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NEPHRECTOMY BY PAPILAR CARCINOMA OF TRANSITIONAL CELLS (UROTELIAL) HIGH GRADE NOT INVASIVE CASE STUDY

Dr. Jorge Daher-Nader [1], Lcda. Alida Vallejo-López [2], Dr. Xavier Chan-Gómez [3]
[1, 2] MSC, Faculty of Medical Sciences, University of Guayaquil, Guayaquil, Ecuador
[3] Faculty of Medical Sciences, University of Guayaquil, Guayaquil, Ecuador

Abstract

Cancer is one of the main causes of morbidity and mortality worldwide, it is produced by the transformation of normal cells into tumor cells in a multiple stages process that can progress to a precancerous lesion to a malignant tumor that can spread through the blood and lymphatic system causing metastasis. The incidence of kidney cancer seems to be increasing, in adults, it begins in the kidneys and can spread to the entire urinary tract that surrounds distant organs or places, renal cell carcinoma is the most common type of kidney cancer and represents approximately 90 percent of cancers tumors.
The present study evidences the case of a patient who comes to medical services when the problem shows symptoms.
Objective - To describe the renal cancer case of a patient with papillary transitional cell carcinoma who was operated to remove a kidney tumor in order to prevent it from triggering in severe states.
Method - The literature on cancer and cancer patients has been reviewed, in the urinary system the data of a case that generated kidney tumor surgery performed in a 63-year-old female patient has been reviewed.
Result - High-grade, non-invasive papillary transitional cell carcinoma (UROTELIAL) can occur, in patients altering the quality of life of people, if it is detected and treated in time complications can be avoided
Conclusion - It is essential to identify the risk factors and possible causes that can trigger this type of pathology, the information collected is expected to be useful to professionals and to contribute as an alert to detect health problems in patients early.

Keywords: Carcinoma; Epidermoid; Surgery.

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1. Introduction

Cancer is one of the main causes of morbidity and mortality worldwide. It presents with a process of growth, proliferation and abnormal and uncontrolled dissemination of cells, which have a high capacity to invade organs, tissues and spread through the blood and lymphatic system for this reason can appear virtually anywhere in the body (1).

A tumor usually invades surrounding tissue and can cause metastases at distant points in the body. In 2000 it was the first cause of death in Spain, 25.6% of the total1. According to the World Health Organization, 13% of total deaths in the world (7.6 million in 2008) are due to this cause. The most commonly diagnosed cancers in 2012 were lung (1.82 million), breast (1.67 million) and colorectal (1.36 million). The most common causes of cancer death were lung cancer (1.6 million deaths), liver cancer (745,000 deaths) and stomach cancer (723,000 deaths). (2-3)

In 2015 it was considered the second leading cause of death in the world; since it caused 8.8 million deaths, one in six deaths in the world is due to this disease. In 2017, only 26% of low-income countries reported that public health had pathology services to serve the general population, this figure is expected to continue increasing to reach 13 million in **2030 (2).** However, frequency statistics and the leading cause of cancer death vary substantially from one country to another and according to the degree of economic development and the associated social and lifestyle factors (3).

Cancer is caused by the transformation of normal cells into tumor cells in a multi-stage process that usually involves the progression of a precancerous lesion to a malignant tumor. These alterations are the result of the interaction between the genetic factors of the patient. Most cancers form a mass called a tumor or growth. However, not all masses (tumors) are cancerous, to differentiate them a biopsy is performed and the non-cancerous ones are called benign tumors and the cancerous ones are called malignant tumors (3).

The world health organization maintains a classification of carcinogens through a specialized body, the International Cancer Research Center. It is considered that there are more than 200 types of cancer, approximately one third of cancer deaths are due to the five main behavioral and dietary risk factors: high body mass index, reduced intake of fruits and vegetables, food contaminated by mycotoxins, food intake, eating disorders, Helicobacter pylori, human papilloma, lack of physical activity, exposure to chemicals or ionizing radiation, consumption of tobacco and alcohol. It is also mentioned that oncogenic infections can be caused by viruses such as Einstein Barr, hepatitis or papillomavirus, among others.

The appearance of a tumor causes a systemic inflammatory response, which together with an altered host reaction, determines a permanent catabolic state. This situation translates into anorexia, metabolic and neuroendocrine disorders, which cause, among others, a loss of weight, which varies according to the stage and type of tumor. A 2005 study found that 70.4% of patients with locally advanced or metastatic cancer had a lower weight than usual, and between 31 and 87% of patients first experienced a significant weight loss prior to diagnosis, depending on the nature of the tumor.

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Affected patients experience decreased appetite, weight loss sarcopenia that can reach tumor cachexia (6). The detection of cancer in an advanced stage and the lack of diagnosis and treatment are frequent problems. The general accumulation of risk factors is combined with the loss of efficacy of the cellular repair mechanisms that usually occur with age.

Objective - To inform about the renal cancer and to describe the case of a patient with papillary carcinoma who underwent surgery to remove a kidney tumor in order to prevent it from triggering in serious conditions.

2. Kidney Cancer

The incidence of kidney cancer appears to be increasing, in adults, it begins in the kidneys and can spread to the entire urinary tract surrounding organs or to distant places, The World Health Organization classification published in 2004 recognizes 49 different types of renal neoplasia (7). Approximately 10-15% of renal cell carcinomas are papillary carcinomas (8). The first detailed description of this histological variety of renal cancer appeared in 1976 (9). Renal cell carcinoma is the most common type of kidney cancer and accounts for approximately 90 percent of cancerous tumors.

Other less frequent types of kidney cancer may also occur. Among the types of kidney cancer can be mentioned renal cell carcinoma, also known as renal cell adenocarcinoma, which is the most common type of kidney cancer, since nine out of ten cases correspond to this type, in general. It grows as a single tumor within the kidney, although sometimes two or more tumors are found in one or both kidneys at the same time. It presents several subtypes based primarily on the appearance of tumors when viewed under a very important microscope to determine if it is compatible with a hereditary genetic syndrome.

Clear cell type renal cell carcinoma: it is the most common renal cell carcinoma. Approximately seven out of ten people with renal cell carcinoma have this type of cancer. When viewed under a microscope, the cells that make up clear cell renal carcinoma look very pale or clear.

Papillary renal cell carcinoma: it is the second most common subtype (approximately 1 in 10 cases is of this type). These cancers form small projections called finger-shaped papillae, somewhere in the tumor, if they are not present in most. Papillary renal cell carcinomas are generally well circumscribed and are often eccentric neoplasms in the kidney. Despite this, most of them are confined in the organ and show capsule 2. In the cut they show a very heterogeneous appearance, depending on the degree of necrosis and the extent of bleeding, since both phenomena are very characteristic of this tumor.

The necrosis can be extensive enough to be interpreted in the radiological studies as a cyst rather than as a tumor. The pathologist, in these extreme cases, must usually look for the best preserved areas in the periphery to be able to issue a diagnosis. Despite its notoriety, it has recently been shown that the extent of necrosis does not influence the prognosis.

Some doctors call these cancers chromophilic because the cells absorb certain dyes and look pink when viewed under a microscope. And renal chromophobic cell carcinoma: this subtype represents

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about 5% (5 cases in 100) of renal cell carcinoma cases. The cells of these cancers are also pale, as are the clear cells, but they are much larger and have certain characteristics that can be recognized when viewed under a microscope.

Other uncommon subtypes: which represent less than 1% of renal cell carcinomas that may be mentioned are renal carcinoma of the collecting tubule, multilocular cystic renal carcinoma, medullary carcinoma, tubular mucinous and spindle cell carcinoma.

There are also forms of renal carcinoma associated with neuroblastoma and some not classified as transitional cell carcinomas, Wilms tumors and renal sarcomas.

Transitional cell carcinoma; Out of every 100 kidney cancers, about five to ten are transitional cell carcinomas, also known as urothelial carcinomas. Transitional cell carcinomas do not originate in the kidney itself, but in the lining of the renal pelvis (the place where the ureters meet the kidneys). This lining is made up of cells called transitional cells that look like cells that line the ureters and bladder. Cancers that originate from these cells look microscopic like other urothelial carcinomas, such as bladder cancer. People with transitional cell carcinoma often have the same signs and symptoms as people with renal cell cancer: blood in the urine and sometimes back pain. (10)

Renal sarcoma: a type of kidney cancer that occurs rarely and that originates in blood vessels or in the connective tissue of the kidney. They represent less than 1% of all kidney cancers.

Among the benign tumors of the kidney can be mentioned: Renal adenoma; Benign kidney tumor that grow slowly also include Oncocytomas and Angiomyolipoma:

Rarely, kidney cancer causes signs or symptoms in its early stages. And at present, there are no routine tests to detect kidney cancer when there are no symptoms. However, the signs and symptoms of kidney cancer may include blood in the urine, pain in the back or on the sides of the body that does not go away with weight loss and appetite, fatigue and intermittent fever. In the case of tumor etiology, computed tomography can characterize an angiomyolipoma and differentiate it from a renal cell carcinoma. The definitive treatment will depend on the cause, it implies endovascular management through umbilication of the bleeding vessel, nephron conservative surgery and total or radical nephrectomy. (11)

3. Methods

The indexed literature on cancer and cancer patients has been reviewed, consultations with Pubmed, American Cancer Society, bulletins of the world health organization, journals of Latindex, Scielo, Redalyc, to strengthen information. In addition, information was collected on a case of kidney cancer that was treated with surgery. 63-year-old patient, with no history of this pathology in his family, no smoking or alcohol consumption. It is worth mentioning that the patient presented 2 years before labyrinthitis and was treated with microser 24, in addition to arterial hypertension. with treatment of enalapril 20 mg per day and cocord 2.5 mg. This patient debuted with back pain and hematuria in February 2018 because an ultrasound was performed that revealed the presence of a mass in the right kidney. UROTAC was performed in April 2018, in which it was determined that there was renal artery infarction.

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In January hematuria again occurred due to this, the doctor indicated a second UROTAC and the need for surgery was determined. The surgery was performed under general anesthesia, prior asepsis and antisepsis, a patient in a lateral position, with sterile surgical fields, a described dieresis was performed on the right flank. it was deepened by planes until approaching the lumbar area with blunt dissection and electro scalpel, the perirenal fat was adorned, just as edematous with adhesion area is observed, the right kidney was identified with the affected area that irritates the lower pole, identified the right ureter by observing a friable lesion with purulent material at the ureteropelvic junction that causes total rupture of the renal pelvis, with the exit of the proximal end of the double catheter j previously placed with continuous difficulty to decode the entire kidney of the Perirenal fat, a pedicle free of adhesions, with a laje clamp, said pedicle is held and then sectioned to said level, achieving the total excess of the kidney in the second time extracted with digital dissection, the remaining perirenal fat is washed in the fossa lumbar with abundant saline solution, hemostasis is revealed, an aspiration drain is placed and the wall closure begins r flat, with suitable material, patient graduates stable conditions.

The report indicated that it was performed, dieresis: right lumbar subcostal, exposure: right lumbar fossa. The exploration and surgical findings: allowed to know that there was edema of perirenal fat, hardened renal pelvis with purulent abscess. Distal ureter margin without neoplasms, pathological stage pT1Nx. Study is requested to rule out regional or distant location extension.

4. Results

Kidney cancer can occur in a variety of types and in many cases it has no previous symptoms, constituting a health problem that affects the general population. The surgery called nephrectomy was performed in the right kidney due to the presence of a non-invasive papillary urothelial tumor of high grade DG: The urothelial urinary tract cancer, presented a size 7 x 32 x 1.8 cm, located in the proximal ureter, renal pelvis and renal calyces without invasion of subepithelial connective tissue, muscular wall of the pelvis, muscular wall of ureter or renal parenchyma.

After the total right nephrectomy he was taken to the cytopathology surgical pathology laboratory on Feb 6, 2019 and the clinical information indicates renal abscess.

The macroscopic examination of the right kidney was determined to weigh 196 gr and measure 9.5 x4.7 x2.6 cm, with a blackish brown surface with areas of hemorrhagic appearance. When cut to the pielocalicillary apparatus, it is widely distributed and replaced by a pinkish-pink neoplastic proliferation that measures 7x3.2 x 1.8 cm of friable consistency, forming papillary structures, wide and irregular, occupies 80% of the parenchyma renal. Ureter measures 6x1.5cm of whitish brown and is dilated. The cut has a whitish brown purulent material, 4 x 1.5 cm renal hilum. It is labeled: A, B. B. C, D, E, F: Injury. G. Transition, healthy kidney injury H. Healthy kidney. I. Ureter. 1. Renal Hilio. Representative cuts are processed for histological study.

Microscopic examination Expanded renal pelvis due to a malignant tumor of epithelial lineage composed of papillae and mantles of transitional epithelial cells of wide, clear or discretely eosinophilic cytoplasm, solitary or irregular nuclei, with moderate anisocariosis, presence of nucleoli and moderate amount of mitosis.

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The tumor extends to the proximal ureter through the ureteropic junction. Proximally compromises all renal chalices. The pielocalicial apparatus dilates with thinning of the renal parenchyma. However, multiple sections do not identify the invasion of the muscular wall of the renal pelvis or ureter. Nor is the invasion of the renal parenchyma at the level of the calyces. It is an intense mononuclear inflammatory infiltrate, fibrosis and focal tubular atrophy. Tumor-free urethral surgical edge.

The diagnosis of the case of total right nephrectomy, partial ureterectomy

- High-grade, non-invasive papillary cell carcinoma (UROTELIAL) carcinoma.
- Commits renal pelvis, proximal ureter and all renal calyces
- Renal parenchyma. Tumor-free ureteral surgical edge
- Accentuated chronic pyelonephritis

Subsequently, positron emission tomography examinations were performed after total nephrectomy to determine if there were metastases. During the procedure, glycemia was used at 104 mg / dL, 7.86 mCi 18F-fiorodeoxiglucose was administered intravenously at 6O minutes post-injection. The acquisition of emission and fusion tomographic images was performed from the brain to the middle third. of the thighs, without the administration of intravenous contrast material. According to the results of this test, the need to remove the ureter was left leaving a stump near the bladder. In this second surgery, the macroscopic pathology report indicated that the meatus and the right ureter were analyzed, the two fragments of tissue one of 0.7 and 0.2 cm, yellowish white, of elastic consistency, the ureter segment of 14, 5 x 0.5 cm, yellowish brown with elastic consistency. To cut off whitish

The microscopic examination demonstrated the urothelial mucosa of preserved architecture. The ureteral epithelium with discrete inflammatory changes, of normal thickness. Umbrella cells present. Own lamina with mild lymphocyte infiltrate. The ureter of conserved architecture is observed. Normal wall. Normal urothelial mucosa. Preserved epithelium

5. Conclusions and Recommendations

We conclude that this case has unknown etiology, It is important to avoid the consumption of potentially dangerous substances and food contaminated by toxins or chemicals, the public should be informed about this issue.

Any process that involves the uncontrolled development of tumor cells must be monitored from the first symptoms so that it can be determined by examinations to which type it belongs and with the early diagnosis it can be prevented from advancing to serious stages.

Kidney cancer is a health problem that can occur and alter the health of people, in this case high-grade, non-invasive papillary transitional cell (urothelial) carcinoma and compromised the renal pelvis, proximal ureter and all renal calyces. The right ureterectomy diagnosis with ureter of preserved histological architecture, free of neoplasia and urothelial mucosa with mild nonspecific chronic inflammation and was complicated by also involving the ureter. The present case is currently being monitored, by the oncologist and urologist, the recommendation is to follow controls for up to 10 years in periods of 3 continuous months.

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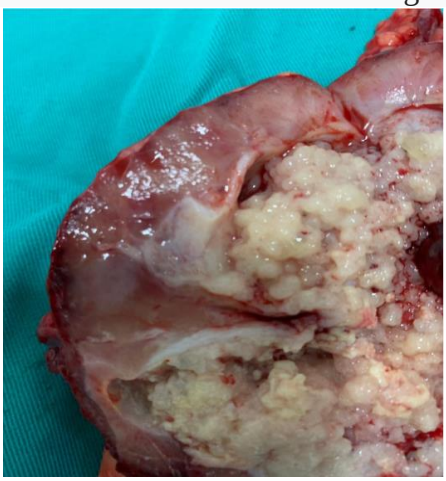
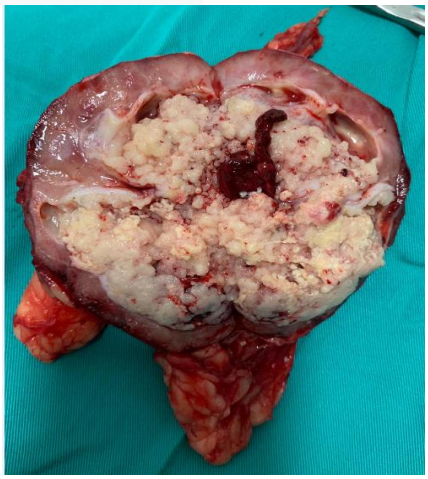
Annexes

RIGHT NEPHRECTOMY IMAGE Right kidney cut is observed

The diagnosis of the case of total right nephrectomy, partial ureterectomy

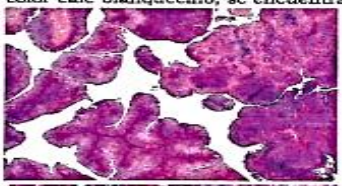
- High grade, non-invasive papillary cell carcinoma (UROTELIAL) carcinoma.
- Renal pelvis, proximal ureter and all renal calyces
- The tumor does not invade pelvic muscle wall, ureter muscle wall or renal parenchyma. Tumor-free ureteral surgical edge
- Accentuated chronic pyelonephritis

Right Nephrectomy

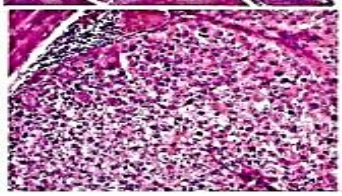
ESPÉCIMEN
Nefrectomía total derecha.

INFORMACIÓN CLÍNICA
Absceso renal.

EXAMEN MACROSCÓPICO
Riñón derecho que pesa 196 gramos, mide 9,5 x 4,7 x 2,6 cm, de superficie de color café negruzcas con áreas de aspecto hemorrágico. Al corte el aparato pielocalicilar se encuentra extensamente destruido y remplazado por una proliferación de aspecto neoplásica, de color rosado blanquecino que mide 7 x 3,2 x 1,8 cm, de consistencia friable, formando estructuras de aspecto papilar, amplias e irregulares. Ocupa el 80 % del parénquima renal. Uréter mide 6 x 1,5 cm, de color café blanquecino, se encuentra dilatado. Al corte presenta material café blanquecino, purulento. Hilio renal que mide 4 x 1,5 cm. Se rotula: **A.B.C.D.E.F**: Lesión. **G.** Transición, lesión riñón sano. **H.** Riñón sano. **I.** Uréter. **J.** Hilio renal. Se procesan cortes representativo para estudio histológico.



EXAMEN MICROSCÓPICO
Pelvis renal expandida por tumor maligno de estirpe epitelial compuesto por papilas y mantos de células epiteliales transicionales de amplio citoplasma claro o discretamente eosinofílico, los núcleos son ovales o irregulares, con moderada anisocariosis, presencia de nucléolos y moderada cantidad de mitosis. El tumor se extiende hacia el uréter proximal a través de la unión ureteropiélica. Proximalmente compromete todos los cálices renales. El aparato pielocalicilar se encuentra dilatado con adelgazamiento del parénquima renal. Sin embargo, en múltiples secciones no se identifica invasión de la pared muscular de la pelvis renal ni del uréter. Tampoco se encuentra invasión del parénquima renal a nivel de los cálices. Éste muestra intenso infiltrado inflamatorio mononuclear, fibrosis y atrofia tubular focal. Borde quirúrgico uretral libre de tumor.



DIAGNÓSTICO

Nefrectomía total derecha, ureterectomía parcial.

- CARCINOMA PAPILAR DE CÉLULAS TRANSICIONALES (UROTELIAL) DE ALTO GRADO, NO INVASIVO.
- COMPROMETE PELVIS RENAL, URÉTER PROXIMAL Y TODOS LOS CÁLICES RENALES.
- El tumor no invade pared muscular de pelvis, pared muscular de uréter ni parénquima renal. Borde quirúrgico ureteral libre de tumor.
- PIELONEFRITIS CRÓNICA ACENTUADA.

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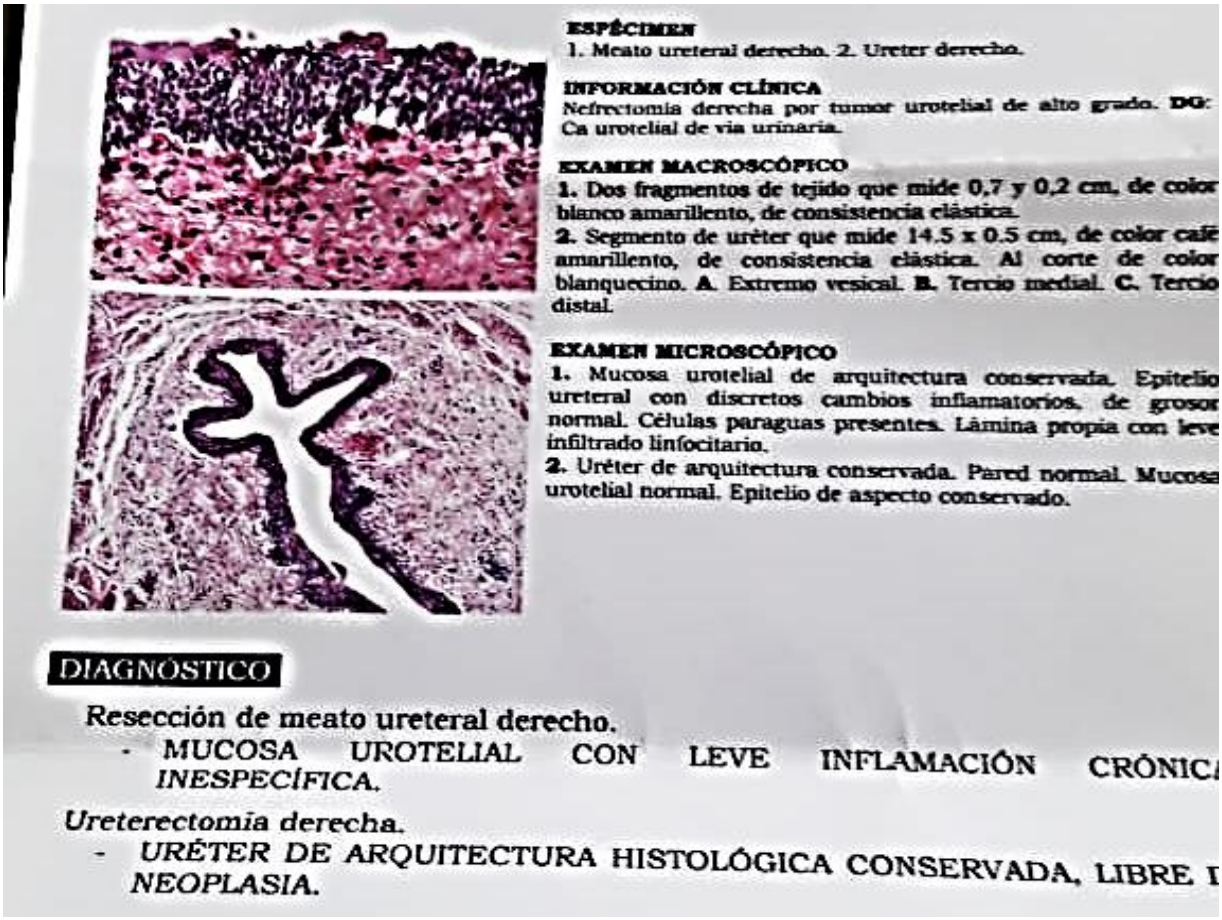
Right URETERECTOMY



Confidentiality

The patient's personal data has been protected as indicated by medical ethics

Conflict of Interests

The authors declare that does not exist an interest conflict.

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*Corresponding author.
E-mail address: jorge.dahern@ ug.edu.ec/alida.vallejol@ug.edu.ec/ositos_3@ yahoo.es/xavier.chang@ ug.edu.ec