

Menstrual cups and Group A Streptococcal Peritonitis: an important differential for Pelvic Inflammatory Disease.

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Background

Invasive Group A Streptococcus (GAS) cases are rare and have a 30% to 60% fatality rate. Recent incidence has increased from 3.8 % to 5.8% and one third of Toxic Shock Syndrome (TSS) is attributed to GAS.

Aims

Menstrual cups are a flexible, re-usable plastic vaginal menses device and are increasing popular menstrual sanitary devices. This case highlights keys for prompt diagnosis of GAS peritonitis and the relevance of these ubiquitous products.

Case

28-year-old female with an acute abdomen, negative STI screen and recent menses with menstrual cup use underwent emergency laparoscopy for suspected appendicitis. Intraoperative consult was sought for severe Pelvic Inflammatory Disease with four quadrant peritonitis and inflamed uterus found, in the absence of tubal pathology. Peritoneal swabs and washout was performed. Group A Streptococcus returned on swabs despite a negative blood culture. Infectious Diseases consult proposed GAS translocation from the vagina. Septic shock and bilateral pleural effusions necessitated a prolonged ICU stay with intravenous benzylpenicillin and the patient made a subsequent full recovery.

Discussion

GAS peritonitis and vaginal translocation of GAS is rare. Exotoxin 'superantigens' causing prolific cytokine release and subsequent TSS has been well described in prolonged tampon use. TSS following menstrual cup use has been recognised in previous cases ⁽¹⁾. Invasive GAS is a high-risk differential diagnosis for atypical abdominal pain in menstruating women and presenting features prior to deterioration are varied, warranting further case research to inform early diagnostic symptomatology.

References

1. Mitchell MA, Bisch S, Arntfield S, Hosseini-Moghaddam SM. A confirmed case of toxic shock syndrome associated with the use of a menstrual cup. *Can J Infect Dis Med Microbiol.* 2015 Jul-Aug;26(4):218-20 . doi: 10.1155/2015/560959. PMID: 26361491; PMCID: PMC4556184.