THE B FLU ASSOCIATED WITH SHOCK AND MULTIPLE ORGANIC FAILURE SYNDROME (MSOF)

VICTORIA BÎRLUȚIU [1]

"Lucian Blaga" University of Sibiu

Keywords: *B flu, shock, MSOF*

Abstract: *The severe evolution of influenza is frequently associated with the virus A flu infection. The virus B flu infection has been considered rather rare and most frequently having a benign evolution. The severity of the flu is associated with some population groups who are prone to it, like patients over 65, or patients who have certain chronic medical conditions, like asthma, BPCO chronic obstructive pulmonary disease (COPD), chronic kidney insufficiency, chronic liver diseases, congestive cardiac insufficiency, patients suffering from syclemy, diabetes, neoplasias, long-term corticotherapy or chronic treatment with aspirin to patients under 19, neurological diseases, pregnancy (especially the last trimester), children under the age of 2 and - in the light of the last pandemic - obese patients with IMC >40 kg/m2 - body mass index >40 kg. We are presenting a case of B influenza in a young patient having no other diseases, with a severe evolution, shock and multiple organic failure syndrome (MSOF).*

Cuvinte cheie: *Gripă B, şoc, MSOF*

Rezumat: *Evoluția severă în gripă este asociată frecvent infecției cu virus gripal A; infecția cu virus gripal B, a fost considerată sporadică şi cel mai frecvent cu evoluție benignă. Severitatea gripei este asociată unor grupe de populații la risc, respectiv pacienți cu vârsta peste 65 ani, pacienți cu anumite condiții medicale cronice, ca de exemplu astm bronşic, BPCO, insuficiență renală cronică, afecțiuni hepatice cronice, insuficiență cardiacă congestivă, pacienți cu siclemie, diabet zaharat, neoplazii, corticoterapie de lungă durată sau tratament cronic cu aspirină la tineri sub 19 ani, afecțiuni neurologice, graviditatea, mai ales ultimul trimestru de sarcină, copiii sub 2 ani şi din experiența ultimei pandemii, pacienții obezi, cu indice de masă corporal IMC ≥ 40 kg/m2. Prezentăm un caz de gripă B la o pacientă tânără, fără comorbidități, cu evoluție severă, cu şoc infecțios şi insuficiență organică multiplă (MSOF).*

CASE PRESENTATION

The patient aged 24, a university student living in the city area, has been comited through the emergency service of the Clinical Hospital in Sibiu, 2 days after the severe debut, consisting of 38.8 fever, headaches, myalgia, odynophagia, lombalgia, pollakiuria, after showing a suspension of her consciousness accompanied by sphincter relaxation, confusional syndrome and extreme psychomotric restlessness within a feverish context (hyperthermia 40.2 degrees C). From her personal history we mention repetitive tonsilites and laryngites and also an episode of E.Coli urinary infection. On arrival, the objective examination shows a bad general condition of the patient with 38.7 degrees fever, pale dehydrated skin, pouched suffering eyes and face, subcutaneous adipose tissue normally represented, IMC 20.4 kg/m2, pulmonary stethoscope sounds physiological MV, no over -added rales perceived, clear, rythmic cardiac noises, no murmurs, AV 140 b/minute, TA 80/40 mmHg, slightly dry saburral tongue, pharynx and tonsils moderately congested, sensitive abdomen in the right hypochondrium and epigastrium, intestinal transit present, liver having the lower end palpable at 3 cm under the rib board, on the right clavicular line, grown consistency, spontaneously painful and under palpation, spleen not palpable, renal lobes not painful, mictions present, clear sensorium, ROT present ans symmetrical, with no signs of meningeal irritation, Babinski inconstantly present on the right. In evolution, the patient's general condition suddenly gets worse; she becomes hemodynamically unstable, systolic BP 70 mmHg, tendency of lipotimia in orthostatic posture, cianosis of the extremities, dyspneic with polypnea. Respiratory frequency 35/minute, incoercible vomiting having a gastric and bile contents, acutisation of abdominal pains associated with the enlargement of the hepatic dullness area, accelerated intestinal transit.

The laboratory examinations showed the following data: Leukocytes **6300**-5100-8350/mm^3, Er 4,25-4,03-4,35mil/mm^3, **Hemoglobine11,9- 10,8-11,7g/dl**, Hematocrite 35,4-33,4-35,2%, MCV 83,3- 82,9-80,9fl, MCH 28-26,8-26,9pg, MCHC 33,6-32,3-33,2g/dl, **Platelets 118000- 45000-150000/mm^3**, The leukocyte formula: NS 44,8-77,3-47,7%, Ly **43,8**-14,4-38,6%, Mo 11,4- 8,3-13,5%, Ba 0,1%, Eo 0,1%; The leukocyte formula indicated metamyelocytes 1%, NN 12%, NS 85%, Eo 0%, Ba 0%, Ly 2%, Mo 0%. **Blood sugar 117**-118-151-78 mg/dl, urea 22-26-27-10 mg/dl, creatinine 1,02- 0,57-0,68-0,60 mg/dl, VSH 10-12 mm/h, **fibrinogen level 86,7-86,7-262,8 mg/dl**, **fibrine monomers TMF –pozitiv ++++,** repetated -negatively **CRP 38,2mg/l**, **LDH 722 U/l, TGO 2101-6438-7210-168-71** U/l, **TGP 1829-2361-2565-604-319 U/l**, amilase 67-86 U/l, TP (total proteins)= 5,8 g/dl, Alkp 39U/l, **GGT 46-207** U/l, BD 0,79 mg/dl, BT 0,63-0,83-0,82-0,64 mg/dl, BI 0,05 mg/dl, **TQ 20,5 sec (40,5%) -11,9 sec (91,3%)** INR 1,77-1,03,

[1]Corresponding Author: Victoria Bîrluțiu, Medicine Faculty "Victor Papilian" Sibiu, 2 A, Lucian Blaga street, Sibiu, 550169, România, e-mail: victoriabirlutiu@yahoo.com; tel: +40 (269) 21.23.20
Article received on 28.05.2011 accepted for publication on 21.06.2011
ACTA MEDICA TRANSILVANICA September 2011; 2(3)356-357

Na 138 mEq/l, K 4,4 mEq/l, **Fe 13,6**-26,1-27,0 µg/dl, Ca 3,8-4,2 mEq/l, ASLO 400, Antibodies HBc-Ig M-negative, Antibodies HAV-Ig M-negative, Antibodies anti-VHC-negative. Urine examination: ASC 2+. Urine culture: negative.

The dynamical imagistics revealed the following:

- **the pulmonary X-ray** I. ITN; II. The value of the right diaphragmatic and basal sinus, the opacification of the left diaphragm sinus, prominent hila, the peribronchovasculary interstitium emphasised on a infrahilar level. Hear and aorta within normal limits.
- **abdominal echography**: liver, pancreas, spleen (11/5.3 cm) and kidneys having a normal echographic aspect. VB having a transonic content, thickened wall, doubled approximately 1 cm CBP, VP normal caliber, an important quantity of ascitic fluid. Medium right and small left pleurisy. Right lateral transonic uterine septated image 5.6 cm (ovarian cyst?)
- **control abdominal echography**: liver within normal dimensions, homogeneous structure with a fine layer of perihepatic fluid. VB with no calculi, with doubled, thickened walls. Pancreas head-body presenting no alterations. Spleen homogeneous, with its long axis 11.3 cm RD. RS with no alterations. No ascitic fluid in the Douglas dead-end.
- **cranial CT**: the MDCT native cranial examination shows the structures of the middle line in a normal position. Cortical furrows, cortical relief within normal aspects of CT aspects. Ventricular system symmetrically normotensive. No areas of focalized or diffuse edema, no intracranial hematic densities, no infra or over-tentorial focalized processes. Conclusions: no signs of intracranial acute pathology.
- **cardiac echography**: normal relations. Heart having a normal size (normal aspect of the valves, no pericardial fluid, good contractions of the SIA walls, intact SIV).
- **the ethiological diagnosis** was supported by the positive exudate for the type B flu virus. The clinical data corroborated with the laboratory examinations (the presence of trombocitopenia and fibrin monomers, the lowering of fibrinogenemia, the prolongement of the Quick Time, the severe hepatic citolisi syndrome) and also imagistic (bilateral pleurisy, the important ascites) confirm a severe clinical form of infectious shock influenza, acute hepatic insufficiency, pleiro-pulmonary disease, CID phenomena and neurological disease - convulsive syndrome.

The patient's evolution was favorable under a hygienic and dietetic regime, filling of the vascular bed with macromolecular solutions, glucose serum, physiologic serum, Ringer, fresh blood plasma, vaso-active medication, antiviral medication Tamiflu, Relenza, antibiotics, corticotherapy, hepatoprotective drugs, symptomatic treatment. She was released out of the hospital on the eleventh day since her commitment, with recommendations concerning the exposure to unfavorable climatic factors, a liver protecting diet and hepatoprotective treatment. During the examination performed one month after her release, the hepatic citolisis test and the cholestasis tests were normal, the neurological examination and and the EEG showed no pathological alterations.

CONCLUSION

In conclusion, the virus B influenza may have clinical aspects of serious gravity, the evolution of the cases depending on the promptness of the antiviral therapy initiation. Prevention is still the most effective method, the anti-flu vaccination, respectively. For the 2011-2012 season in the North hemisphere it has been recommended the vaccination using the tri-vaccine A/California/ 7/2009 (H1N1) like-virus, A/Perth/16/2009 (H3N2) like-virus and B/Brisbane/60/2008- like-virus (1). Although it is recommended to use the same vaccine, the population must be revaccinated because the protection provided by the 2010 vaccination is limited to approximatively 6 months, with no protection provided one year after the inoculation. Vaccines and Related Biological Products Advisory Committee (VRBPAC) is taking into consideration the introduction on the market of a tetra anti-flu vaccine instead of the usual tri-vaccine, by associating two strains of the B flu virus, the B strain/Victoria and the B strain/Yamagata respectively or providing the vaccination of the children using this quadrivalent vaccine, as warning to the circulation of the B flu virus strains.

BIBLIOGRAPHY

1. CDC What's New on the Influenza Site