biliary obstruction any cause is more common in men. Among the diagnostic methods used in the study, MRI examination gives the strongest correlation with male biliary obstruction.

10. Icterogen biliary obstruction causes tumor appear to be more common in men and mature age groups and the elderly, regardless of investigation method used, the result showing increased sensitivity for CT and especially MRI explorations to examine U.S.. Of these cases, the most frequent pathologies criminalized biliary obstruction regardless of...
diagnostic method used are pancreatic neoplasms (maximum prevalence of the topography cephalic) and colangiocarcinoma.

11. Single MRI examination is more effective than any other imaging method for detection ment of biliary obstruction causes mixed or multiple icterogenic substrate. At the same time, there are specific substrates that are objectified obstructive jaundice in an overwhelmingly only through an exploration of MRI, including mixed plurietiologic pathogenesis.

12. Compared with other methods, exploring MRI identifies a maximum number of hepatic biliary obstruction at hilar biliary level, offering a significantly superior description of CT examination on the location of distal biliary obstruction. Thus, MRI is able to offer far superior to any other details about the type and topography imaging infra-junetional biliary occlusion.

13. Overall, MRI offers the possibility of a localized lesion relative to the more precise biliary obstruction from the CT scan.

14. CT offers an apparently reliable enough for effective detection of a biliary occlusion in the pancreatic head, surveying the exploration MRI does not appear to have advantages clear from the CT scan.

15. Hypertrophic chronic pancreatitis carried the highest percentage of biliary dilatation with any locale, CT detected.

16. The most common substrate icterogen tumor is detected pancreatic CT.

17. The level and location of the pancreas is frequently visualized on CT inflammatory etiology of biliary obstruction.

18. More than half of biliary obstructions located distally incomplete describable CT.

19. Exploration MRI better than CT is sensitive in the detection of biliary obstruction Intrahepatic topography and lithiasis of the substrate.

Most radiopaque gallstones obstacles generate bile flow view CT were located at the distal bile in primary biliary route.

21. The study identifies a high proportion of multiple gallstones detected by MRI examination: 35.7% of all cases of gallstone gallstones are discovered multiple MRI.

22. Lithiasis of main biliary MRI exam revealed a significantly higher proportion compared to exploring CT.

23. U.S. has an increased capacity to detect a large biliary tract lithiasis, which is most times unnecessary complementary exploration methods, except search multiple gallstones and gallstones exact position in which MRI proved to be the more efficient (vide supra).

24. Biliary obstructions that produce the calibration inflammatory bile sudden and graduated in relatively equal proportions.
25. The study shows a statistically significant increased capacity to explore MRI to CT in the evaluation of biliary obstruction issue head tumor, regardless of histo-pathology of its substrate.

26. CT is more effective than U.S. in assessing the correct location of the tumor biliary obstructions.

27. Both CT and MRI (particularly the latter) more frequently detected with biliary obstruction from extrinsic development to the intraluminal bile ducts. In contrast, icterogen factor acts through direct mechanism in most cases, a small number of subjects as the mechanism of jaundice secondary (compression, invasion of the biliary tree by contiguity, etc.). MRI examination is more sensitive to signal this aspect of biliary obstruction.

Despite the increased efficiency in the detection and characterization of MRI examination of most of the elements etiopathogenic biliary obstruction, one with congenital left-racterizabilă that a similar ability irrespective of the method used radioimagistică exploration.

28. All cases in the study of portal venous thrombosis of the shaft were concerned tumors.

29. Vascularity of liver disorders associated biliary obstruction (of which there is an important component accompanying portal thrombosis) are reliably diagnosed with CT and MRI, providing an additional MRI exam details with reference to their etiology.

30. MRI has the ability to detect metastases from abdominal tumor icterogene processes with greater efficiency to exploring CT.

31. MRI exam shows an apparent efficiency unmatched in the description of intrahepatic biliary tract dilation.

32. On CT, the maximum number of cases with biliary tract dilatation is the overall biliary dilatation.

33. Isolated biliary dilatation occurs most commonly as a consequence of tumor pathogenesis.

34. The most common type of dilatation of intrahepatic biliary cholangiography is considered bilaterally symmetrical.

35. Two-thirds of obstructive jaundice are concerned tumors cholangiography identified, the majority sunrise Klatskin tumors.

36. Histologically, the vast majority of Klatskin tumors investigated in the study were adenocar-cinoamas..
37. According to the Bismuth-Corlett classification types lilac, IIb and IV, taken together, represent an enormous majority of Klatskin tumors, rather than type I, which occurs very rarely.

38. Radioimaging exams used can not reliably detect early lymph-node loco-regional invasion.