INFECTIOUS ENDOCARDITIS WITH FIVE LOCALISATIONS
- CASE REPORTS

Alina-Costina Luca, C. Iordache
University of Medicine and Pharmacy “Grigore T. Popa” – Iași
Faculty of Medicine
Discipline of Pediatrics

INFECTIOUS ENDOCARDITIS WITH FIVE LOCALISATIONS - CASE REPORTS (Abstract)
Infectious endocarditis is defined as an infection of the endocardial surface area of the heart which can include one or more cardiac valves, mural endocardium or a septal defect. We present the case of a patient, aged 8, hospitalized in Hemato-Oncology Department with pontine glioma, who was diagnosed with infectious endocarditis with five localisations.

Keywords: ENDOCARDITIS, CARDIAC VALVES, SEPTAL DEFECT.

Infectious endocarditis is defined as an infection of the endocardial surface area of the heart which can include one or more cardiac valves, mural endocardium or a septal defect (1, 11). Its intracardiac effects include severe valve insufficiency which can lead to congestive cardiac insufficiency that is hard to treat and to myocardial abscesses. If it is left untreated, the infectious endocarditis is, in general, fatal (2, 6).

Endocarditis can be classified into:
• native valve endocarditis, acute and subacute;
• early and late prosthetic valve endocarditis;
• secondary endocarditis in intravenous drug users (4, 7).

Rheumatic diseases represent now less than 20% of the cases and 6% of the patients with cardiac rheumatic disease finally develop infectious endocarditis. Congenital cardiac diseases represent 15% of the cases, with bicuspid aortic valve being the best known example (10).

Acute endocarditis is caused most frequently by Staphilococcus aureus, it appears on a normal valve, and is rapidly destructive, produces metastatic foci and if not treated is fatal in less than 6 weeks (5, 8). Subacute endocarditis is caused usually by viridans streptococci, it appears on valves with pre-existent injuries, it does not determine metastatic foci and, if not treated, it needs more than 6 weeks or even a year to become fatal (8, 9).

Other congenital anomalies which lead to the appearance of endocarditis include ventricular septal defect, persistence arterial channel and tetralogy of Fallot. Atrial septal defect is rarely associated with infectious endocarditis. Mitral valve prolapse is the most common predisposing factor, more frequently found in young patients and is the predisposing condition in 30% of the cases of native valve endocarditis in this age group. Infectious endocarditis complicates 5% of the cases of asymmetric septal hypertrophy, which usually involves
the mitral valve (2, 3).

**CASE REPORT**

A 8 years and 2 months old male patient is transferred to the IVth Clinic of Hematology Oncology with signs and symptoms of acute cardio-respiratory insufficiency: generalized edema, dyspnea with orthopnea, hepatomegaly of under 4 cm below the rim, tachycardia, low blood pressure, rales on bilateral, the reason for which he is transferred to Intensive Therapy Section.

The patient at the debut of the disease at the beginning of October 2008 with headache resistant to symptomatic treatment. After a week, convergent squint of the left eye appears. The ophthalmological and neurological examination recommends correction of the squint by wearing glasses. In December 2008, mother notices balance disorders, nasal voice and discrete swallowing disorders.

CT and IRM examinations showed a cerebral edema in December 2008, and a suspicion of brainstem glioma in January 2009. Progressive deterioration of the general state, persistence of balance disorders, progressive squint and swallowing disorders imposed treatment with chemotherapy and radiotherapy.

During the fourth course of chemotherapy, the patient’s state aggravated quickly, with signs and symptoms of acute cardiorespiratory failure.

The symptoms described earlier were resolved under treatment with Cefort Tienam, Dopamine, Tramadol, Furantril, ACC, HHC, tapping, physiotherapy, secretion aspiration, Brofimen, the patient being transferred to Oncology.

Later evolution of the disease was aggravated by the appearance of some complications: acute enter colitis reflecting the immunosuppressed state, hepatocytolisis syndrome, iatrogenic Cushing syndrome, thrombocytopenia secondary to CHT (chemotherapy).

Under an objective clinical examination, it was observed that the general state of the patient was extremely poor, with preserved consciousness. The child presented Cushingoid facies, ringed, with pale skin, dry, with multiple bruises and stretch marks post-venous, with peripheral cooling trend. The patient had aphthous stomatitis and dry lips, muscular system hypotonic and hypokinetic weakness. Stetacustic lung could detect the presence of a coarse vesicular murmur with disseminated bronchial rales on both lung areas.

Heart sounds were rhythmic, cardiac frequency of 84b/min and blood pressure of 97/40mm Hg. In the digestive system, slowed intestinal transit was present, lack of appetite, hepatomegaly 3-4 cm below the costal margin, of soft consistency, with rounded front edge.

Patient reacts only to painful stimuli, balance disorders and psychomotor retardation specific to age.

Laboratory examinations could reveal the presence of microcytic hypochromic anemia, thrombocytopenia and absent inflammatory markers, hepatic cytolysis syndrome, hyperglycemia, remaining examinations were within normal limits.

Electrocardiogram showed sinus tachycardia 140b/min, QRS axis +30 degrees, PQ = 0.12 and rounded T waves in all leads (fig. 1, 2).

Chest radiograph (postero-anterior incidence) showed lung drawing accentuated hiliobazal, bilateral and heart displayed on the diaphragm (fig. 3).

Given the patient's neurological status,
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computed tomography performed on 15.12.2008 was reconsidered, an examina-
tion which confirmed the diagnosis of glia-
oma Pontin (fig. 4, 5, 6, 7),

Fig. 1. EKG – sinus tachycardia

Fig. 2. EKG – where T rounded in all leads

Fig. 3. Chest radiography – accentuated lung drawing hiliiobazal, bilateral, heart displayed on the diaphragm

Fig. 4. Cranio-cerebral computer tomography - glioma Pontin

Fig. 5. Aspects of computed tomography

Fig. 6. Aspects of computer tomography
Neurosurgical examination revealed that the patient was conscious, with poor cooperation and left hemiparesis.

Doppler echocardiography performed on 08/06/2009 showed an intraventricular vegetation 1/1cm, located at the apical level that does not cause hemodynamic disturbances (fig. 8). Route ECG performed immediately revealed paroxysmal supra-ventricular tachycardia, AV = 170b/min, PQ = 0.12 and indefinite electrical axis with biventricular overload. Cardiothoracic radiography reveals a pronounced lung and heart drawing displayed on the diaphragm.

Echocardiography performed on 11.09.2009 highlights hiperechogene formation with dimensions of 1.52 mm / 0.57 mm VMA at the top left ventricular formation of 1/0, 4cm, VMA perforation, mitral insufficiency degree III, severe tricuspid degree III, pulmonary insufficiency degree III, raising the suspicion of pulmonary valve endocarditis (fig. 9).

The echocardiography performed on 17.09.2009 the endocarditis is diagnosed with 5 locations: mitral valve, aortic valve, pulmonary valve, tricuspid valve and ventricular tip.

During admissions, the patient was given antibiotics in dual therapy, initially with Ciprofloxacinc Targocid and subsequently with Tienam and Cefort, for hemodynamic support Dopamine was administered, and Spironolacton for cardiac function, Furantril, under which the evolution of symptoms was weakly positive, finally, the patient died.

Final diagnoses were: 1. brainstem glioma; 2. syndrome pontomezen-cephalic; 3. VI nerve paresis left; 4. convergent strabismus left eye; 5. postchemotherapy ane-
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CONCLUSIONS

The peculiarity of the case lies in the presence of five outbreaks of endocarditis. The first ultrasound localization was described on 06.08.2009 at the top of right ventricle, size of 1/1 cm after the patient received broad spectrum antibiotics and antifungal agents, and one month later it was described in other four sites of endocarditis.

This is explained by the patient's immunosuppressed status (by chemotherapy with Temodal). Also, chemotherapy is responsible for anemia, thrombocytopenia, hepatic cytosis syndrome and nitrogen retention syndrome.

During the 9 hospitalizations, the patient had an episode of paroxysmal supra-ventricular tachycardia, for which he received treatment with metoprolol, this was the only episode.

Another feature of the case is the age of cerebral glioma—being outside the two peaks of incidence of the disease by age.

Patient prognosis was reserved, finally the patient died despite of all the efforts.

The prognosis of infectious endocarditis was also reserved as the etiologic agent could not be identified; the mortality reported in literature is of 20-25%.

Glioma Pontin has the worst prognosis, with average survival of 9-12 months, despite treatment, the patient survived nine months after being diagnosed.

Favorable prognosis factors in glioma Pontin are represented by neurofibromatosis, symptoms of less than 12 months before the diagnosis, exofitic localization, favorable histology, extra cervico medullary or focal tectal tumors, and calcification on computed tomography. Factors of unfavorable prognosis are under 2 years, with cranial nerve palsy and unfavorable histology.

REFERENCES

IMPORTED HUMAN RABIES CASES WORLDWIDE

Authors from the Institut Hospitalo-Universitaire Méditerranée Infection, Marseille, France, carried out a study about 60 cases of human rabies in international travelers, reviewed from 1990-2012. A significant proportion of the cases were observed in migrants or their descendants when emigrating from their country of origin or after a trip to visit friends and relatives or for other reasons (43.3%). The cases were not necessarily associated with long-term travel or expatriation to endemic countries; moreover, cases were observed in travelers after short trips of two weeks or less. A predominance of male patients was observed (75.0%). The proportion of children was low (11.7%). Cases from India and Philippines were frequent (16 cases/60). In a significant proportion of cases (51.1%), diagnosis was challenging, with multiple missed diagnoses and transfers from ward to ward before the final diagnosis of rabies. Among the 28 patients whose confirmed diagnosis was obtained ante-mortem, the mean time between hospitalization and diagnosis was 7.7 days (median time: 6.0 days, range 2-30) including 4 cases with a diagnosis delayed by 15 or more days. In 5 cases, a patient traveled through one or more countries before ultimately being hospitalized. Factors that played a role in delaying the diagnosis of rabies in a number of cases were a low index of suspicion for rabies in countries where the disease has been eradicated for a long time or is now rare, a negative history of animal bites or exposure to rabies, and atypical clinical presentation of the disease. Clinical symptomatology of rabies was complex and commonly confuses physicians. Furthermore, failure in diagnosing imported cases in more developed countries is most likely related to the lack of medical familiarity with even the typical clinical features of the disease. (Carrara P, Parola P, Brouqui P, Gautret P. Imported human rabies cases worldwide, 1990-2012. PLoS Negl Trop Dis. 2013; 2; 7(5): e2209)