



**MINISTERUL EDUCAȚIEI NAȚIONALE**  
**ANALELE UNIVERSITĂȚII "DUNĂREA DE JOS" DIN GALAȚI**  
**FASCICULA XVII**  
**MEDICINĂ**  
**Nr. 1- 2016**  
**ISSN-L: 1583 – 2074**  
**ISSN: 2344-4428**

---

**MINISTRY OF NATIONAL EDUCATION**  
**ANNALS OF "DUNĂREA DE JOS" UNIVERSITY OF GALAȚI**  
**FASCICLE XVII**  
**MEDICINE**  
**No. 1- 2016**  
**ISSN-L: 1583 – 2074**  
**ISSN: 2344-4428**

---

### **EDITOR IN CHIEF:**

Prof. Aurel NECHITA, MD PhD

### **EDITORS :**

Prof. Carmina Liana MUŞAT, MD PhD

Prof. Dorel FIRESCU, MD PhD

### **EDITORIAL BOARD:**

Prof. Jean ASHKENAZI, MD PhD (Tel Aviv, Israel)  
Prof. Vasile ASTĂRĂSTOAIIE, MD PhD (Iaşi, Romania)  
Prof. Tudorel CIUREA, MD PhD (Craiova, Romania)  
Prof. Sanda COPOTOIU, MD PhD (Tg. Mures, Romania)  
Prof. Vincent DOUSSET, MD PhD (Bordeaux, France)  
Prof. Constantin DUMITRACHE, MD PhD (Bucharest, Romania)  
Prof. Alexandru GOTLLIEB, MD PhD (Cleveland, SUA)  
Prof. Mihaela HINCUI, MD PhD (Constanta, Romania)  
Prof. Decebal HUDIŢĂ, MD PhD (Bucharest, Romania)  
Prof. Alexandru IERIMA, MD PhD (Galati, Romania)  
Prof. Mircea IFRIM, MD PhD (Bucharest, Romania)  
Prof. Mario Adelfio LATTERI, MD PhD (Palermo, Italy)  
Prof. Nicolae MIU, MD PhD (Cluj, Romania)  
Prof. Giovanni PERI, MD PhD (Palermo, Italy)  
Prof. Biagio VALENTINO, MD PhD (Palermo, Italy)  
Nicolae BACALBAŞA, MD PhD (Bucharest, Romania)

Information or opinions expressed in the articles are belong to the authors and not to the editors of the Annals of  
"Dunarea de Jos" University of Galati.

The editor, or the publisher assume no responsibility for the adequacy of the information published.

The submission of the articles involves the transfer of copyright from the authors to the journal.

## SUMMARY

MOTOR DELTAPLANE FATAL ACCIDENT. CASE REPORT, <i>Fulga Iuliu, Botezatu Dan, Musat Carmina Liana, Fulga Ana, Rebeleanu Codrin, Dinu Ciprian</i> .....	5
HISTOPATHOLOGICAL MODIFICATIONS IN OVERLOOKED PERITONITIS AT CHILDREN, <i>Șerban Cristina, Firescu Dorel, Nechita Aurel, Rebegea Laura, Mariana Lupoae, Moraru Petruta-Iuliana</i> .....	9
ORTHOKERATOLOGY – MODERN TREATMENT METHOD OF MYOPIA. LITERATURE REVIEW, <i>Tiutiuca Carmen, Crețu-Stuparu Mariana, Bușilă Camelia, Călin Alina, Botezatu Dan, Balan Gabriela</i> .....	15
THE STUDY OF CERTAIN FACTORS INVOLVED IN THE DEVELOPMENT OF TOOTH DECAY, <i>Popa Gabriela, Popa Gabriel, Debita Mihaela, Romila Aurelia, Aburel Bianca, Lupoae Mariana, Gurau Gabriela, Nechita Aurel</i> .....	19
THE STUDY OF ENDOTOXICOSIS IN ACUTE PERITONITIS AT CHILDREN, <i>Șerban Cristina, Firescu Dorel, Nechita Aurel, Rebegea Laura, Voinescu Carina, Moraru Petruta Iuliana</i> .....	31
THE INCIDENCE OF HEART RHYTHM DISORDERS FOUND IN CHILDREN WITH SYNCOPE AND CHEST PAIN, <i>Moraru Petruța Iuliana, Aurel Nechita, Voinescu Doina Carina, Baciui Ginel, Calin Alina Mihaela, Șerban Cristina, Radu Afinica Mihaela</i> .....	35
SELF-IMAGE IN TEENS – BETWEEN WEIGHT STATUS AND EMOTIONAL INSTABILITY, <i>Stuparu-Crețu Mariana, Bușilă Camelia, Tiutiuca Carmen, Botezatu Dan, Călin Alina</i> .....	41
CASE PRESENTATION UPPER DIGESTIVE BLEEDING IN A PATIENT WITH NEUROFIBROMATOSIS – A CASE REPORT AND LITERATURE REVIEW, <i>Balan Gabriela, Botezatu Dan, Tiutiuca Carmen, Pelin Ana-Maria, Voinescu Doina Carina, Dinu Ciprian, Călin Alina Mihaela</i> .....	47
SIMULATION OF THE DECISION-MAKING PROCESS REGARDING THE PURCHASE OR OUTSOURCING IN A MEDICAL CENTRE WITH THE HELP OF THE DECISION-TREE METHOD, <i>Buzia Olimpia Dumitriu, Harapu Camelia, Mardare Nela, Lupoae Mariana</i> .....	53
CASE PRESENTATION ZENKER’S DIVERTICULUM: A RARE CAUSE OF DYSPHAGIA – A CASE REPORT AND LITERATURE REVIEW, <i>Bălan Gabriela, Botezatu Dan, Tiutiuca Carmen, Călin Alina Mihaela, Dinu Ciprian, Voinescu Carina Doina, Pelin Ana Maria</i> .....	57
CARCINOID SYNDROME WITHOUT LOCALIZATION WITH PEPTIC AND INTESTINAL DETERMINATIONS, <i>Botezatu Dan, Bălan Gabriela, Săvulescu Simona, Romila Aurelia, Călin Alina Mihaela, Tiutiuca Carmen, Crețu Stuparu Mariana, Dinu Ciprian, Fulga Iuliu,</i> .....	61
SICK SINUS SYNDROME MISDIAGNOSED AND MISTREATED AS AN EPILEPSY CASE, <i>Moraru Petruța Iuliana, Nechita Aurel, Voinescu Doina Carina, Baciui Ginel, Călin Alina Mihaela, Șerban Cristina, Radu Afinica Mihaela</i> .....	65
ACUTE DRUG INDUCED CHOLESTATIC HEPATITIS AFTER AMOXICILLIN – CLAVULANIC ACID TREATMENT A CASE REPORT, <i>Botezatu Dan, Bălan Gabriela, Săvulescu Simona, Romilă Aurelia Călin Alina Mihaela Tiutiuca Carmen, Crețu Stuparu Marian, Dinu Ciprian Adrian , Fulga Iuliu</i> .....	71
THE DEATH ETIOLOGY BY LIVER CIRRHOSIS. A FIVE YEARS (2011-2015) RETROSPECTIVE COHORT STUDY IN GASTROENTEROLOGY UNIT OF CLINICAL DEPARTMENTAL EMERGENCY HOSPITAL GALAȚI, <i>Botezatu Dan, Bălan Gabriela, Săvulescu Simona, Romilă Aurelia Călin Alina Mihaela, Tiutiuca Carmen, Crețu Stuparu Mariana, Dinu Ciprian, Fulga Iuliu</i> .....	75

ETIOLOGY OF HYPOGLYCEMIA IN NEONATES, <i>Busila Camelia, Bujoreanu I. Sofica, Tiutiuca Carmen, Balan Gabriela, Stuparu-Cretu Mariana, Calin Alina</i> .....	79
CALCULATION OF TENSION EXERTED ON A STRETCHING LIGATURE IN HANGING IN HEAD – DOWN POSITION, <i>Fulga Iuliu, Rebeleanu Codrin, Fulga Ana, Mușat Liana Carmina, Necula Iuliana, Chițescu Carmen Lidia, Dinu Ciprian, Botezatu Dan</i> .....	83
PRELIMINARY STUDY CONCERNING THE VERIFICATION AND EVALUATION OF THE VALIDITY PERIOD OF HYDROGEN PEROXIDE, <i>Diaconu Camelia, Moscaliuc Cornelia Adriana, Dumitriu Buzia Olimpia, Rebegea Laura, Paltenea Elpida, Manolache Nicuța</i> .....	89
ANATOMICAL AND IMAGISTICAL CORRELATIONS IN CHILDREN’S EAR CONGENITAL MALFORMATIONS, <i>Ștefănescu Victorița, Georgescu Elia Monica, Pelin Ana Maria, Dobre Michaela, Chesaru Bianca, Bratu Ana Magdalena</i> .....	97
MARKOV CHAINS ANALYSIS OF FORECAST EVOLUTION OF THE MARKET SHARES OF A RANGE OF COSMETICS SOLD IN FOUR ROMANIAN PHARMACEUTICAL NETWORKS, <i>Buzia Dumitriu Olimpia, Harapu Camelia, Mardare Nela, Lupoae Mariana</i> .....	101
SEVERE PULMONARY INFECTION WITH AH1N1- CASE REPORT, <i>Lupu Mary, Calin Alina, Botezatu Dan, Bălan Gabriela, Rebegea Laura, Tiutiuca Carmen, Crețu Mariana</i> .....	105
CONGENITAL DIAPHRAGMATIC RIGHT HERNIA , <i>Călin Alina, Lupu Mary, Botezatu Dan, Balan Gabriela, Rebegea Laura, Ionescu Cringu, Andrei Cristian</i> .....	109
PHARMACEUTICAL MARKETING STRATEGIES FOR ATTRACTING NEW CUSTOMERS AND FOR BUILDING CUSTOMER LOYALTY, <i>Dumitriu Buzia Olimpia, Mardare Nela, Harapu Camelia, Lupoae Mariana</i> .....	115
<i>INSTRUCTION FOR AUTHORS</i> .....	125

## DELTAPLANE FATAL ACCIDENT. CASE REPORT

Fulga Iuliu, Botezatu Dan, Musat Carmina Liana, Fulga Ana,  
Rebeleanu Codrin, Dinu Ciprian  
Faculty of Medicine and Pharmacy, "Dunarea de Jos" University of Galati, Romania  
fulgaiuliu@yahoo.com

### ABSTRACT

*The incidence of lethal motor deltaplane casualties in Romania is extremely low, making us present a fatal event which took place in the region of Galati in 2011. Authors investigate criminal data, necroptic data, complementary laboratory examinations, in collaboration with the newest data from high speciality literature. Presented data demonstrates that lethal trauma involving an ultralight aircraft distinguishes by the multiple severe lesions by applying increased kinetic force. Depending on the location of the pilot compared to the ultralight aircraft in the moment of impact, there is a possibility to produce lesions through many mechanisms: hitting rigid components inside the aircraft, free falling from a great height or both mechanisms combined.*

**KEYWORDS:** *ultralight aircraft; fatal injuries; autopsy*

## HISTOPATHOLOGICAL MODIFICATIONS IN OVERLOOKED PERITONITIS IN CHILDREN

Serban Cristina<sup>1,2</sup> Firescu Dorel<sup>1,2</sup>, Aurel Nechita<sup>1,3</sup>, Rebegea  
Laura<sup>1,2</sup>, Mariana Lupoae<sup>1,3</sup>, Moraru Petruta Iuliana<sup>1,2</sup>

<sup>1</sup>"Dunarea de Jos" University of Galati, Faculty of Medicine and Pharmacy

<sup>2</sup>Emergency County Hospital "Saint Andrei" Galati

<sup>3</sup> Emergency Clinic Hospital of Pediatric "Saint Ioan" Galati

[Iulianamoraru06@gmail.com](mailto:Iulianamoraru06@gmail.com)

### ABSTRACT

*It is known that acute peritonitis is one of the most common causes of sepsis. Recent studies have demonstrated that the severity of the disease is dependent not only on the local events and the extent of the inflammatory process in the peritoneal cavity, but also on the morphopathological delimitation of pathological process. Here is presented peritonitis in an advanced, purulent stage, whose gushing states through its aspect the conflict in progress between the aggressing germs and anti-microbial defensive system of the body. We present the case of a female patient, aged 16 years old, with peritonitis - generalized neglected occlusion whose etiology was perforated appendicular gangrene.*

**KEYWORDS:** *sepsis, peritonitis, morphopathological delimitation*

## ORTHOKERATOLOGY – MODERN TREATMENT METHOD OF MYOPIA. LITERATURE REVIEW

Tiutiuca Carmen<sup>1,2</sup>, Crețu-Stuparu Mariana<sup>1</sup>, Bușilă Camelia<sup>1,3</sup>,  
Călin Alina<sup>1,2</sup>, Botezatu Dan<sup>1,2</sup>, Balan Gabriela<sup>1,2</sup>

<sup>1</sup> Faculty of Medicine and Pharmacy, "Dunarea de Jos" University of Galati, Romania

<sup>2</sup> "Sf. Andrei" Emergency Clinical Hospital, Galati, Romania

<sup>3</sup> "Sf. Ioan" Emergency Clinical Paediatric Hospital, Galati, Romania

tiutiuca\_carmen@yahoo.com

### ABSTRACT

*Orthokeratology is a modern method of myopia reduction as well as of its risk of progression. It consists in the wearing, during the night, of rigid corrective reverse-geometry contact lenses. This paper aims to list part of the data in technical literature regarding the indication and the results of orthokeratology, its effectiveness and safety profile, its effectiveness in stopping the progression, the rate of complications emergence and their severity.*

**KEYWORDS:** *orthokeratology, myopia correction, myopia control, safety, complications, side effects*

## THE STUDY OF CERTAIN FACTORS INVOLVED IN THE DEVELOPMENT OF TOOTH DECAY

Popa Gabriela<sup>1</sup>, Popa Gabriel<sup>1,2</sup>, Debita Mihaela<sup>2,3</sup>, Romila Aurelia<sup>2,3</sup>, Aburel Bianca<sup>4</sup>, Lupoae Mariana<sup>2,5</sup>, Gurau Gabriela<sup>2,5</sup>, Nechita Aurel<sup>2,5</sup>

<sup>1</sup>Smile Gabi Dent S.R.L.

<sup>2</sup>Faculty of Medicine and Pharmacy, "Dunarea de Jos" University of Galati, Romania.

<sup>3</sup>"Sf. Andrei" Emergency County Hospital, Galati, Romania

<sup>4</sup>Secondary School No. 16 - Galati, Romania

<sup>5</sup>Children's Emergency Hospital „Sfântul Ioan” Galati, Romania

[gabriela.gurau@ugal.ro](mailto:gabriela.gurau@ugal.ro)

### ABSTRACT

*Dental caries is a multifactorial disease that affects many people worldwide, regardless of age, ethnicity, gender and socioeconomic status. The process of developing tooth decay depends on biological factors present in saliva and dental plaque, genetic and environmental ones. We studied some physicochemical and microbiological properties of the samples of saliva collected from 35 subjects (children and adults) with dental caries, for whom the DMFT index ranged within 4 - 12 points. We found a positive correlation between buffering capacity and pH ( $r = 0.703$ ;  $p < 0.001$ ) and between DMF-T and age of patients ( $r = 0.789$ ;  $p < 0.001$ ). Salivary flow rate was influenced by gender, being slightly higher in men than women ( $5.4 \pm 0.95$  versus  $5.12 \pm 1.32$  ml/min). The lower salivary flow rate (2.0 ml/min) was found in saliva taken from a woman of 55 years and the highest (8 ml/min) from a woman aged 35 years. Pearson correlation coefficients between the DMFT and the buffering capacity, and salivary flow rate were: - 0.13; - 0.14, without noticing any statistically significant correlations. Cariogenic bacteria levels of Streptococcus mutans and Lactobacilli showed individual variations, being  $\geq 10^5$  CFU/ml for most patients, especially in women older than 50 years. We noticed a tendency for DMF-T index to increase with increasing levels of mutans streptococci and lactobacilli of saliva determined with bacteria CRT Ivoclar Vivadent test showed significant correlations with DMF-T, their increasing along with increasing DMF-T index values. High levels of mutans streptococci and lactobacilli in saliva can be used as predictors of dental caries.*

**KEYWORDS:** dental caries, saliva, cariogenic bacteria, mutans stafilococci and lactobacilli, index DMF-T, salivary flow rate

## THE STUDY OF ENDOTOXICOSIS IN ACUTE PERITONITIS AT CHILDREN

Serban Cristina<sup>1,2</sup>, Firescu Dorel<sup>1,2</sup>, Nechita Aurel<sup>1,3</sup>, Rebegea Laura<sup>1,2</sup>, Voinescu Doina Carina<sup>1,3</sup>, Moraru Petruta Iuliana<sup>1,2</sup>

<sup>1</sup>"Dunarea de Jos" University of Galati, Faculty of Medicine and Pharmacy

<sup>2</sup>Emergency County Hospital "Saint Andrei" Galati

<sup>3</sup>Emergency Clinic Hospital of Pediatric "Saint Ioan" Galati

[Iulianamoraru06@gmail.com](mailto:Iulianamoraru06@gmail.com)

### ABSTRACT

*This article analyses the molecular biology and the physiopathological mechanisms of endotoxemia in acute peritonitis at children, through a retrospective study of 127 patients, with ages comprised between 0 months and 18 years, treated for acute peritonitis of different etiologies, during the period 2009-2014 in "Sf. Ioan" Hospital from Galati. the Acute Intestinal Failure Syndrome (AIFS) had been monitored, as an indirect factor of assessing the severity degree of the systemic inflammatory process and of abdominal sepsis. AIFS was found at all patients with terminal peritonitis and with a significant frequency of 96.34 % at those in a toxic phase, against the reactive phase in 9.09 % of cases.*

**KEYWORDS:** endotoxemia, peritonitis, abdominal sepsis

## THE INCIDENCE OF HEART RHYTHM DISORDERS FOUND IN CHILDREN WITH SYNCOPE AND CHEST PAIN

Moraru Petruța Iuliana<sup>1,2</sup>, Aurel Nechita<sup>1,2</sup>, Voinescu Doina Carina<sup>1,3</sup>, Baciu Ginel<sup>1,2</sup>, Calin Alina Mihaela<sup>1,3</sup>, Șerban Cristina<sup>1,3</sup>, Radu Afinica Mihaela<sup>1,2</sup>

<sup>1</sup>“Dunarea de Jos” University of Galati, Faculty of Medicine and Pharmacy

<sup>2</sup>Emergency Clinic Hospital of Pediatric “Saint Ioan” Galati

<sup>3</sup> Emergency County Hospital “Saint Andrei” Galati

[Iulianamoraru06@gmail.com](mailto:Iulianamoraru06@gmail.com)

### ABSTRACT

*Although quite rare, but because behind a syncope or chest pain in children there can be found a heart rhythm disorder that can be life threatening, this study aimed to identify, using Holter ECG 24 hour monitoring, those of them with sudden death risk. Because in the last year the number of children and young teenagers that died suddenly, usually after physical effort, increased, we want to establish the real incidence of possible fatal arrhythmias in children that experienced syncope, chest pain or palpitations, and were admitted in our hospital. The study was conducted between October 2013 and March 2016, and we examined, using ECG Holter 24 hours monitor, 359 children who was hospitalized in our hospital. During our study we diagnosed an important number of patients with heart arrhythmias, a significant percent of them with dangerous arrhythmias that required medical and invasive treatment. This paper presents an observation study as part of a still ongoing observational and prospective trial.*

**KEYWORDS:** *syncope, life threatening, arrhythmias, ECG Holter*

## IMAGE IN TEENS – BETWEEN WEIGHT STATUS AND EMOTIONAL INSTABILITY

Stuparu- Crețu Mariana<sup>1,2</sup>, Bușilă Camelia<sup>1,3</sup>, Tiutiuca Carmen<sup>1,4</sup>, Botezatu Dan<sup>1,4</sup>, Călin Alina<sup>1,4</sup>

<sup>1</sup> Faculty of Medicine and Pharmacy, “Dunarea de Jos” University of Galati

<sup>2</sup>“Bunavestire” Hospital of Obstetrics and Gynecology Galati

<sup>3</sup>“Sf Apostol Ioan” Emergency Hospital for Children - Galati

<sup>4</sup>“Sf Andrei” Emergency Hospital- Galati

[marianascretu@yahoo.com](mailto:marianascretu@yahoo.com)

### ABSTRACT

*During adolescence the self-esteem of teenagers is usually low due to their personality crises. Their self image may not correspond to the objective measurable image or to the image perceived by the groups they pertain to. The main aspects that form the self-image in teens concern physical appearance, sports performances, place in the age group and the school results. The purpose of this study is to analyse the status of weight in teens correlated with self-appreciation items as part of the self-esteem of the age. The analysis was conducted on , 953 teens with ages between 14 and 19 selected from the schools and high schools in Galati. There were gathered anamnestic data about the individual life style, anthropometric measurements were made and we analysed self-appreciation items. The statistic correlations were performed using the SPSS Statistic Data method and ANOVA. The study refers to the physical activity performed by teens correlated with the weight status and to the assessment of the self-image of the individuals through self-appreciation items. The general self-image was assessed by means of two values, with personal explanations for the negative aspect and the emotional status. Out of the young with a low self-esteem, over 70% mentioned weight as a reason and over 40% declared themselves to be emotional. The interpretation of abnormal weight modifications was performed taking into consideration the height and it was age corrected, obtaining the body mass index. The results were analysed for the entire batch as well as gender differentiated. Over 17% of the young were found that with the weight over the cut-off value but there were also found underweight teens. More than half of them were considered sedentary. Due to the main focus on flaws, a major part of the youngsters have a low self-esteem, being unhappy with their own person, which increases the risk of an inappropriate behaviour. Self-knowledge acquired through reference to others leads to self-esteem and the*

*underappreciation signalled in teens suggests the necessity of educational communication programmes able to promote their qualities and to raise awareness regarding their real worth in terms of personality.*

**KEYWORDS:** adolescents, BMI, physical activity, self image/self-esteem

## **UPPER DIGESTIVE BLEEDING IN A PATIENT WITH NEUROFIBROMATOSIS – A CASE REPORT AND LITERATURE REVIEW**

Balan Gabriela<sup>1,2</sup>, Botezatu Dan<sup>1,2</sup>, Tiutiuca Carmen<sup>1,2</sup>, Pelin Ana-Maria<sup>1</sup>, Voinescu Doina Carina<sup>1</sup>, Dinu Ciprian<sup>1</sup>, Călin Alina Mihaela<sup>1,2</sup>

<sup>1</sup>Faculty of Medicine and Pharmacy, “Dunărea de Jos” University of Galați, Romania

<sup>2</sup>“Sf. Ap. Andrei” Emergency County Hospital, Galați, Romania

[gabrielamedicine@yahoo.com](mailto:gabrielamedicine@yahoo.com)

### **ABSTRACT**

*Neurofibromatosis (NF), known as von Recklinghausen disease, is an autosomal dominantly inherited disease with 100% penetrance but variable phenotypic expression. There have been identified mutations of the tumor suppressor gene NF1, located on chromosome 17q, which underlie the appearance of this condition. NF is defined by the presence of numerous neurofibromas of the skin associated with more than five cutaneous café-au-lait spots. Neurofibromas rarely occur in the gastrointestinal (GI) tract, but they represents a frequent systemic manifestation of generalized NF type 1 (NF1). GI involvement may lead to symptoms as intussusception, volvulus, obstruction, bleeding or perforation. Rarely, sporadic malignancies as colon adenocarcinoma, gastrointestinal stromal tumors, anaplastic astrocytoma and hematologic malignancies can be associated with NF1. We present the case of a 71-year-old man with a medical history of NF1 who sought medical assistance for hematemesis, melena with severe anemia. The laboratory work-up disclosed leukocytosis with lymphocytosis and presence of smudge cells, severe anemia, thrombocytopenia, mild hepatic dysfunction and azotemia. Abdominal computed-tomography scan showed hepatomegaly with portal-hypertension signs and retroperitoneal lymph nodes. Upper digestive endoscopy revealed esophageal varices third grade with signs of recent bleeding and mild portal-hypertensive gastropathy. The patient was diagnosed with NF1 associated with chronic lymphocytic leukemia and portal-hypertension syndrome, complicated with esophageal variceal bleeding. The evolution was favourable with medical treatment, patient being discharged and referred for hematologic therapy and monitoring. The case was interesting because of the rare association of NF, chronic lymphocytic leukemia and gastrointestinal bleeding with an unexpected origin.*

**KEYWORDS:** neurofibromatosis; portal hypertension; gastrointestinal bleeding.

## **SIMULATION OF THE DECISION-MAKING PROCESS REGARDING THE PURCHASE OR OUTSOURCING IN A MEDICAL CENTRE WITH THE HELP OF THE DECISION-TREE METHOD**

Buzia Olimpia Dumitriu, Harapu Camelia, Mardare Nela,  
Lupoae Mariana

Faculty of Medicine and Pharmacy, „Dunarea de Jos” University, Galați, Romania

[buzia\\_olimpia@yahoo.com](mailto:buzia_olimpia@yahoo.com)

### **ABSTRACT**

*The present paper aims at analysing the situation of a medical centre of investigations through Magnetic Resonance Imaging (MRI), which has to become more effective following a complex and important decision in which random events which take place successively are involved. The MRI centre analyses three decisional alternatives which may lead to meeting the clients' demand: buying an MRI scanner, or two, or outsourcing the service to another MRI centre, for a commission. The choice-making process of the best decision is represented by a decision-tree-graph formed of nodes (decision nodes and chance outcomes nodes) and branches (states and decisional variants). Determining the expected values of the average income associated with the nodes is based on roll-back technique, which entails making the best decision at the level of the last decision point, based on the*



criterion of maximum mathematical expectation. Data are introduced in WinQSB software, accessing the Decision Analysis menu and then the Decision Tree Analysis module.

**KEYWORDS:** medical office, MRI investigation, decision tree, application software

## ZENKER'S DIVERTICULUM: A RARE CAUSE OF DYSPHAGIA – A CASE REPORT AND LITERATURE REVIEW

Gabriela Bălan<sup>1,2</sup>, Dan Botezatu<sup>1,2</sup>, Carmen Tiutiuca<sup>1,2</sup>, Alina Mihaela Călin<sup>1,2</sup>, Ciprian Dinu<sup>1</sup>, Carina Doina Voinescu<sup>1</sup>, Ana-Maria Pelin<sup>1</sup>

<sup>1</sup> Faculty of Medicine and Pharmacy, "Dunarea de Jos" University of Galati, Romania

<sup>2</sup> "Sf. Ap. Andrei" Emergency County Hospital, Galati, Romania

[gabrielamedicine@yahoo.com](mailto:gabrielamedicine@yahoo.com)

### ABSTRACT

*Pharyngoesophageal diverticulum known as Zenker's diverticulum (ZD) is an acquired hernia developed in the pharyngo-esophageal junction, from the mucosa of the posterior pharyngeal wall. ZD is a rare disorder but is associated with significant morbidity. ZD occurs especially in elderly patients older than 70 years and can present with dysphagia, halitosis, regurgitation, aspiration, recurrent chest infections, and weight loss. The gold standard investigation for diagnosis is pharyngo-esophageal barium swallow test. Management of pharyngeal pouches includes endoscopic stapling or open surgery procedures. Surgical treatment represented for a long time the conventional treatment. Actually, due its short duration and low rate of complications, the endoscopic treatment is preferred when it is available. Here, we present the case of a 70 year-old male patient without comorbidities, presented for symptoms appeared several months prior to admission, consisting in regurgitations, heartburn, occasional dysphagia to solid and liquid foods, intermittent difficulty swallowing, drooling and halitosis. Barium swallow test revealed a pharyngoesophageal diverticulum and gastroesophageal reflux. Upper digestive endoscopy confirmed the presence of uncomplicated ZD. The patient refused surgical treatment and was discharged with medical treatment for gastroesophageal reflux disease. The case shows that ZD should be considered in the differential diagnosis of oropharyngeal dysphagia appeared in elderly patients.*

**KEYWORDS:** Zenker's diverticulum; esophageal diverticulum; dysphagia

## CARCINOID SYNDROM WITHOUT LOCALIZATION WITH PEPTIC AND INTESTINAL DETERMINATIONS

Botezatu Dan<sup>1,2</sup>, Bălan Gabriela<sup>1,2</sup>, Săvulescu Simona<sup>3,4</sup>, Romila Aurelia<sup>1,2</sup>, Călin Alina Mihaela<sup>1,2</sup>, Tiutiuca Carmen<sup>1,2</sup>, Crețu Stuparu Mariana<sup>1,2</sup>, Dinu Ciprian<sup>1,2</sup>, Fulga Iuliu<sup>1,2</sup>

<sup>1</sup> Faculty of Medicine and Pharmacy, "Dunarea de Jos" University of Galati, Romania

<sup>2</sup> Emergency Hospital of Galati, Romania

<sup>3</sup> Elias University Hospital Bucharest, Romania

<sup>4</sup> "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania

[dan.botezatu@yahoo.com](mailto:dan.botezatu@yahoo.com)

### ABSTRACT

*APUD (Amine Precursor Uptake and Decarboxylation) system represents all neuronally range derived cells. Topographically, these cells of the Disseminated Endocrine System have different functions: B cells secrete insulin, A cells secrete gastrin, A2 cells secrete glucagon, D cells secrete somatostatin, D1 cells secrete VIP, and D2 cells secrete PP substance.[10] The carcinoid tumors are defined by the secretions of different substances like serotonin and gastrin with cutaneous flush, diarrhea, bronchoconstriction, right side heart failure and in our case with duodenal and gastric ulcers. It was presented a case of a 47 years old female patient, with a long history of abdominal pains, vomiting heart burn, diarrhea, and severe weight loss (60 kilograms in 15 years). She was diagnosed with gastritis, gastric and duodenal peptic ulcers. The main diagnosis demonstrated association of inappropriate fasting with high gastrinemia, high serum serotonin, high serum cholesterol, high LDL cholesterol and low serum 25-OH-D-vitamine. The scanning with <sup>99m</sup>Tc-Tek, without carcinoid or*

neuroendocrine tumors well differentiated. Upper ultrasound endoscopy without gastric, duodenal and pancreatic tumors. C.T. with right and left suprarenal hyperplasia and parathyroid enlargement. The treatment with Proton Pump Inhibitors in high doses and Somatostatin do not ameliorate the symptoms. Carcinoid syndrome was diagnosed after a long time of evolution, with gastric and duodenal ulcers vomiting, diarrhea and cachexia. In spite of the treatment, a carcinoid tumor not well differentiated can degenerate to other tumors with different localization or metastases.

**KEYWORDS:** APUD, Disseminated Endocrine System, carcinoid or neuroendocrine tumors

## **SICK SINUS SYNDROME MISDIAGNOSED AND MISTREATED AS AN EPILEPSY CASE**

Moraru Petruța Iuliana<sup>1,2</sup>, Nechita Aurel<sup>1,2</sup>, Voinescu Doina Carina<sup>1,3</sup>, Baciuc Ginel<sup>1,2</sup>, Călin Alina Mihaela<sup>1,3</sup>, Șerban Cristina<sup>1,3</sup>, Radu Afinica Mihaela<sup>1,2</sup>

<sup>1</sup>"Dunarea de Jos" University of Galati, Faculty of Medicine and Pharmacy

<sup>2</sup>Emergency Clinic Hospital of Pediatric "Saint Ioan" Galati

<sup>3</sup>Emergency County Hospital "Saint Andrei" Galati

[Iulianamoraru06@gmail.com](mailto:Iulianamoraru06@gmail.com)

### **ABSTRACT**

*This paper presents the case of a 14 year-old patients that had been diagnosed with epilepsy and treated with different antiepileptic pills for about two years for repeated syncope events that were considered seizures. Despite the different antiepileptic pills that he received, syncope events repeated with an increased frequency. After two years he was referred to the Cardiology Department of our Hospital where he was monitored using ECG Holter, and diagnosed with Sick Sinus Syndrome.*

**KEYWORDS:** Sick Sinus Syndrome, Syncope, Epilepsy, Holter ECG

## **ACUTE DRUG INDUCED CHOLESTATIC HEPATITIS AFTER AMOXICILLIN – CLAVULANIC ACID TREATMENT A CASE REPORT**

Botezatu Dan<sup>1,2</sup>, Bălan Gabriela<sup>1,2</sup>, Săvulescu Simona<sup>3,4</sup>, Romila Aurelia<sup>1,2</sup>, Călin Alina Mihaela<sup>1,2</sup>, Tiutiuca Carmen<sup>1,2</sup>, Crețu Stuparu Mariana<sup>1,2</sup>, Dinu Ciprian<sup>1,2</sup>, Fulga Iuliu<sup>1,2</sup>

<sup>1</sup> Faculty of Medicine and Pharmacy, "Dunarea de Jos" University of Galati, Romania

<sup>2</sup> Emergency Hospital of Galati, Romania

<sup>3</sup> Elias University Hospital Bucharest, Romania

<sup>4</sup> "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania

[dan.botezatu@yahoo.com](mailto:dan.botezatu@yahoo.com)

### **ABSTRACT**

*Drugs frequently cause liver damage with biologically high alanine aminotransferase, high bilirubin and alkaline phosphatase level, with minor liver changes to acute cholestatic hepatitis, liver cirrhosis and even cancer.[1] A case of a 22 years old male patient, with no history of liver disease and with about two months treatment with Amoxicillin – Clavulanic acid was studied. First he was admitted to the Hospital of Infectious disease with the suspicion of Acute infectious hepatitis. Clinical exam revealed fatigue, jaundice, dark urine, hepatic enlargement, high serum alanine aminotransferase, high serum bilirubin with both components. All the liver infectious acute disease was negative; HBV, HBC, HIV, CMV, Toxoplasmosis, and Paull Bunell reaction. He was transferred to the Gastroenterology Department with the same clinical aspects. The patient was investigated for the autoimmune hepatitis, primary biliary cirrhosis, Willson disease. All negative. CT scan described an enlarged homogeny liver without enlargement of biliary intra or extra liver ducts. The diagnose was acute cholestatic drug induced hepatitis after Amoxicillin-Clavulanic acid treatment. We treated the illness*

with 16 mg Metilprednisolone, with the transaminase and bilirubin level lowering, and drugs like Amoxicilline –clavulanic acid induced cholestasis and hepatitis. It is important to make the difference between cholestatic hepatitis and acute liver infectious disease, primary biliary cirrhosis or with biliary obstruction or another form of cholangitis.[1,5] The cessation of drug administration did not change the evolution after two months. The favorable evolution after the corticoid treatment is characteristic in our case, in spite of the medical literature.

**KEYWORDS:** drugs, Amoxicillin – Clavulanic acid, cholestatic hepatitis

## **DEATH ETIOLOGY BY LIVER CIRRHOSIS. A FIVE-YEAR (2011-2015) RETROSPECTIVE COHORT STUDY IN the GASTROENTEROLOGY UNIT OF the CLINICAL DEPARTMENTAL EMERGENCY HOSPITAL GALAȚI**

Botezatu Dan<sup>1,2</sup>, Bălan Gabriela<sup>1,2</sup>, Săvulescu Simona<sup>3,4</sup>, Romila Aurelia<sup>1,2</sup>, Călin Alina Mihaela<sup>1,2</sup>, Tiutiuca Carmen<sup>1,2</sup>, Crețu Stuparu Mariana<sup>1,2</sup>, Dinu Ciprian<sup>1,2</sup>, Fulga Iuliu<sup>1,2</sup>

<sup>1</sup>Faculty of Medicine and Pharmacy, "Dunarea de Jos" University of Galati, Romania

<sup>2</sup>Emergency Hospital of Galati, Romania

<sup>3</sup>Elias University Hospital Bucharest, Romania

<sup>4</sup>"Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania

dan.botezatu@yahoo.com

### **ABSTRACT**

*Cirrhosis is a condition that is defined histopathologically and has a variety of clinical manifestations and complications some of which can be life threatening.[1] We assessed variation in clinical characteristics and diagnostic in patients with a lethal evolution from that complication. In a retrospective cohort study of 150 patients death, over five years, 2011-2015, from liver cirrhosis in Gastroenterology Unit, we compared the demographic data, the etiology and the complications in the evolution of the illness which finally failed to death. The age of death was in 61-70 decade, the males are predominant in 2/3 of the cases, the alcoholic etiology of the cirrhosis was in 86 of the patients, followed by those with C virus in 26 patients, alcohol association etiology being recorded in 19 of them. B virus etiology was in 20 patients, alcohol association etiology in 17 of them. The association between viral and alcohol etiology was in 36 patients. Comorbidity of death was represented by heart disease in 31 patients, mellitus diabetes in 25 patients. Death etiology was represented by hepatic encephalopathy in 47%, variceal hemorrhage in 46%, and hepatorenal syndrome in 15%. The pathological associations to ? morbidity was in 60% of the cases. In 27 deaths, the necropsy exam found 27 patients with hepatic carcinoma. All the patients had Child-Pugh class C. The liver transplant is the solution to prevent the death from cirrhosis complications. Our study has demonstrated the gravity of cirrhosis with different etiology, mainly those with alcohol pathology, the final evolution being the death. Hepatic transplant is the solution to save the life of those patients.*

**KEYWORDS:** etiology, cirrhosis, death

## **ETIOLOGY OF HYPOGLYCEMIA IN NEONATES**

Busila Camelia<sup>1,2</sup>, Bujoreanu I. Sofica<sup>3</sup>, Tiutiuca Carmen<sup>1,3</sup>, Balan Gabriela<sup>1,3</sup>, Stuparu-Cretu Mariana<sup>1</sup>, Calin Alina<sup>1,3</sup>

<sup>1</sup> Faculty of Medicine and Pharmacy, "Dunarea de Jos" University of Galati, Romania

<sup>2</sup> "Sfantul Ioan" Children's Emergency Hospital, Galați, Romania

<sup>3</sup> "Sf. Andrei" Emergency County Hospital, Galati, Romania

camelia\_busila@yahoo.com

### **ABSTRACT**

*Neonatal hypoglycemia, defined as a plasma glucose level of less than 30 mg/dL in the first 24 hours of life and less than 45 mg/dL thereafter, is the most common metabolic problem in newborns. Major long-term sequelae include neurologic damage resulting in mental retardation, recurrent seizure activity, developmental delay, and personality disorders. Some evidence suggests that severe hypoglycemia may impair cardiovascular*

*function. Hypoglycemia should be treated as soon as possible to prevent complications of neurologic damage. Early feeding of the newborn with breast milk or formula is encouraged.*

**KEYWORDS :** hypoglycemia, neurologic damage, newborns.

## **CALCULATION OF TENSION EXERTED ON A STRETCHING LIGATURE IN HANGING IN HEAD – DOWN POSITION**

Fulga Iuliu, Rebeleanu Codrin, Fulga Ana, Mușat Liana Carmina,  
Necula Iuliana, Chițescu Carmen Lidia, Dinu Ciprian,  
Botezatu Dan

Faculty of Medicine and Pharmacy, "Dunarea de Jos" University of Galati, Romania

[Iuliu.fulga@ugal.ro](mailto:Iuliu.fulga@ugal.ro)

### **ABSTRACT**

*Accidental hanging in head-down position is extremely uncommon and not dealt with so far. This case is about a 51-year-old male who was found dead on a 45° inclined plane in a recumbent supine head-down position, with neck compression patterns. The author was called by the investigators for a preliminary examination of the body and asked to collect data at the death scene. At a preliminary examination we observed that, while the body was sliding down the inclined plane, the back of the shirt's collar had gathered between the scapular area of the body and the irregular surface support plane, and the front side was compressing the front and the side of the lower region of the neck. External examination of the body revealed a transversely placed depression in the lower side of the neck, a few scratch marks on the arms, indicating friction against the support plane, marked congestion and petechiae on the face, neck, upper thorax and arms. The alcohol concentration in the blood was 2.75 g/l. There were no other injuries or pathology to account for his death. We calculated the value of the body weight involved in the stretching ligature; the result is in accordance with the most recent studies in specialised literature. Death was determined to be due to accidental hanging in head-down position under severe alcohol intoxication.*

**KEYWORDS:** Hanging, Head-down position, Alcohol intoxication

## **PRELIMINARY STUDY CONCERNING THE VERIFICATION AND EVALUATION OF THE VALIDITY PERIOD OF HYDROGEN PEROXIDE**

Diaconu Camelia<sup>1</sup>, Moscaliuc Cornelia Adriana<sup>2</sup>, Dumitriu  
Buzia Olimpia<sup>1</sup>, Rebegea Laura <sup>1</sup>, Paltenea Elpida<sup>1</sup>,  
Manolache Nicuța<sup>1</sup>

<sup>1</sup>Faculty of Medicine and Pharmacy, „Dunarea de Jos” University, Galați, Romania

<sup>2</sup>“Elena Doamna” Food Industry College Galați

harapucamelia@yahoo.com

### **ABSTRACT**

*The prognosis of stability of any medicament materializes by means of a preservation test which indicates the validity period depending on its packaging, storage conditions, as well as all experimental data that set the ground for the conducted forecast. As far as the validity period of the officinal preparations is concerned, the specialty literature does not make any extensive mentions, nor does the legislation in the field. In order to verify the validity period of the 3% solution of hydrogen peroxide the method we chose was to track its behavior under normal conditions of storage for an amount of time at least equal to the corresponding validity period (long-term isothermal process). Another manner of studying the stability of a pharmaceutical preparation is represented by the accelerated stability tests in which the medicaments are subject to unfavorable external conditions. In the conducted study some of the given amount of hydrogen peroxide was subject to unfavorable conditions such as being kept at a high temperature and being exposed to great temperature swings. As a result of the development of this preliminary study of verification and evaluation of the validity period of hydrogen peroxide, we have ascertained that the 3-month validity period generally indicated for this officinal preparation has been corroborated both in the case of glass and plastic (P.V.C.) containers used as preservation materials. Moreover, this validity period was confirmed not only under controlled conditions of preservation (in the pharmacy depot), but also under conditions of thermal stress.*

**KEYWORDS:** oxygen peroxide, stability, validity period

## **ANATOMICAL AND IMAGISTICAL CORRELATIONS IN CHILDREN'S EAR CONGENITAL MALFORMATIONS**

Ștefănescu Victorița<sup>1</sup>, Georgescu Elia Monica<sup>1</sup>, Pelin Ana Maria<sup>1</sup>, Dobre Michaela<sup>1</sup>, Chesaru Bianca<sup>1</sup>, Bratu Ana Magdalena<sup>2</sup>

<sup>1</sup>Faculty of Medicine and Pharmacy, Dunărea de Jos University of Galati, Romania

<sup>2</sup>University of Medicine and Pharmacy "Carol Davila" Bucharest, Romania

anapelin@gmail.com

### **ABSTRACT**

*The malformation of the ear lobe, middle ear and mastoid are associated with stenosis/atresia of the external auditory canal, are unilateral or bilateral, isolated or associated with syndromes. This study aims to highlight the role of imaging in the diagnosis of children's ear congenital anomalies. This study was conducted as a retrospective study, comprising the children admitted to the Integrated Ambulatory of "Sf. Ioan" Clinical Emergency Infant Hospital Galați and suspected of ear congenital malformations over a period of three years. The children underwent clinical and radio imaging investigations (mastoid X-ray, CT, MRI). Clinically, during ENT examination, 225 cases of language delay, 228 cases of transmission and sensorineural deafness, 69 with deafness, 10 with visible ear malformations and 5 with assessment for cochlear pre-implant were reported. The CT exam, performed for all patients, established malformations of the ear pavilion (5 cases), of the external auditory canal (3 cases), malformations of the middle and internal ear (2 cases each). The study results demonstrated the importance and the superiority of CT and MRI versus X-ray investigation in children's ear congenital malformations diagnostic, by allowing their anatomical characterization.*

**KEYWORDS:** anatomy, imaging, ear malformations

## **MARKOV CHAINS ANALYSIS OF FORECAST EVOLUTION OF THE MARKET SHARES OF A RANGE OF COSMETICS SOLD IN FOUR ROMANIAN PHARMACEUTICAL NETWORKS**

Buzia Olimpia Dumitriu, Harapu Camelia, Mardare Nela,  
Lupoae Mariana

Faculty of Medicine and Pharmacy, „Dunarea de Jos” University, Galați, Romania

buzia\_olimpia@yahoo.com

### **ABSTRACT**

*The Markov chains method is a forecast method of great importance, which does not entail either the existence of a chronological series or an association. The definition of a Markov chain entails setting the initial probabilities associated with a data system and transition probabilities. Based on the previous evolution of the products market penetration, a matrix of the transition probabilities is designed starting from the law of the probabilities of transition from an initial state to a next state, which expresses the trend of the ratio in which the product range is demanded by customers. The method has been successfully applied in a market study which has determined the forecast of the market share for some products sold on the pharmaceutical market, based on customers' degree of fidelity and migration, which generates the transition probabilities matrix. Data have been processed in the Markov Process module of the WinQSB software.*

**KEYWORDS:** probabilities matrix, market research, WinQSB software

## SEVERE PULMONARY INFECTION WITH AH1N1- CASE REPORT

Lupu Mary<sup>1,2</sup>, Calin<sup>1</sup>Alina<sup>2</sup>, Botezatu Dan<sup>1,2</sup>, Bălan Gabriela<sup>1,2</sup>,  
Rebegea Laura<sup>1,2</sup>, Tiutiuca<sup>1</sup>Carmen<sup>2</sup>, Crețu Mariana<sup>1,3</sup>

<sup>1</sup>Faculty of Medicine and Pharmacy, "Dunarea de Jos" University of Galati, Romania

<sup>2</sup>Emergency Hospital "Sf. Apostol Andrei" of Galati, Romania

<sup>3</sup>Maternity „Buna Vestire” of Galati

Mary.lupu@yahoo.com

### ABSTRACT

*Respiratory infections caused by the H1N1 virus were diagnosed for the first time in summer 2009. Great number of sick people has led the World Health Organization declare this infection with pandemic (August 2010). At a number of patients infected with H1N1 has been a worsening of general condition, usually after 5-6 days after onset of symptoms, requiring hospitalization in ICU.*

**KEYWORDS:** *AH1N1 infection, antiviral treatment initiated within 48 hours hypoxenic severe respiratory failure*

## CONGENITAL DIAPHRAGMATIC RIGHT HERNIA

Călin Alina<sup>1, 2</sup>, Lupu Mary<sup>1, 2</sup>, Botezatu Dan<sup>1,2</sup>, Balan Gabriela<sup>1,2</sup>,  
Rebegea Laura<sup>1, 2</sup>, Ionescu Cringu<sup>3</sup>, Andrei Cristian<sup>4</sup>

<sup>1</sup>„Dunărea de Jos” University of Galați, Faculty of Medicine and Pharmacy

<sup>2</sup>Emergency County Hospital „Sf. Apostol Andrei” of Galați

<sup>3</sup>Hospital Clinic of Emergency”Sf.Pantelimon”Bucharest

<sup>4</sup>Hospital Clinic of Emergency”Elias”Bucharest

alina\_calin\_2005@yahoo.com

### ABSTRACT

*This paper presents the case of a 35 year-old patient with a low socioeconomic status, uncontrolled and unsupervised during pregnancy, who, at 30 weeks has heavy bleeding which is the purpose of surgical intervention. a live fetus, male, 1800g, Apgar 2 was extracted. By intraoperative monitoring it is found polyhydramnion and central placenta praevia. Postnatal evolution of the newborn was critical; he was limp, areactiv, with generalized cyanosis, bradycardia and absent vesicular murmur on the right side . After the chest radiography, it was confirmed that the diagnosis of HDD and at 2h postpartum irreversible cardiac arrest is shown, followed by fetal death. Fetal length was 43 cm, corresponding to 30 weeks in pregnancy, but with an index weight of 2.2 and cranial perimeter of 29 cm and 28 cm at chest. Due to the rapid deterioration of general condition and following clinical investigations with absence of MV right and abnormal report between perimeters, it was indicated that the chest radiography emergency which highlighted: opacity in the right hemitorax, with the presence of a hidroaeric level from the same side, shifting the mediastinum to the opposite side, after such investigations emphasizing the suspicion of diaphragmatic right hernia because it was tried the starting procedure of transfer to a university center at the pediatric surgery department, but at 2h postpartum, the newborn had an irreversible cardiopulmonary arrest and died. In the autopsy examination it was found that half of the liver and small bowel loop were ascended in the chest, associated with right pulmonary hypoplasia. Undiagnosed cases in non-territorial centers die without transfer to the NICU. The rate of morbidity and neonatal mortality is closely linked to the risk of pulmonary hypoplasia.*

**KEYWORDS:** *right diaphragmatic hernia, thoracic congenital malformation*

# PHARMACEUTICAL MARKETING STRATEGIES FOR ATTRACTING NEW CUSTOMERS AND FOR BUILDING CUSTOMER LOYALTY

Buzia Olimpia Dumitriu, Harapu Camelia, Mardare Nela,  
Lupoae Mariana

Faculty of Medicine and Pharmacy, „Dunarea de Jos” University, Galați, Romania  
buzia\_olimpia@yahoo.com

## ABSTRACT

*The present paper aims at studying the efficiency of pharmaceutical marketing strategies applied by the staff of X pharmacy in view of attracting and building customer loyalty. The research objectives were: to identify the pharmaceutical marketing strategies applied by the staff of X pharmacy in view of attracting and building customer loyalty; to identify the loyalty degree of the patients in regard to the service provided by Pharmacy X, to identify their satisfaction level; to account for the efficiency of the marketing strategies applied for attracting customers and building their loyalty. Starting from the SWOT analysis of Pharmacy X, we identified its weak points and drafted a questionnaire related to the degree of satisfaction and loyalty, applied to 100 patients, in view of investigating their opinions about the way in which the service provided by the pharmaceutical staff meets their exigencies. Based on the questionnaire, we concluded that the most frequent and effective strategy when building customer loyalty is in focus is related to price policy; in addition, the patients consider the pharmacists' professionalism and obligingness as being very important. The cost of keeping a customer is 5 to 10 lower than the cost of getting a new customer. Loyal customers are more profitable: they have a certain predisposition towards accepting higher prices than other customers. Also, in their case, purchase frequency is higher and cross-buying potential is easier to capitalize.*

**KEYWORDS:** *SWOT analysis, satisfaction questionnaire, customer, advertising, competition*