Intern Emerg Med (2015) 10:1029–1030
DOI 10.1007/s11739-015-1245-1

CE - MEDICAL ILLUSTRATION

Abducens nerve palsy during sepsis

Alberto Maria Cappellari[1] · Irene Maria Borzani[2] · Maria Chiara Russo[3] · Carla Colombo[3]

Received: 21 April 2015 / Accepted: 25 April 2015 / Published online: 8 May 2015

A 28-year-old man presented with fever, myalgia and swelling of the left forearm. The history was remarkable for cystic fibrosis, pulmonary and renal transplants complicated by rejection, compensated diabetes mellitus, and hemodialysis fistula on the left forearm. Two days later, the fever disappeared, but the patient complained of sudden onset diplopia and left ocular pain. Neurologic examination revealed a left abduction deficit, consistent with left abducens nerve palsy (Fig. 1a).

Pharmacologic history included mycophenolate mofetil, tacrolimus, prednisone, antihypertensive drugs, and insulin. Blood studies showed high CRP (9.38 mg/dl; n.v. <0.5) and procalcitonin (95.56 ng/ml; n.v. 0.002–0.06). Blood cultures were negative. Treatment with daptomycin 6 mg/kg/day every other day and meropenem 1 g/day was started. Viral and antibody testing were negative. A brain MRI without contrast was normal. T2-weighted MRI of the left forearm revealed hyperintensity of the muscular and subcutaneous tissues, consistent with inflammatory edema (Fig. 1b). Two weeks later, blood studies showed normal CRP (0.42 mg/dl; n.v. <0.5) and near normal procalcitonin (2.57 ng/ml; n.v. 0.02–0.06). Six weeks later, ocular motility was normal, and an MRI of the left forearm showed reduction of muscle edema. The sixth cranial nerve (abducens nerve) innervates the lateral rectus muscle, which is responsible for abducting the eye [1]. Abducens nerve palsies occur more frequently in children while they are unusual in young adults [2, 3]. The leading causes of acquired abducens nerve palsy are neoplasm and trauma [2, 4]. Inflammatory palsies are less frequent and can recover after appropriate treatment, as was the case in our patient [2].

✉ Alberto Maria Cappellari
albertocapp@yahoo.it

[1] Department of Neurological Science, Fondazione IRCCS Ca' Granda, Ospedale Maggiore Policlinico, Via Sforza, Milan, Italy

[2] Radiology Unit, Fondazione IRCCS Ca' Granda, Ospedale Maggiore Policlinico, Via Commenda 9, 20122 Milan, Italy

[3] Cystic Fibrosis Center, Fondazione IRCCS Ca' Granda, Ospedale Maggiore Policlinico, Via Commenda 9, 20122 Milan, Italy

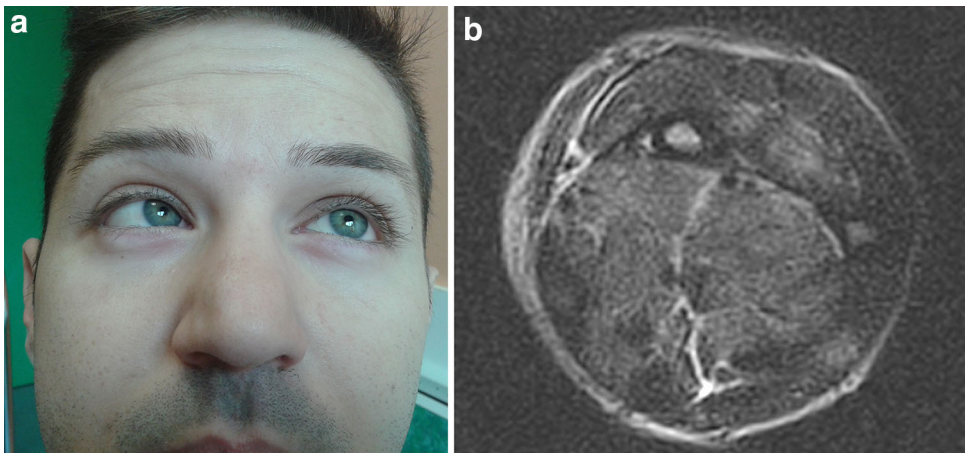

Fig. 1 Clinical presentation: left abducens nerve palsy (**a**). Axial T2-BLADE MRI image of the mid left forearm shows diffuse swelling and hyperintensity of the muscles and subcutaneous tissue consistent with inflammatory oedema (**b**)

Conflict of interest None.

Ethical standard The authors hereby declare that the research documented in the submitted manuscript "Abducens Nerve Palsy during Sepsis", involving human participant has been carried out in accordance with the ethical standards of the institutional and national research committee and have been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki and its later amendment or comparable ethical standards.

Informed consent Written informed consent of the patients was obtained.

References

1. Goodwin D (2006) Differential diagnosis and management of acquired sixth cranial nerve palsy. Optometry 77:534–539
2. Merino P, Gómez de Liaño P, Villalobo JM et al (2010) Etiology and treatment of pediatric sixth nerve palsy. J AAPOS 14:502–505
3. Peters GB 3rd, Bakri SJ, Krohel GB (2002) Cause and prognosis of nontraumatic sixth nerve palsies in young adults. Ophthalmology 109:1925–1928
4. Lee MS, Galetta SL, Volpe NJ et al (1999) Sixth nerve palsies in children. Pediatr Neurol 20:49–52