This study has the purpose to analyze the clinical, biological and therapeutically aspects, together with the evolution under therapy in Ludwig’s angina and the factors who determined the appearance of this very severe disease. The retrospective study was done on a group of 5 adults patients with Ludwig’s angina, admitted in the Clinic of Infectious Diseases of Iasi, during 2009-2013. All the patients presented stomatological records or angina, that became the portal of entry. The clinical manifestations of the onset were: high fever, local pains, trismus and regional painful tumefaction, or dysphagya and dyspneea. The diagnosis confirmation was realized through bacteriologic exams and the treatment consists in: antibiotherapy associated with surgical drainage, soft tissue decompression, local periodontal therapy of the primary focus and corresponding pathogenic therapy. The response of healing was favorable in all 5 cases. Conclusions: Ludwig angina represents a very severe infection through its systemic potential, the etiologic and anatomic context; this allows the spread of the infection in the mediastin, with direct effects on the respiratory and cardiac functions.

Keywords: Ludwig’s angina, haemoculture, anaerobes.

INTRODUCTION
Ludwig angina is a very serious disease, life threatening diffuse cellulitis, being a surgical emergency. It bringing together a wide range of infections that are interested in spaces sublingual, submaxillary and submandibular, with bilateral involvement and potential broadcast mediastinal space with direct implications for cardiac and respiratory function. It can be determined by: Gram positive and negative,, most frequent determined by: Staphylococcus aureus, Streptococcus spp., Prevotella spp. and Porphyromonas spp.( aerobic or anaerobic organisms).

The purpose of this paper is to draw attention to the existence of this very serious infection, the factors that have determined the difficulties confronting therapeutic and prevention of these diseases with a poor prognosis.

MATERIAL AND METHODS
This study includes a total of 5 patients with Ludwig angina hospitalized in the Clinic of Infectious Diseases of Iasi in the period 01.01.2009 - 31.12.2013. In this group of patients we performed a statistical analysis in terms of the distribution of cases by calendar years, sex, age, provenience medium, clinical manifestations and therapy.

RESULTS AND DISCUSSIONS
In the period 2009-2013 were 5 cases of Ludwig angina hospitalized in the Clinic of Infectious Diseases of Iasi.
Distribution of cases of Ludwig angina varies during this period: 2 cases in 2011 and only one case in 2009, 2012, and 2013, with no event in 2010. There were 2 cases on female and 3 cases on male, whose ages ranged from 19 to 35 years old. The distribution on provenience medium shows 90% of cases from rural area and 10% were from urban areas. In all cases, dental and angina identified source present in 3 cases, the infection has spread. Odontogenic infections were the common etiologic factor in 2 cases and 3 cases post dental extraction sepsis. The history of all patients retain the attention with the existence of dental infections, acute periodontitis, root debris, these and the existence of imunosupressed host constituting the trigger of the infection. As host immunosuppression predisposing factors were: chronic alcoholism 3 cases, diabetes (one case), and pulmonar infection (1 case).

The distance between primary dental disease and Ludwig angina varied between 24 hours and 3 days, the admission diagnosis being of Ludwig angina „in 4 from 5 cases, one case being admitted with the observation of „sepsis”. From the clinical point of view, all the patients clinically presenend from admission: serious malaise, fever (38.5 to 39°C), throbbing pain at the entrance gate, dysphagia (100%) with propulsion tongue to the floor of mouth, the swallowing, pulping wood of the floor mouth, ear pain reflex (60% cases), loco-regional lymphadenopathy, dizziness, frontal headache, tachycardia, and two of the patients presented from admission early hypotension and oliguria.

The useful laboratory diagnostic tests drew our attention to the following results:
- a constant leukocytosis with values between: 11000/mm³ and 19000/mm³, and neutrophils greater than 80%;
- a erythrocyte rate sedimentation was in all cases greater than 50 mm / h;
- a moderate intrainfectious anemia;
- blood cultures remained sterile in all cases, because of beginning of antibiotic treatment before admission.

Isolation of etiologic agents was realized only intravitam in only septic pus, that included mixed anaerobic flora, streptococci and Gram-negative bacilli. Bacteriological examinations were performed and blood culture system Oxoid Signad-appropriate solid media incubated aerobic and anaerobic. The bacteria were identified by conventional methods and antibiotic susceptibility testing was performed by diffusion method or standard solutions.

The etiologic agents were isolated in 4 cases and were represented by anaerobic flora: - triple combination of anaerobic bacteria: Fusobacterium + Peptostreptococcus spp + Porphyromonas (1 case);
- Gram-negative association + anaerobic and anaerobic BGN (1 case);
- Porphyromonas-( 1case);
- Klebsiela + Streptococcus- (1case)

The treatment is an urgency in all cases, being necessary a prompt evaluation and a serious clinical follow-up, in order to improve its prognosis and reduce the high mortality. Antibiotherapy is important to stop the diffusion of the infection and prevent the marrow dissemination, with the establishment of the mediastinitis and other complications. Being a very serious infection, it requires the use of intravenously antibiotic, active on oral microflora, broad spectrum antibiotics both to aerobic Gram-positive bacilli, Gram-negative, and on anaerobic bacilli. The length of treatment ranged from a minimum 14 days to 60 days, with an average of 21 days, depending on the virulence of the etiological agent. In all the cases, antibiotic therapy was performed with empiric treatment, with different combinations of parenteral broad-spectrum antibiotics and after that, subsequently according to the antibiogram: Penicillin G + Chloramphenicol + Metronidazole( 1 case), or Cephalosporins
III generation in combination with Aminoglycoside and Metronidazole (2 cases)

Another used therapeutic option was: Amoxicillin + Clavulanic acid associated with Gentamicin and Fluoroquinolones – Ciprofloxacin (1 case) or Imipenem in combination with Metronidazole (1 case).

Together with antibiotic therapy was practiced surgical treatment, necessary for the discharge of pus (drainage for decompression of facial spaces - airway management). Periodontal treatment was performed local outbreaks of dental debridement, incision followed by excision, curative pathogenic and symptomatic medication. The clinical evolution of the studied patients was favourable under therapy in all those 5 cases, with lower fever, loss of local phenomena, improving of the general condition and normalization of biological samples.

The complications were determined because of the delayed addressability, which worsens the prognosis: airway obstruction (2 cases), pericarditis (1 case).

CONCLUSIONS

Ludwig angina is a serious infection through its particularly systemic potential, anatomic context. The etiology allow the dissemination into mediastinum with direct implications for the cardiac and respiratory function. Being a surgical emergency, it requires a serious, complex and urgent therapy, the antibiotic with broad spectrum associating surgical drainage and pathogenic treatment.

REFERENCES