Águeda et al., Pediat Therapeut 2013, 3:1
DOI: 10.4172/2161-0665.1000136

Pediatrics & Therapeutics
ISSN: 2161-0665

Case Report Open Access

Cerebral Abscess and Empyema due to *Morganella morganii*

S Águeda[1]*, A Leitão[1], G Rocha[1] and H Guimarães[1,2]

[1]*Neonatal Intensive Care Unit, Department of Pediatrics, Centro Hospitalar São João, Porto, Portugal*
[2]*Faculty of Medicine, University of Porto, Portugal*

Introduction

Morganella morganii is a gram negative aerobe, commonly implicated in urinary tract infections and pyogenic infections [1]. It rarely causes CNS infections especially brain abscess. There are very few published reports of *Morganella morganii* as a causative pathogen in brain abscess, especially in pediatric patients [2-4]. High index of suspicion of this pathogen is important in cases of brain abscess secondary to otogenic infections.

Case Report

A previously healthy nine years old male had a diagnosis of suppurative left otitis media and was medicated with amoxicillin and clavulanate for 7 days. Two days later he started fever, otalgia and pain on the left mastoid area. Also had a transient change of conscious (disorientation and memory loss). A brain CT was performed and revealed chronic left otomastoiditis complicated by an extensive area of encephalitis in temporoparietooccipital region, with deep abscess formation that caused mass effect (Figures 1 and 3). There was also an extradural and subdural empyema (Figure 2). There were no signs of active hydrocephalus.

The boy was treated with ceftriaxone and vancomycin and a tympanomastoidectomy was performed with transtympanic tube placement on the left and began therapy with metronidazole and dexamethasone. Cerebral MRI showed the same left temporal abscess and extra-axial empyema. In the same week the drainage of the empyema was performed. The pus from the auricular swab and from the drained empyema isolated a multirresistant *Morganella morganii*. He mantained clinical stability and was transferred to the inpatient Pediatrics/Pediatric Neurosurgery for maintenance care, and remained afebrile and with markers of infection all negative. During hospitalization he maintained hemodynamic stability, and was always conscious, cooperative and oriented, without focal deficits or seizures. Cerebral MRI was performed three weeks after the drainage of empyema showed a good recovery without abscessed collections. After three weeks of triple antibiotics plus another week of ceftriaxone and metronidazole he was discharged, maintaining oral antibiotics for another two weeks (cefixime) and oriented for several consultations.

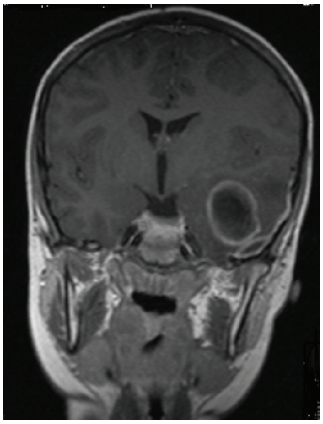

Figure 1: Deep abscess formation.

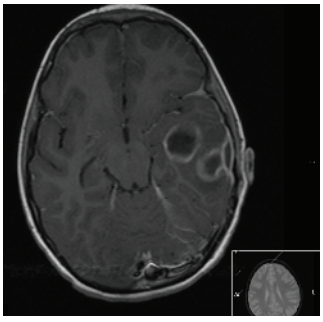

Figure 2: Extradural and subdural empyema.

Discussion

Morganella morganii infections are usually reported in the setting of urinary tract infection, postoperative wound infection or bacteraemia [5,6]. This agent is an extremely rare cause of brain abscess and empyema, with very few reports.

We report this case to increase awareness among pediatricians that *Morganella morganii*, even though uncommon, is a cause of brain abscess and empyema. As it may have a slow insidious onset with

Figure 3: Deep abscess formation with associated mass effect.

***Corresponding author:** Sofia Águeda, M.D. Neonatal Intensive Care Unit, Department of Pedatrics, Centro Hospitalar São João, Porto, Portugal, Tel: 225 512 100; E-mail: sofiamsa@gmail.com

Received May 15, 2013; **Accepted** May 26, 2013; **Published** May 29, 2013

Citation: Águeda S, Leitão A, Rocha G, Guimarães H (2013) Cerebral Abscess and Empyema due to *Morganella morganii*. Pediat Therapeut 3: 147. doi:10.4172/2161-0665.1000147

minimal signs and symptoms, a high index of suspicion is required. Our report was a very successful case, as Morganella morganii cerebral infection can be a devastating disorder. The outcome depends upon the early institution of appropriate antibiotics and surgical intervention and in our case the agent was multirresistant *in vitro*, but fortunately responded *in vivo* to the third generation cephalosporins. Aggressive surgical management and appropriate antimicrobial therapy can lead to cure, but the mortality rate for these infections remains high [3].

References

1. Falagas ME, Kavvadia PK, Mantadakis E, Kofteridis DP, Bliziotis IA, et al. (2006) Morganella morganii infections in a general tertiary hospital. Infection 34: 315-321.
2. Patil AB, Nadagir SD, Lakshminarayana S, Syeda FM (2012) Morganella morganii, subspecies morganii, biogroup A: An unusual causative pathogen of brain abscess. J Neurosci Rural Pract 3: 370-372.
3. Abdalla J, Saad M, Samnani I, Lee P, Moorman J (2006) Central nervous system infection caused by Morganella morganii. Am J Med Sci 331: 44-47.
4. Thomas VA, Sathish T, Agarwal I, Chacko AG (2007) Unusual cause of brain abscess in an infant. J Pediatr Neurosci 2: 94-5.
5. Chang HY, Wang SM, Chiu NC, Chung HY, Wang HK (2011) Neonatal Morganella morganii sepsis: a case report and review of the literature. Pediatr Int 53: 121-123.
6. Kim BN, Kim NJ, Kim MN, Kim YS, Woo JH, et al. (2003) Bacteraemia due to tribe Proteeae: a review of 132 cases during a decade (1991-2000). Scand J Infect Dis 35: 98-103.