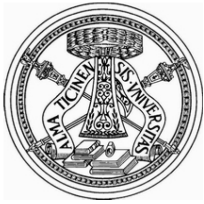


A lump in the head?

ESCMID Online Lecture Library
© by author

Serena Ludovisi, MD
Department of Infectious Diseases
Fondazione IRCCS Policlinico San Matteo, Pavia, Italy

History

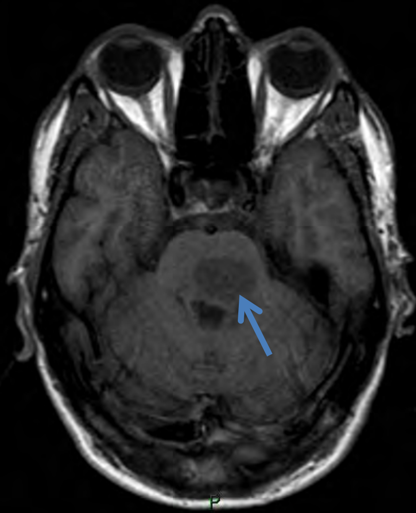
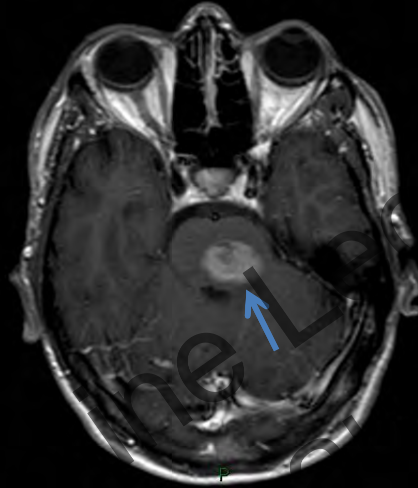
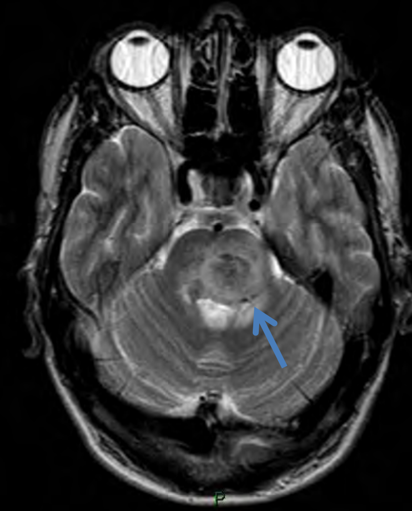
- Italian, 41 yr-old male, smoker, runner, factory worker
- Idiopathic Membranous Glomerulonephritis (2008) on treatment with ACEIs, ARBs and statins

July 3, 2012: admitted to neurology division of a district hospital because of right body side ***numbness, nausea and dizziness***

Brain CT and MRI scan

ESCMID Online Lecture Library
© by author

Brain MRI

«left paramedian pontine mass with a significant enhancement and perilesional edema at T1-weighted scans…suggestive of ***primary central nervous system lymphoma»***

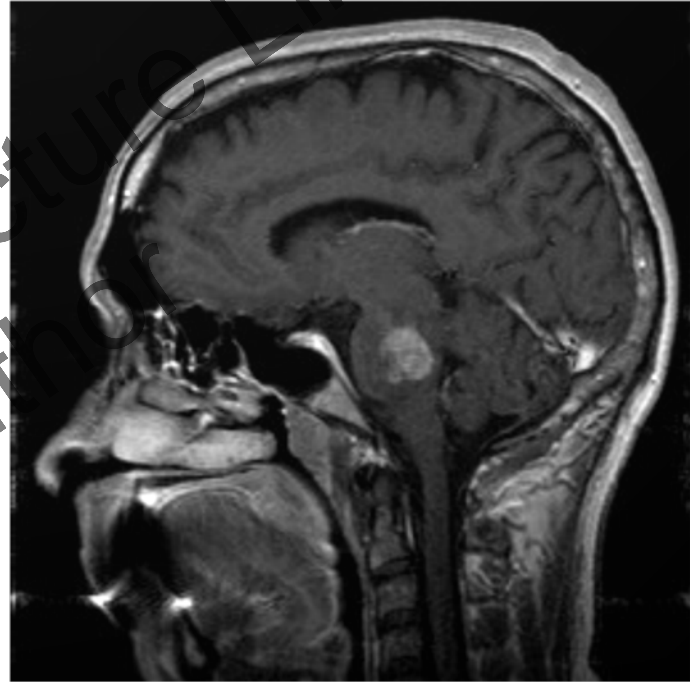
ESCMID Online Lecture Library © by author

HIV-antibody positive

Transferred to our **Department of Infectious Diseases**

On admission

- Right hemisensory paraesthesia
- Wide-base ataxic gait, mild Romberg sign
- Dysmetria
- Afebrile



- Negative inflammatory and tumour markers
- Plasma HIV-RNA 12,052 cp/ml
- CD4+ T-cell count 229 cells/µl (31%)
- Plasma EBV-DNA 3,700 cp/ml

ESCMID Online Lecture Library © by author

- Blood cultures
- *C. neoformans* Ag
- *Listeria* serology
- Blood *M.tuberculosis* culture
- Mantoux skin test
- *Toxoplasma* serology
- HHV8-DNA
- HCV & HBV serology
- CMV-DNA and serology
- Echocardiogram
- Total body CT scan
- Bone marrow biopsy
- PET-CT

ALL NEGATIVE

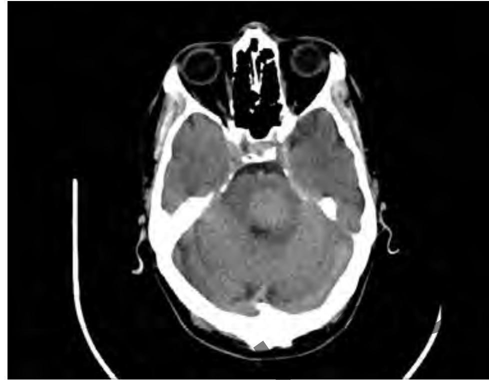
Lumbar puncture

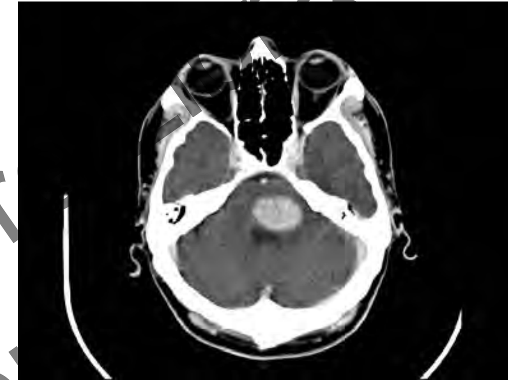
- 22 lymphocytes
- Total protein: 52 mg/dl n.v. < 45 mg/dl
- Glucose: 56 mg/dl (blood glucose 84 mg/dl)

- CSF HIV viral load 72,486 cp/ml
- CSF EBV-DNA 4,469 cp/ml
- *M. tuberculosis culture*, *M. tuberculosis* PCR, *syphilis serology*, aerobic culture, *C. neoformans* Ag: **NEGATIVE**
- CMV-DNA, HTLV I-II RNA, *Polyomavirus* JC-DNA, VZV-DNA, HSV-DNA: **UNDETECTABLE**
- *T. gondii* PCR: NEGATIVE
- Cell immunophenotype: **NEGATIVE**

ESCMID Online Lecture Library © by author

Meanwhile…





On Friday evening

- Ataxia worsening
- New cerebral CT scan (no change, no basal ganglia involvement)

The doctor on call prescribed *dexhametasone 8 mg t.i.d* with mild improvement

On Monday

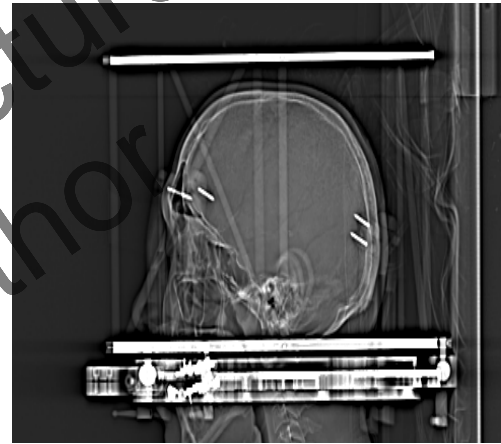
The hematologist, having a strong suspicion of primary CNS lymphoma, advised us to start a CHEMOTHERAPY WITH METHOTREXATE AND CYTARABINE

… Should we start it?

ESCMID Online Library
© by author

After one week of steroid tapering...

Stereotactic biopsy

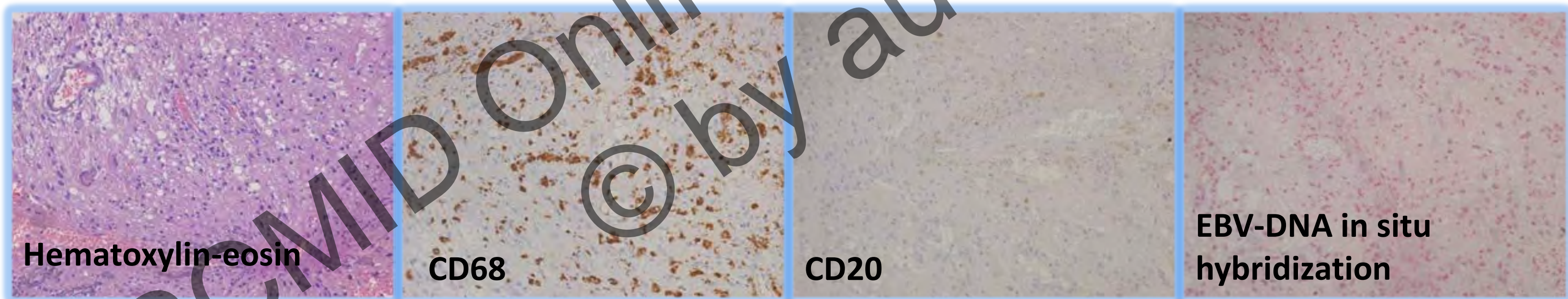


- Patient started on antiretroviral therapy (darunavir/r, abacavir / lamivudine)
- Discharged in fairly good condition, waiting for the histological results

ESCMID Online Lecture Library
© by author

Histology

«Reactive gliosis, inflammatory infiltrate enriched in CD68+ macrophages and perivascular aggregates of CD3+ T cells, rare CD20 and CD79a positive lymphocytes. Negative EBV DNA by in situ hybridization»



- Not diagnostic of lymphoproliferative disease or glial tumour
- SUGGESTIVE OF VIRAL INFECTION

ESCMID Online Lecture Library © by author

What next?

Doubts

- Could one week of low dose steroid therapy completely reverse a primary CNS lymphoma?
- Could the mass be of a different origin?

Proposals

- Another biopsy?
- Empirical chemotherapy for CNS lymphoma?
- Empirical antimicrobial therapy ?

ESCMID Online Lecture Library
© by author

…and what we did

- *Group discussion* with NEUROSURGEON, NEUROLOGIST, PATHOLOGIST, HEMATOLOGIST and INFECTIOUS DISEASE SPECIALIST
- *Literature search*

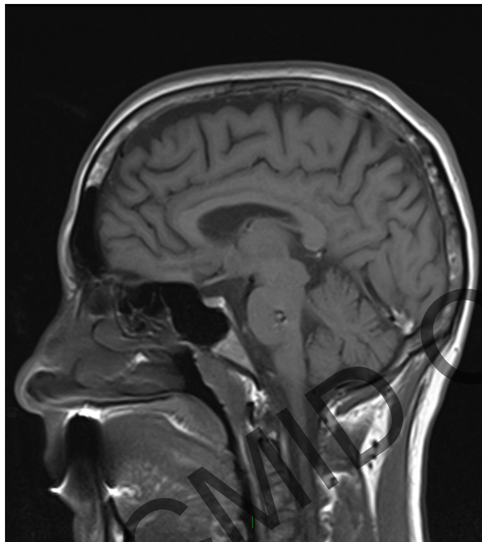
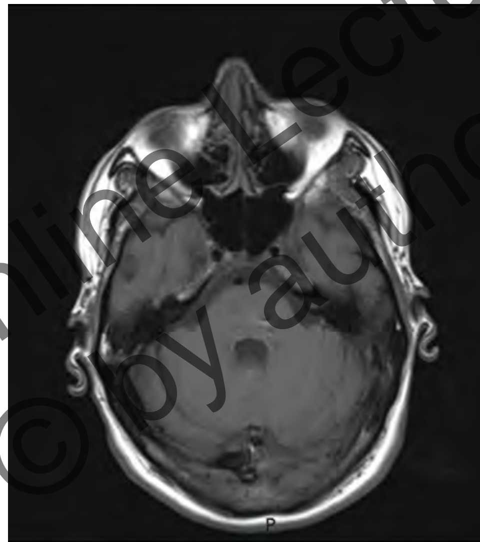
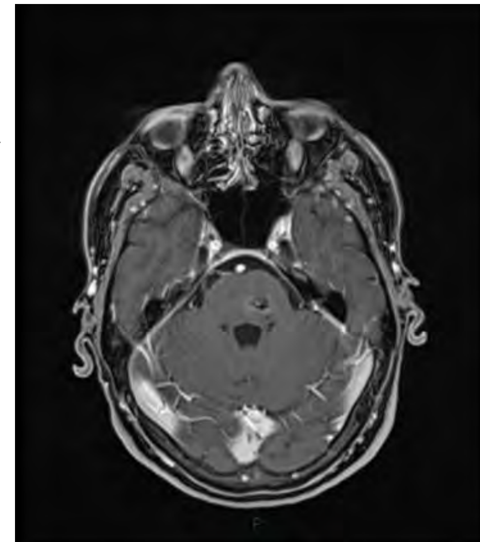
"HIV-related focal encephalitis"

No chemotherapy was administered, the patient continued to receive cART, showing a progressive general improvement

ESCMID Online Lecture Library
© by author

Three months later…

- Repeat Brain MRI

- HIV-RNA undetectable, CD4+ T-cell count: 341 cells/μl
- *Normal neurological examination* and *normal active life*: the patient went back to work and started to run again!

ESCMID Online Lecture Library © by author

Considerations

- Radiological and virological data vs histological findings: ***WHICH WINS***?
- Should awareness of HIV-related diseases be increased? If HIV serology had been done in 2008, ***COULD THE STORY HAVE BEEN DIFFERENT***?

MULTIDISCIPLINARY APPROACH *and* **COLLABORATION BETWEEN SPECIALISTS** *were crucial for an appropriate management of the patient!*

ESCMID Online Lecture Library
© by author

Acknowledgements

Prof. M. Mondelli

Director of the Postgraduate School of Infectious Diseases of the University of Pavia

Prof. L. Minoli

Director of the Infectious Diseases Department, Fondazione IRCCS Policlinico "San Matteo", Pavia

Prof. L. Magrassi

Director of the Postgraduate School of Neurosurgery of University of Pavia

Dr E. Seminari, Dr A. Di Matteo

Infectious Diseases Department

Dr E. Carrara, Dr G. Contardi, Dr E. Fronti, Dr L. Gerna, Dr L. Praticò

Infectious Diseases trainees, colleagues and friends

ESCMID Online Lecture Library
© by author