Title: A Rare Case of *Streptococcus agalactiae* Pyomyoma in a Postmenopausal Patient

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Background: Pyomyoma is a rare but potentially fatal complication of uterine leiomyomata. Most cases occur in postpartum or postmenopausal patients with vascular disease and arise due to infarction and infection of existing fibroids. However, symptoms may be non-specific upon presentation, often making this diagnosis difficult or delayed. The proposed diagnostic triad for pyomyoma includes 1) sepsis or bacteremia; 2) uterine leiomyomata; and 3) no other apparent source of infection. To date, only 50 cases have been reported in the literature.

Objective: We present a case and resolution of a postmenopausal patient who presented with the aforementioned triad, and was found to have a pyomyoma, positive for *Streptococcus agalactiae.*

Case Report: A 67 year-old G1P0010 African-American female with no known past medical history presented to the emergency department for acute onset altered mental status. Although afebrile, she was tachycardic and hypotensive, with severe hyperglycemia and leukocytosis on initial assessment. Initial head imaging revealed multiple thromboembolic cerebral infarcts, but further evaluation was negative for a cardiac or vascular source. Her infectious workup was ultimately notable for *S. agalactiae* bacteremia, while a CT abdomen and pelvis revealed a lobulated, calcified fibroid uterus with a rim-enhancing fluid collection measuring up to 9.9 cm. Broad spectrum intravenous antibiotics (vancomycin and ceftriaxone) were initiated and she underwent CT-guided drainage of the abscess, which was also positive for *S. agalactiae.* Antibiotic susceptibilities revealed sensitivity to penicillin and cephalosporins, so vancomycin was discontinued and the patient was continued on ceftriaxone, with metronidazole and doxycycline added for pelvic abscess coverage. The patient had recurrent fevers and persistent leukocytosis with conservative management, ultimately prompting a total abdominal hysterectomy with bilateral salpingo-oophorectomy and pelvic washout. Intraoperative findings were notable for a pedunculated, necrotic uterine fibroid with a nest of purulent material within, and no other apparent gastrointestinal source of infection. Final uterine pathology was benign. The patient recovered well post-operatively, and she was ultimately discharged to an inpatient rehabilitation facility.

Conclusion: While rare, pyomyoma should be considered for any postpartum or postmenopausal patient with medical risk factors or known vascular disease, presenting with the triad of sepsis or bacteremia, uterine leiomyomata, and no other apparent source of infection. Most likely, infectious seeding arises from the urogenital tract. Colonization with S. agalactiae is relatively common in patients of reproductive age, but may be less prevalent in post-menopausal patients according to some studies. The high mortality associated with pyomyoma is due to overwhelming sepsis and a delay in diagnosis, likely related to non-specific symptoms and low suspicion for any uterine pathology, as in our case. Our patient reported no pelvic pain or abnormal vaginal discharge on arrival and only minimal tenderness was evoked during bimanual examination. Interestingly, an unconventional, fortuitous approach was undertaken to evaluate her altered mental status, with a MRI BATT performed, rather than a typical non-contrast CT of the head. The findings of thromboembolic emboli with this modality combined

with tachycardia and significant leukocytosis heightened concern for an infectious etiology. By hospital day 2, a sepsis workup revealed bacteremia, prompting a CT of the abdomen and pelvis to identify any potential source of infection. Conservative treatment with IV antibiotics and image-guided drainage of the pyomyoma proved to be inadequate for our patient. Ultimately, surgical management was curative. Due to the high potential for mortality, a diagnosis of pyomyoma should be considered for patients such as ours and warrants prompt identification and immediate treatment.