

KNOWLEDGE ABOUT OVERWEIGHT AND OBESITY AS RISK FACTORS OF CHOLELITHIASIS. IT'S IMPORTANCE FOR THE PHYSICIANS TO BE

EI CONOCIMIENTO DEL SOBRE PESO Y LA OBESIDAD COMO FACTORES DE RIESGO DE COLOLITIASIS. SU IMPORTANCIA PARA LOS FUTUROS MÉDICOS

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ABSTRACT

Sarcopenic Obesity is the decline in muscle mass that occurs during the aging process and is not an isolated phenomenon but strongly linked to a parallel increase in fat mass. The prevalence demonstrated in patients 65 years diagnosed with obesity outpatient sarcopenia in the University Hospital of Guayaquil in the period July 2013 to July 2014. This study was descriptive, retrospective, and cross-sectional. Results determined the prevalence in one year, 13%, the month with the highest prevalence was generally July 2013 with 21 diagnosed patients, the most frequent biomechanical complications were Osteoarthritis unspecified 44% (73 cases), followed by other OA with 28% (46 cases). The most common comorbidities were hypertension found 28% (69 cases), followed by diabetes with 25% (61 cases). The province with the highest number of patients was the Guayas with 94% (154 cases), 86% (143 cases) were from urban areas. Of the patients studied, 87% (145 cases) corresponded to females, 54% (89 cases) for the age group between 65 and 69 years. BMI was predominant moderate 84% (139 cases), and only 2% (4 cases) is the very high risk or morbid obesity.

KEYWORDS: Obesity, sarcopenia, complications

RESUMEN

La obesidad sarcopénica es la disminución de la masa muscular que se produce durante el proceso de envejecimiento y no es un fenómeno aislado, pero fuertemente vinculado a un aumento paralelo en la masa grasa. La prevalencia se demostró en pacientes de 65 años diagnosticados con obesidad ambulatoria sarcopénica en el Hospital Universitario de Guayaquil en el período de julio de 2013 a julio de 2014. Este estudio fue descriptivo, retrospectivo y transversal. Los resultados determinaron la prevalencia en un año de un 13%, el mes con mayor prevalencia fue julio de 2013 con 21 pacientes diagnosticados, las complicaciones biomecánicas más frecuentes fueron osteoartritis no especificada 44% (73 casos),

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seguida por otra OA con 28% (46 casos). Las morbilidades más frecuentes fueron hipertensión encontrada 28% (69 casos), seguida de diabetes con 25% (61 casos). La provincia con mayor número de pacientes fue la de Guayas con el 94% (154 casos), el 86% (143 casos) fueron de áreas urbanas. De los pacientes estudiados, el 87% (145 casos) correspondió a mujeres, 54% (89 casos) para el grupo de edad entre 65 y 69 años. El IMC fue predominante moderado 84% (139 casos), y sólo el 2% (4 casos) siendo la obesidad la del riesgo más alto.

PALABRAS CLAVES: Obesidad, sarcopenia, complicaciones

This study aims to analyze the relationship between overweight and obesity as a risk factor associated with cholelithiasis, by indirect observation. The overall incidence of vesicular lithiasis in patients with weight gain is high and bearing in mind that in 6 of every 10 Ecuadorian adults have overweight or obese, affecting mostly women, affecting health, overweight or obese people tend to develop different diseases among these cholelithiasis.

Cholelithiasis is one of the most common gastrointestinal diseases; frequently queries emergency services and surgery, prevalence not well known, because the majority of the patients are asymptomatic. (Gaitán, 2014). In 20% of cases are symptoms or complications, being higher in advanced ages and women. Its global distribution varies considerably, from being almost unknown or rare in Oriental and African countries to have a 5-15% prevalence in the West industrialized countries. However, there are significant ethnic variations; American Indians have a high prevalence ranging between 60 and 70%. (Gaitán, 2014)

It's composition can distinguish three types of calculations: 1) cholesterol gallstones which represent 75% of the calculations in the Western countries, 2) calculations of Brown pigments (20%), mainly composed of calcium salts of unconjugated bilirubin and 3) calculations of black pigments (5%) that are typically associated with chronic hemolysis, cirrhosis and pancreatitis and whose component is calcium bilirubinate.(Jerusalen,2010)

Some predisposing factors, include demographic traits, genetic (higher prevalence among Native Americans), obesity, loss of weight, female sex hormone, age, ilea disease, pregnancy, type IV Hyperlipidemia and cirrhosis.

They are a matter of common surgical intervention and occupy one of the leading causes of hospital morbidity. In the surgical field, the vesicular lithiasis continues to be a surgical condition in the daily work of the surgeon. The first cholecystectomy practiced on July 15, 1882 by Dr. Cakl Johann August Langenbuch, in the small hospital Lazarus Krankenhaus in Berlin, through an incision in the upper right quadrant. For more than one century, this technique was the choice for the treatment of cholelithiasis or other tax vesicular conditions of surgical treatment. It is one of the most frequently practiced interventions in our hospitals. Despite the experience and scientific advances, sometimes it becomes difficult and forces to bring into play all the skills of the surgeon who performed it.

Currently there are two surgical options for the treatment of symptomatic gallbladder lithiasis, conventional open cholecystectomy procedure and, for almost two decades, laparoscopic cholecystectomy. The latter has become the gold standard, given the advantages over the conventional procedure, in terms of post-surgical recovery, postoperative pain, and length of hospital stay, early return-to-work activities and acceptable cosmetic results. Approximately 25% in the United States are open cholecystectomies and 75% by laparoscopy. (Pérez, 2014)

In United States, the general prevalence of gallstones (symptomatic, asymptomatic or previous cholecystectomy for lithiasis) in a sample of 14,000 people examined by ultrasound was 7.9% of men and 16.6% of the women. A Swedish study in 739 patients, found a prevalence of cholelithiasis of 16.3%, with development of clinical related at 5 years in patients without previous symptoms of 7.6%.

In an Italian population-based study that was performed an ultrasound to all the inhabitants of a town, a prevalence of cholelithiasis of 7% was observed (males, 5%; women, 9%); 82% of the participants in the study with vesicular lithiasis were unaware of having it, 16% of them suffered biliary symptoms after a 10-year follow-up. In another Italian study, 26% of asymptomatic cholelithiasis subjects had symptoms during a 10-year follow-up. With all this, and intuitively, we can say that asymptomatic cholelithiasis is common (1 in 10 people), and that approximately 1-2 patients with asymptomatic vesicular lithiasis of every 10 will have biliary symptoms over a period of 10 years from diagnosis (Martinez, 2011).

In our country in 2009, a study of biliary pathology, in the Hospital Enrique Garcés, registered 1758 cases of cholelithiasis 89.6% and 184 cases of choledocholithiasis that corresponds to 10.4 %.(Pilantuña, 2011)

The prevalence of cholelithiasis has a significant ethnic and geographical variability. The highest prevalence rates are in populations with Amerindian ancestors, being particularly frequent in Chile, and Scandinavian populations. Intermediate prevalence seen in African American populations and lowest correspond to the black populations of sub-Saharan Africa and the population of East Asia. There are also differences in the composition of the calculations. In Western countries, cholesterol gallstones are the most frequent, while in East Asia, brown pigment gallstones are the predominant. (Jerusalen, 2010)

The disease prevalence of biliary lithiasic in the Western world ranges between 5-15%, being more frequently in women than in men. In the United States, there are 1 million of new cases of cholelithiasis by year and an average of 670,000 cholecystectomies practiced by year, with an annual cost of US \$6.5 million, which outperforms other diseases of the liver and pancreas. (Gaitan, 2014)

In Europe, nearly 10% of all adults have gallstones, being three times higher prevalence in women during the fertile period, than in men. It is less common in France and Germany than in England and in Sweden the high prevalence rates are very similar to the indigenous American population, making it a special case. Among Eastern countries, the prevalence in Thailand, Singapore and Japan ranges between 3% and 8% and in China is the smallest (0.23%). The African continent has a low prevalence. (Gaitan, 2014)

In Mexico, the overall prevalence of gallstones is 14.3%, Chile has the highest prevalence in the world: there affects about 44% of women and 25% of men over the age of 20 years old. (Gaitan, 2014)

In Ecuador, the cholelithiasis is the second disease within the top ten cause of morbidity. With a total of 33.868 hospital discharges, of whom 9.172 belong to the male gender and 24.699 to the female gender, being more frequent in 65 years in men with 2.087 cases and 65 years for women, with 3.336 cases, with a rate of fatality for every 100 disbursements of 0.3. With a prevalence rate of 21.82% x 100,000 population, within the morbidities in the female sex is the first cause 31, 54%, male occupies the fifth cause of morbidity with a 14.04%. In the province of Pichincha were presented in 2012 9.579 cases of cholelithiasis and in the province of Guayas 8.979 cases of cholelithiasis.

The risk of gallstones is higher in women than in men, at any age, with a ratio of a one. Obesity increases the prevalence of gallstones. It may be up to 35% of women with an index of greater than 32 BMI kg/m². In obesity, excess cholesterol secreted in the bile alters its transport capacity. (Gaitan, 2014)

This is a very important fact according to Ensanut (national health and nutrition survey) 2011-2013, showed that 63% of the Ecuadorian population had problems of overweight or obesity. The 41% were overweight, and 22% to obesity, prevalence higher in women with 62%, that women spend less time on physical activity-related 29% of adults in urban areas consume more calories from those required, so tend to overweight. In total, the population overweight and obese in the Ecuador is 5'558. 185 million people. In which 4'876. 076 million people correspond to ages 20 to 60 years and 682.109 thousand people corresponds to age 60 years.

Risk factors and protective factors

There are three main risk factors for the development of gallstones. Firstly, the age. As age progresses, the bile becomes more lithogenic increasing the prevalence of calculations. (Gaitan, 2014). The female sex (probably under the influence of estrogen, also increases the risk. Finally the obesity, which is associated with an increase in production and subsequent elimination of cholesterol by the bile. It is uncommon, in this context, the appearance diet with accelerated weight loss, due to the massive removal of cholesterol by the bile biliary colic. (Pérez, 2014). Protective factors should include is ascorbic acid or vitamin C, moderate coffee consumption and the consumption of vegetable protein.

Female gender and parity

The risk of CB is higher in women than in men of all ages. In young women, the high risk related to pregnancy, Mora Bazantes, Suárez Hurtado y Medina Pinoargote (2017), contraceptive treatment and the replacement therapy with estrogens in the menopause. (Pérez, 2014). During pregnancy, a form CB in 1-3% presented in women, and biliary sludge in more than 30% of pregnant women. Elevated serum estrogen levels trigger the secretion of supersaturated bile from cholesterol, and high levels of progesterone cause gallbladder stasis (Savino, 2011)

In the male population, environmental and physiological factors associated with CB include obesity, personal history of weight reduction, low serum cholesterol and elevated triglycerides, smoking, and diabetes mellitus. The consumption of alcohol correlates inversely with the frequency of cholelithiasis.

Obesity

The main factor of nutritional risk in the development of cholelithiasis is obesity. LB incidence rises in parallel to the increase in the (BMI) body mass index; 35% of women with a BMI 32 kg/m², are CB. The mechanism are formed by which these calculi is not clearly defined, found that obese, and synthesize more cholesterol in liver, which is secret in excessive quantities, resulting in supersaturating of bile. Alterations in the time of nucleation, associated with elevation of the concentration of arachidonic acid, prostaglandin E₂, and been found the type of mucin glycoproteins.

Natural history. Asymptomatic cholelithiasis

In the majority of patients (60-80%), cholelithiasis is asymptomatic and diagnosed incidentally to indicate an ultrasound for other reasons. The average annual risk of developing symptoms is 2% and the annual incidence of complications and gallbladder cancer is 0.02% and 0.3% respectively. It is not necessary to perform prophylactic cholecystectomy to all patients. There are several exceptions to this recommendation:

Patients at high risk of developing gallbladder cancer:

- Existence of gallbladder polyps with rapid growth or greater of 1 cm.
- Vesicle in porcelain.
- Greater than 3 cm.
- Young woman of Amerindian origin calculation.(Jerusalen,2010)

Patients at higher risk of developing symptoms:

- Young man with sickle cell anemia. In these patients, abdominal pain crises could make difficult the differential diagnosis of biliary colic or acute cholecystitis. (Jerusalen,2010)

Risk factors associated with the formation of cholesterol gallstones.

- Age.
- Female sex.
- Obesity.
- Rapid weight loss.
- Total parenteral nutrition.
- Pregnancy.
- Multiparity.
- Drugs.
- Exogenous estrogens.

-Oral contraceptives.

-Clofibrate.

-Octreotide.

-Ceftriaxone.

- Hypertriglyceridemia or low HDL levels.
- Insulin-resistant diabetes.
- Diseases of the terminal ileum. -Crohn's disease.
- Injuries in the spinal cord.
- Ethnicity (Native American and Scandinavian).

Risk factors associated with the formation of stones of black pigments.

- Chronic hemolytic anemia.
- Liver cirrhosis and pancreatitis. Symptomatic cholelithiasis uncomplicated

Approximately 65% of symptomatic patients presented clinical recurrence in the first two years with an annual incidence of 1-2 %.

Pathogenesis

Of gallstones can be of three types according to their composition: cholesterol, pigment and Black Brown. (Gaitan, 2014)

Cholesterol stones are the most prevalent in the West. Are composed mostly of cholesterol (51-99%) and up to 15% are radiopaque.

Determining factors for the formation of cholesterol gallstones

Pure cholesterol stones are rare (10%) and the majority of cholesterol gallstones contains calcium salts in their content. A precipitate biliary important in the pathogenesis of gallstones is bile "sludge," which is a mixture of cholesterol crystals, granules of bilirubinate of calcium in a matrix of mucin gel.

The pathogenesis of cholesterol gallstones is undoubtedly multifactorial, but essentially involves three stages: 1) supersaturating of cholesterol in bile, 2) formation of nuclei of glass and 3) growth of the calculation. Cholesterol is a steroid characterized by a ring of cyclopentane joined a phenanthrene ring system. Pregnancy is an important risk factor for the development of cholesterol gallstones. The risk related to the frequency and the number of pregnancies. The prevalence of gallstones increased from 1.3 per cent in nulliparous women with a 12.2 per cent in multiparous women. (Pilantuña, 2012)

Supersaturating occurs because of an increase in cholesterol secretion induced by estrogen causing supersaturated bile and progesterone gallbladder stasis by deceleration of the motility of the gallbladder to decreasing the secretion of bile acids. Pregnancy also induces a quantum leap in the synthesis of bile acids is characterized by the relative overproduction of hydrophobic bile acids, thus

reducing the capacity of bile to dissolve cholesterol. These changes normalized one or two months after childbirth. (Jerusalen, 2010)

Obese synthesize more cholesterol in the liver resulting in supersaturating of bile and stone formation. (Pilantuña, 2012)

Clinical

Single symptom attributable to the cholelithiasis is biliary pain. It produced intermittent obstruction of the cystic duct by a calculation and manifests as an episode of pain visceral. It is located in the right epigastrio-hipocondrio. (Gaitan, 2014), in 50% of cases the pain radiates to the right shoulder or scapula, and manifests itself as a constant pain, which increases gradually during 15 minutes - 1 hour, stays for an hour or more and slowly disappears. When pain lasts for more than 5-6 hours, you should suspect the possibility of acute cholecystitis.

It often accompanied by diaphoresis, nausea, vomiting, and anxiety. Gas, bloating, flatulence and dyspepsia not related to the calculations themselves. These symptoms found with a similar frequency in patients without cholelithiasis and, therefore, cannot wait for cholecystectomy to resolve these symptoms. Physical examination is usually normal in the course of a simple, showing only light hypersensitivity/tenderness in the right upper quadrant biliary colic. (Gaitan, 2014)

The gold standard for diagnosis is abdominal ultrasound, unique exploration necessary to certify the presence of stones in the gallbladder. (Harrison, 2013) It is a safe, low-cost and technique available on most of the centers with a sensitivity and specificity over 95% for exceeding four mm² size calculations. Typically detects mobile calculations, slopes and with posterior acoustic shadow. When clinical suspicion is high, and may be indicated an endoscopic, the ultrasound is negative. Oral cholecystography is used, primarily, when the gallbladder cannot be identified by ultrasound (e.g. when is full of stones and collapsed) and to assess the gallbladder motility and the permeability of the Cystic before oral dissolution or lithotripsy treatment.

The CT scan of the abdomen (CT) and magnetic resonance imaging (MRI) are not necessary in the absence of complications.

Treatment

During the episode of colic biliary, please digestive rest, local heat and analgesia. The use of NSAIDs recommended since in addition to relieving the symptoms, can prevent the progression of the box towards acute cholecystitis. (Martinez, 2011)

After the presentation of a first episode of colic bile must propose the realization of deferred cholecystectomy. Laparoscopic cholecystectomy or small incision allows a lower hospital stay to open cholecystectomy, where there is no significant difference in the rate of complications or mortality.

Non-surgical treatment is low efficiency and high rates of recurrence. Therefore, it should only offer patients at high surgical risk. The most widely used medical treatment is currently dissolutive oral treatment (Martinez, 2010). Ursodeoxycholic acid used (at doses of 8 - 10 mg/kg of weight per day, before going to bed). This

acid dissolves stones, decreasing the biliary secretion of cholesterol and bile desaturation.

The treatment maintained until it verified the dissolution of stones in two consecutive scans carried out at an interval of one month and be interrupted if it is not well tolerated by the patient, if you experience complications of cholelithiasis during the same or if the calculations have not dissolved in 6 months. In the hypothetical case that the dissolution is partial after 6 months, the treatment extended up to 2 years, interrupting the same if not achieved the total dissolution of the same. This treatment is only applicable to much selected patients (less than 15% of symptomatic patients). (Gaitan, 2014)

Dissolute treatment succeeds at 20-70% of the treated patients, with a risk of recurrence of 50% at 5 years. More than 10 mm size calculations can be associated with extracorporeal lithotripsy.

Other drugs that may be useful are under investigation: Ezetimibe, Statins or modulators of nuclear receptors involved in the biliary secretion of lipids. (Jerusalen, 2010)

Criteria for the dissolute treatment of biliary lithiasis. Characteristics to administer oral dissolute treatment

- Cholelithiasis without complications and symptomatic (preferably colic bile mild and infrequent).
- Permeable cystic duct, proven by oral cholecystography and emptying of the gallbladder right.
- Cholesterol gallstones of small size (diameter 10 mm, preferably 6 mm)

Surgical treatment

For cholelithiasis treatment is cholecystectomy, which can be either open or laparoscopic. The benefits offered by the treatment of cholelithiasis for laparoscopic cholecystectomy are reproducible for cases of acute cholecystitis. The current mortality of laparoscopic cholecystectomy rate is 0.5%. This surgical technique been proven to reduce hospital stay, time of physical disability, the use of painkillers in the postoperative and the number of incision hernias.

Open first cholecystectomy

Successfully Carl Langebuch performed cholecystectomy in 1882, and Courvoisier in Switzerland practiced it for the first time in 1885. (Chiesa, 2009)

Technical surgical preparation of the patient as all general, anesthesia must have a minimum six hours fasting, shaving the abdomen, tetanus prophylaxis, washing of abdomen with antiseptic substances. Position of the patient in dorsal decubitus, some surgeons prefer to place a roll under the dorsal area right in order to superficializar the main bile duct, and descend the hepatic flexure of the colon, and inframesocolonicos bodies. . (Chiesa, 2009)

Surgical technique

Open peritoneum, should be second field set with point involving peritoneum and back sheet of the rectum anterior sheath. Take the round ligament and the falciform ligament that extends to the navel and section between ligatures. Then proceed to perform careful palpation of the gallbladder and carefully explore the abdominal contents (concentric examination of the abdomen), it should be in a systematic way so that not any pathological process goes unnoticed.

The assistant must move to the left front wall of the stomach, it is greater and lesser curvature, this allows examination of the pylorus and duodenum ulcerative disease looking for. Then it will feel the head and the body of the pancreas and all the stomach and will examine the esophageal hiatus, following to the left will examine the spleen and left kidney.

Raising the transverse colon the thick and thin intestine is may examine, an assistant opens the lower end of the wound, allows the exploration of cecum, Appendix, sigmoid, straight top, and genital organs in women. Pulling gallbladder to down an Assistant raised flange right rib with a separator, that allows air in the sub diaphragmatic space and the exploration of the upper surface of the liver and the diaphragm, if adhesions between the liver and the inferior surface of the diaphragm they should be sectioned to avoid tearing of the capsule of Glasson.

Completed concentric exploration, a separator auto type Balfour is placed or similar, then conveniently repaired gauze compresses placed. Taking the gallbladder with a traumatic tweezers is pulls up that exposes the underside of the liver and allows placing a compress and valve that separates the hepatic flexure of the colon, the transverse colon downward, and a second pad and valve separating the duodenum up and in. Thus exposed the gallbladder, colecistocolonic and colecistoduodenal ligaments.

Ablation of gallbladder done from bottom to collar or neck vesicular thoroughly. The bottom of the vesicle taken with a traumatic tweezers, and proceed to the section of the serosa of the vesicular fund with a scalpel to 2 cm from the edge of the liver, two hemostats hold the top edge of the peritoneal section entrusted to the first Assistant. Continuing the cleavage plane surgeon a traumatic clamp will switch to the first Assistant and will continue the dissection of the drawing referred to earlier with scissors; to reach the gallbladder infundibulum, moment in which replaces the peritoneal forceps by placing a compress and a valve on the liver bed facilitating hemostasis and dissection of the gallbladder.

If the dissection plane is correct, you can use swab or digital dissection to remove his gallbladder. You must dissect since its inception into the gallbladder where is divided into an anterior branch and another later. Dissected once item is his proximal and distal Ligature sectioning among them. Colon guides are placed in the distal cystic to avoid its retraction and proceed to the section of the Canal by removing the gallbladder of the surgical field, which is to be opened by the surgeon by checking its contents and macroscopic characteristics of its walls before sending it to pathology. (Chiesa, 2009)

Relationship between obesity and development of Comorbidities

Is a simple indicator of the relationship between weight and height that commonly used to identify overweight and obesity in adults? It calculated by dividing a person's weight in kilograms by the square of your height in meters (kg/m²). BMI provides the most useful measure of overweight and obesity in the population, since it is the same for both sexes and for adults of all ages. However, it should be disposed as an indication because it is possible that it does not correspond with the same level of thickness in different people.

Obesity decreases the quality of life and life expectancy. Around 7% of all deaths attributed to excess weight. Obesity creates mechanical problems caused by overload of the musculoskeletal, limitation of breathing movements of the rib cage or increasing abdominal pressure. Obesity affects the emotional well-being in part due to dissatisfaction with the image itself. Also linked to the development of cancer, perhaps because of the hormonal activation / nutrition (p. ex., insulin, IGF1, fatty acids) of certain growth factors and nuclear receptors.

The research allowed arriving to the following conclusions:

The prevalence of the Sarcopenia obesity in patients of 65 years who treated at the University Hospital of Guayaquil in the period July 2013 to July 2014 is 13%. Complications biomechanical arose in 100% of patients the most frequent presenting patients with obesity Sarcopenia were osteoarthritis not specified with a 44% (73 cases), followed by other arthrosis with 28% (46 cases).

Comorbidities were present in 93% (245 co-morbidities in 154 patients), and only 7% (12 patients) had no co-morbidities. Most common Comorbidities that we found were high blood pressure with a 28% (69 cases), followed by Diabetes with 25% (61 cases). Within the epidemiological characteristics, the province that presented the highest number of patients was Guayas with 94% (154 cases); 86% (143 cas0s) came from urban area. Of the patients investigated the 87% (145 cases) corresponded to the female gender, 54% (89 cases) correspond to between 65 and 69 years age group.

These results lead us to make the following recommendations:

Raise through social media care, physical activity, good nutrition, reducing alcohol consumption, tobacco from young people, not to have a high rate of morbidity with respect to obesity and its relation with associated diseases, thus improving the quality of life in our old age.

Arrange from the early age and deal with modifiable risk factors to obtain a reduction in the morbidity associated with obesity and manage Comorbidities attending medical appointments in a timely manner. If this were effective would decrease government spending in relation to associated diseases.

Concern in a timely manner those patients with obesity when BMI does not reach the moderate risk. In addition, referring the patient early nutritionist.

Engender greater focus in the study of obesity sarcopenia from all ages, not only in old age, giving continuity to the present research study by different institutions that known of this new disabling disease of the 21st century.

REFERENCES

- Bravo, T. (2012). Enfermedad biliar litiásica. MEDICINA, 481-488.
- Chiesa. (2009). Colectomía típica y atípica por medios convencionales. Cirugía digestiva.
- Farreras, r. (2012). Medicina interna (Vol. 1). Madrid:ELSEVIER.
- Gaitán. (2014). Enfermedad biliar litiásica, experiencia en una clínica de cuarto nivel, 2005-2011. Revisión colombiana de la cirugía.
- Harrison. (2013). Manual de medicina interna. Mc Graw Hill.
- Jerusalén. (2010). Cálculos biliares y sus complicaciones. Departamento de medicina, psiquiatría y dermatología. Universidad de Zaragoza.
- Martinez, M. (2011). Actitud ante el hallazgo de un cálculo biliar asintomático. Medicina guiada.
- MD, J. (2012). Litiasis vesicular asintomática. Pautas de Práctica de la Organización Mundial de Gastroenterología.
- Mora Bazantes, Suárez Hurtado y Medina Pinoargote (2017). La importancia del conocimiento de las vitaminas durante el embarazo para el estudiante de medicina. Recuperado de <http://opuntiabrava.ult.edu.cu> 9(2)
- Pérez. (2014). Colectomía abierta convencional en el tratamiento quirúrgico de la litiasis vesicular. Medisur.
- Pilantuna, g. Y. (2012). Utilidad del Gammaglutamil Transpeptidas como factor predictivo precoz de coledocolitiasis en el Hospital Enrique Garcés de la ciudad de Quito durante los años 2010-2011. Universidad Central de Ecuador.