Clinical Neurology and Neurosurgery 121 (2014) 35–38

Contents lists available at ScienceDirect

Clinical Neurology and Neurosurgery

journal homepage: www.elsevier.com/locate/clineuro

Case report

Rhinogenic metastatic brain and spinal cord abscesses in Crohn's disease

John F. Morrison[a,*], Pradeep K. Narotam[b], Narendra Nathoo[c]

[a] Department of Neurosurgery, Warren Alpert Medical School, Brown University, Providence, USA
[b] Union Hospital Neurosciences, Terre Haute, USA
[c] The Medical Center, Bowling Green, USA

ARTICLE INFO

Article history:
Received 6 August 2012
Received in revised form 6 March 2014
Accepted 9 March 2014
Available online 18 March 2014

Keywords:
Abscess
Brain
Melanoma
Miliary rhinogenic
Immuno-suppression

1. Introduction

Intracranial suppurative complications from neglected rhinogenic sinusitis in the developed world are an uncommon occurrence. However, the increased use of immune suppressive therapy and patients with chronic inflammatory, immunosupprsessive disorders, has exposed patients to an increased risk of infectious complications with the potential for unusual clinical presentations. Patients with inflammatory bowel disease are susceptible to infectious complications and more so in the presence of immunosuppressive therapy. We report an interesting complication of multifocal central nervous and peripheral abscesses due to rhinogenic sinusitis in a patient with Crohn's disease.

2. Case Report

2.1. History & examination

A 70-year old male with previous history of Crohn's disease (status post colectomy and ileostomy), hepatic abscess (successfully treated percutaneously 3-years prior to presentation), portal vein thrombosis, as well as melanoma resection (Clark Level 2, 2-years prior to presentation though depth was uncertain) presented to the emergency room with new onset seizures and associated monoparesis of the right upper extremity. He was noted to be afebrile, with a normal white blood cell (WBC) count of 7.7, without bacteremia or bacteruria, but with hyponatremia to 130 mEq/L. Three months earlier he had been treated with oral antibiotics for an upper respiratory tract infection and sinusitis with complete resolution of symptoms. Gadolinium enhanced Magnetic Resonance Imaging (MRI) brain revealed rhinogenic maxillary sinusitis with gradient echo negative, Diffusion Weighted restriction negative, multiple ring enhancing lesions in a miliary distribution, and a large solitary restrictive left parietal lesion with minimal vasogenic edema (Fig. 1A and B). Cervical spine MRI revealed a thoracic T3 intra-medullary lesion (Fig. 1C) while a 3 cm, ill defined, area was seen in the right hepatic lobe on abdominal CT (Fig. 2). Whole body (18)F-fluorodeoxyglucose positron emission tomography (FDG-PET) scan revealed hyper-metabolic lesions with a high Standardized Uptake Value (SUV), while transthoracic echocardiography and Human Immunodeficiency Virus status tested negative. While not currently on immunomodulating therapy, cessation of Infliximab (Centocor Ortho Biotech, Inc.; Malvern, PA) and steroid use had occurred two years ago due to severe side-effects. Crohn's symptoms have been well tolerated and the patient in good clinical health until presentation. Given the clinical presentation and associated medical history the differential diagnosis

* Corresponding author at: Department of Neurosurgery, 593 Eddy Street, Providence 02903, USA. Tel.: +1 608 215 0872; fax: +1 401 444 7146.
E-mail address: jfmorrison@uwalumni.com (J.F. Morrison).

http://dx.doi.org/10.1016/j.clineuro.2014.03.009
0303-8467/

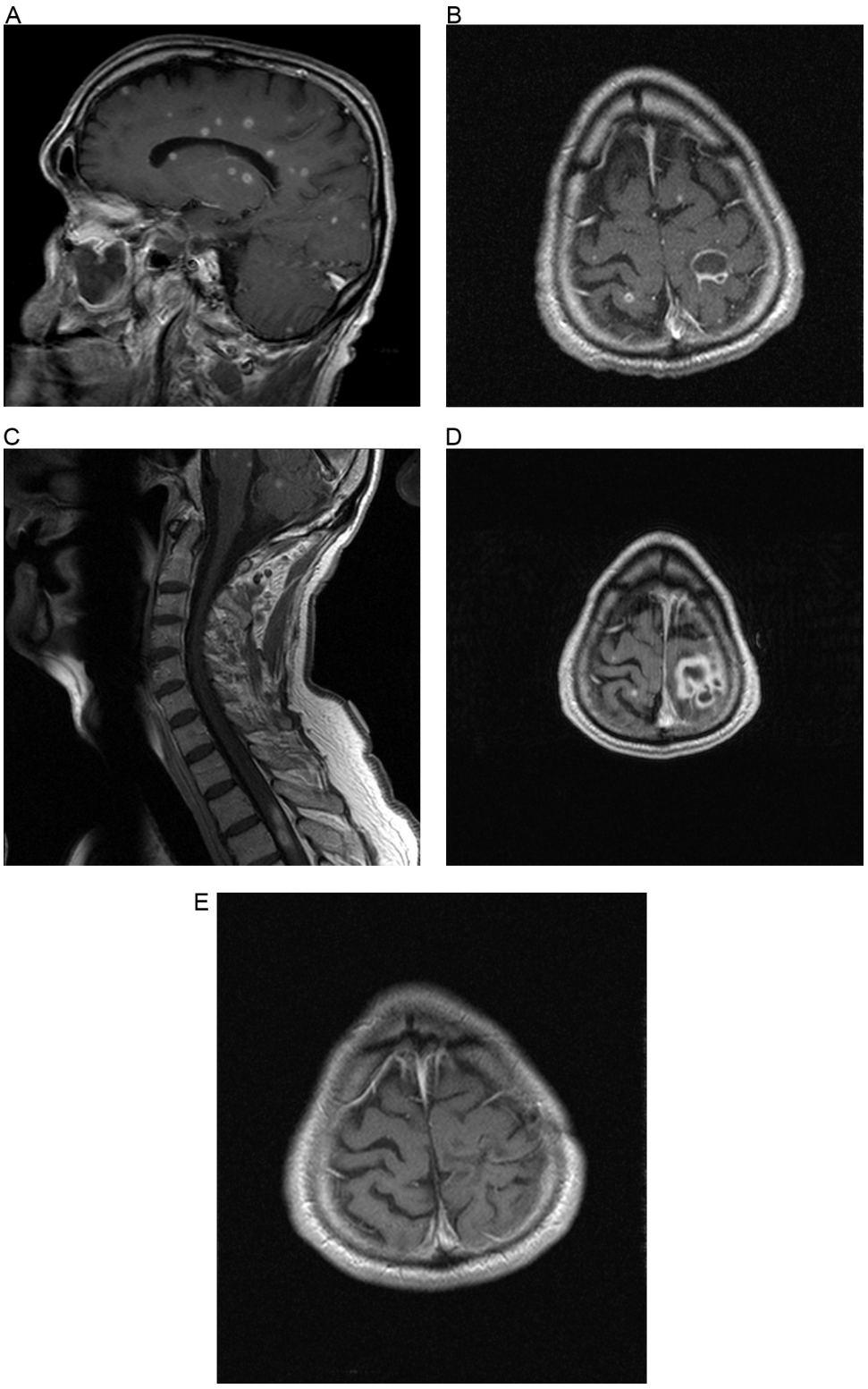

Fig. 1. Contrast enhanced MRI of brain (A) T1 sagittal view consistent with military spread and maxillary sinusitis. (B) T1 axial view consistent with a solitary, large left sensory-motor, ring enhancing lesion. (C) T1 sagittal cervico-thoracic view consistent with a lesion at hyper intense intramedullary lesion thoracic T3. (D) T1 axial view consistent with expansion of lesion visualized in (B). (E) T1 axial view consistent with resolution of previously visualize ring enhancing lesion (B and D).

favored metastatic melanoma over multiple abscesses, surgery was contemplated to establish the diagnosis, but erythrocyte sedimentation rate (ESR) and c-reactive protein (CRP) were not ordered as the patient was afebrile, without elevated WBC, and negative PET correlation.

2.2. Operative technique

On the morning of the surgery, progression of the sensory-motor lesion to involve the fronto-parietal region was noted on the pre-operative planning MRI (Fig. 1D). Using frameless image