INTRODUCTION

Acupuncture use has grown in the past decade. It has become a commonly practiced and recognized form of complementary and alternative medicine (CAM) especially as therapy for chronic pain.

This case highlights two issues, the safety of acupuncture and the clinical significance of S. aureus bacteriuria in patients with S. aureus bacteremia.

CASE DESCRIPTION

An 80 year female presented with a two day history of fever, chills, rigors and lower back pain severely limiting mobility. Areas of erythema were noted at the lower back region. There were no visible needle marks or other wounds. She was febrile, 101.3°F (38.5°C). She had spinal tenderness at the lower thoracic and lumbar region but no neurological deficits.

Five days prior to presentation, she had received acupuncture to the lower back region after falling and sustaining lower back pain. She underwent a second session of acupuncture two days later. The acupuncture had been performed by a Traditional Chinese Medicine (TCM) practitioner at a medicinal shop. The skin was not cleaned before needle insertion and it was not known if the needles were sterilized. The needles were inserted for an hour each session.

Five out of six blood cultures and urine culture grew methicillin-sensitive staphylococcus aureus (MSSA). Magnetic resonance imaging showed spondylodiscitis of T11-L1 and paravertebral soft tissue infection (Fig 1).

The diagnosis was spondylodiscitis with bacteremia and bacteriuria secondary to acupuncture. She was started on intravenous clavuloxicillin for 6 weeks duration and the remainder of her hospital stay was uneventful.

DISCUSSION

Systemic reviews done exploring the relationship between adverse outcomes and acupunctures have mostly found that complications are avoidable; acupuncture is generally safe when compared to adverse outcomes in other pharmacological treatments. Complications are not intrinsic to acupuncture but rather are caused by the negligence of acupuncturists.

S. aureus is the most common pathogen in bacterial infections secondary to acupuncture.

S. aureus is associated with significant mortality and morbidity but is a rare cause of urinary tract infection. A positive urine culture is typically attributed to hematogenous spread especially in the absence of bladder catheters, lower urinary tract symptoms, or recent urological surgeries. As such, S. aureus bacteriuria has been found to be an indicator of distant haematogenous seeding and a marker of deep tissue dissemination in patients with S. aureus bacteremia of non-urinary tract origin.

It has been hypothesized that S. aureus bacteriuria occurs in bacteremic patients because of greater organism burden. This consequently may signify worse outcome. Hence, the presence of S. aureus bacteriuria may help with early identification of patients who are at increased risk of poorer sequelae from bacteremia given the higher burden of infection, thus influencing general management and treatment duration.

CONCLUSION

In view of the increasing popularity of acupuncture, it is important to ensure that proper safeguards and protocols are instituted to decrease the occurrence of complications.

Clinicians should have a high suspicion of invasive S. aureus disease occurring in patients found to have S. aureus bacteriuria without risk factors for a positive urine culture. Obtaining blood cultures should thus be considered in these cases. Conversely, a positive urine culture for S. aureus may provide useful prognostic information in patients with S. aureus bacteremia.