Photo Quiz: To Scan or Not to Scan?  
(See page 1003 for the Photo Quiz.)

Diagnosis: *Salmonella* Enteritidis mycotic pseudoaneurysm of the iliac artery.

Our patient had been in his usual state of health until 1 month before, when he first started experiencing fevers and chills and was diagnosed with a urinary tract infection. At that time, his urine culture, stool culture, and 4/4 bottles of blood cultures were positive for *Salmonella* Enteritidis susceptible to ciprofloxacin, amoxicillin, and co-trimoxazole. One year before, an abdominal computed tomography scan had shown extensive atherosclerotic disease of the abdominal aorta but no aneurysms. Testing for human immunodeficiency virus was negative. Repeat cultures were negative, and he was discharged on oral ciprofloxacin for a total of 14 days.

A few days after the patient finished the ciprofloxacin, his fever recurred. On the day of admission, he presented with painless left hip flexor palsy with intact sensation throughout, which was concerning for compression of the femoral nerve and/or the psoas muscle. A computed tomography scan of the abdomen and pelvis revealed a 10.5 × 5 × 4.4-cm pseudoaneurysm of the left common iliac artery, with mass effect on the psoas muscle, femoral nerve, and left ureter (Figure 1), resulting in significant hydronephrosis (Figure 1). Urine and 4/4 blood culture bottles again yielded *Salmonella* Enteritidis.

Nontyphoid *Salmonella* species are widely distributed in the environment, including in a variety of animal hosts. Our patient had once owned chickens, turtles, and dragon lizards, all of which have been associated with carriage of nontyphoid *Salmonella*. Unlike most gram-negative bacteria, *Salmonella* is well known for its propensity to adhere to damaged vascular endothelium and atherosclerotic plaques. *Salmonella* Typhi arteritis was described by Sir William Osler in 4 of 1500 patients with enteric fever, and the first case of a mycotic pseudoaneurysm was published in 1909, regarding a 32-year-old farmer who was recovering from typhoid [1]. Surgical excision and in situ repair were attempted, but the patient developed gangrene that required limb amputation.

Our patient was an active smoker aged in his 60s with significant burden of atherosclerotic vascular disease. In the presence of *Salmonella* bacteremia, these patients are at high risk for seeding of atherosclerotic lesions and developing mycotic aneurysms, as demonstrated in the present and previous reports [2–6]. In particular, 25% of men with nontyphoid *Salmonella* bacteremia aged >50 years [2] and 40% of men aged >60 years [3] were found to have an endovascular source. Although *Salmonella* may infect preexisting atherosclerotic aneurysms, the evolution from *Salmonella* aortitis to a frank mycotic aneurysm can be as rapid as 1 week or even less [4]. Therefore, recent imaging that is negative for aneurysms does not rule out the possibility of an endovascular infection, as illustrated in the present case.

The mortality from *Salmonella* aneurysms with medical management alone is almost 100%, with the most common cause of death being rupture of the aneurysm; therefore, prompt surgical intervention is paramount. Excision of the aneurysm with wide debridement and extra-anatomic bypass outside infected planes is generally preferred [4, 5]. In high-risk surgical candidates with significant comorbidities, endovascular stent grafts can be used with satisfactory results [4, 7].

![Figure 1](https://example.com/figure1.png)
Although, to our knowledge, no formal randomized controlled trials exist, lifelong suppression with oral antibiotics seems to improve survival after surgery [5]. In our patient, kissing stents were placed in the common iliac arteries bilaterally, resulting in resolution of his symptoms. He was treated with intravenous ceftriaxone for 6 weeks and was discharged with the plan to continue lifelong oral suppression with amoxicillin.

**Note**

*Potential conflicts of interest.* All authors: No reported conflicts. All authors have submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Conflicts that the editors consider relevant to the content of the manuscript have been disclosed.

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