CLINCAL VIGNETTE

Isolated Aseptic Liver Abscesses in a Patient with Ulcerative Colitis

Erica G. Bromley, M.D.[1], Susan D. Leonard, M.D.[2]

[1]Department of Internal Medicine, David Geffen School of Medicine at UCLA, Los Angeles, CA
[2] Department of Internal Medicine and Geriatrics, David Geffen School of Medicine at UCLA, Los Angeles, CA

Introduction

Aseptic abscesses (AA) or sterile fluid collections of neutrophils have been described in case reports as early as the 1970s[1,2,3]. While they share some features with neutrophilic dermatoses, cases of AA deep to the subcutaneous tissues have been reported. Ulcerative colitis (UC) has been associated with very few cases of AA[4,5] and there have been no reports of patients with isolated aseptic hepatic abscesses.

Case Report

A 69-year-old south Asian male with a 25-year history of UC presented in 2012 with five years of recurrent fevers. He had been treated with sulfasalazine for mild UC. On initial presentation in 2007, he was diagnosed with pneumonia. CT of the abdomen showed multiple fluid collections within the liver consistent with abscesses. Percutaneous culture demonstrated sterile fluid collections. He was treated with broad-spectrum antibiotics with improvement in his fever. In 2009 and 2010 he experienced recurrent fevers and persistent hepatic abscesses despite antibiotics. After two courses of prednisone in 2010, his fevers had improved and CT scan showed reduction in size of the abscesses.

He presented again in 2012 with a temperature of 37.8°C, leukocytosis of 17,500/µL, and sedimentation rate of 31 mm/hr. CT of the abdomen demonstrated two hypodense lesions within the right lobe of the liver demonstrating rim enhancement (Figure 1). Ultrasound-guided percutaneous drainage of the larger collection produced 25cc of purulent fluid, which was negative on culture. He was started on prednisone 40mg orally daily while undergoing treatment for latent tuberculosis, and subsequently was started on infliximab. His fevers resolved, and ten months after starting infliximab, repeat CT scan demonstrated near resolution of the abscesses (Figure 2).

Discussion

The diagnosis of aseptic abscesses is unusual,and even more uncommon with the patient's older age at diagnosis, his South Asian ethnicity, and the presence of isolated liver involvement. Of the fewer than 60 reported cases of aseptic abscesses, the majority have been reported in Europe[1-4]. A recent review documented thirty cases of aseptic abscesses with mean age at diagnosis of 29 years[1]. Although 70% of these patients had inflammatory bowel disease, only 13% were diagnosed or had features of UC. Other cases were associated with Crohn's disease, relapsing polychondritis, neutrophilic dermatosis, and monoclonal gammopathy of undetermined significance[1]. The spleen was involved in 93%, the liver in 40%, and lung in 17%[1]. As in this paper, the other case reports document intra-abdominal aseptic abscesses, but cases of isolated aseptic hepatic abscesses have not yet been reported.[1-6]. Those cases associated with UC have involved of several different organs concomitantly: 1) spleen, liver, and mesenteric lymph nodes; 2) retropharyngeal space and spleen; and 3) subcutaneous tissues[6].

While hepatic abscesses are the most common type of visceral abscess in general, they are typically infectious, often polymicrobial, and carry mortality ranging from 2.5% to 12%[7,8]. Thus, upon discovery of a hepatic abscess, is essential to pursue a thorough infectious work-up including stool or serum testing for amebiasis. Once infectious etiologies are excluded, immunosuppressive therapy can be pursued. While standardized guidelines for treatment of aseptic abscesses do not exist, corticosteroids have been utilized in nearly all described cases, with the successful addition of immunomodulators or TNF-alpha inhibitors—cyclosporine, azathioprine, methotrexate, or infliximab—in multiple cases[1-6].

In this case, given persistence of abscesses and fevers despite two courses of prednisone therapy, anti-TNF therapy was pursued with clinical success. His clinical course highlights the importance of considering the diagnosis of aseptic abscesses in

patients with UC, and contributes to growing literature documenting extra intestinal manifestations of inflammatory bowel disease.

REFERENCES

1. **André MF, Piette JC, Kémény JL, Ninet J, Jego P, Delèvaux I, Wechsler B, Weiller PJ, Francès C, Blétry O, Wismans PJ, Rousset H, Colombel JF, Aumaître O**; French Study Group on Aseptic Abscesses. Aseptic abscesses: a study of 30 patients with or without inflammatory bowel disease and review of the literature. *Medicine (Baltimore).* 2007 May;86(3):145-61. Review. PubMed PMID: 17505254.
2. **André M, Aumaître O, Papo T, Kemeny JL, Vital-Durand D, Rousset H, Ninet J, Pointud P, Charlotte F, Godeau B, Schmidt J, Marcheix JC, Piette JC**. Disseminated aseptic abscesses associated with Crohn's disease: a new entity? *Dig Dis Sci*. 1998 Feb;43(2):420-8. PubMed PMID: 9512140.
3. **Andre M, Aumaitre O, Marcheix JC, Piette JC**. Aseptic systemic abscesses preceding diagnosis of Crohn's disease by three years. *Dig Dis Sci*. 1995 Mar;40(3):525-7. PubMed PMID: 7895536.
4. **André M, Piette JC, Frances C, Wechsler B, Delevaux I, Aumaître O**. Retropharyngeal and splenic aseptic abscesses treated with prednisone and cyclophosphamide in a patient with ulcerative colitis. *Dig Dis Sci*. 2003 Jun;48(6):1193-5. PubMed PMID: 12822884.
5. **André M, Aumaître O**. [Aseptic abscesses syndrome]. Rev Med Interne. 2011 Nov;32(11):678-88. doi: 10.1016/j.revmed.2011.02.001. Epub 2011 Mar 5. *Review*. French. PubMed PMID: 21382655.
6. **Kinjo F, Miyazato S, Hokama A, Kugai Y, Saito A**. Aseptic subcutaneous abscess associated with ulcerative colitis. *J Gastroenterol Hepatol*. 2003 Oct;18(10):1214-5. PubMed PMID: 12974915.
7. **Rahimian J, Wilson T, Oram V, Holzman RS**. Pyogenic liver abscess: recent trends in etiology and mortality. *Clin Infect Dis*. 2004 Dec 1;39(11):1654-9. Epub 2004 Nov 9. PubMed PMID: 15578367.
8. **Mohsen AH, Green ST, Read RC, McKendrick MW**. Liver abscess in adults: ten years experience in a UK centre. *QJM*. 2002 Dec;95(12):797-802. PubMed PMID: 12454322.

Submitted on July 16, 2013