

Infectious diseases, vaccines and treatments

Session: Poster Session A

(229) A national point prevalence survey to assess surgical antibiotic prophylaxis duration and timing in obstetrics and gynaecological surgery in Kuwait

Monday, August 26, 2024 8:00 AM – 6:00 PM CEST

Location: Convention Hall II

Presenting Author(s)



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Background: Surgical antibiotic prophylaxis (SAP) is prescribed to reduce the prevalence of surgical site infections (SSIs) in obstetrics and gynaecological (OB/GYN) surgery. Global guidelines recommend SAP administration within 60 minutes of the start of surgery as a single dose, but SAP practices in Kuwait for OB/GYN surgeries remain uncertain.

Objectives: This study assessed the duration and timing of SAP in OB/GYN surgery in Kuwait.

Methods:

Design: A national multi-centre point prevalence survey (PPS) followed the Global Point Prevalence Survey (GPPS) protocol. **Setting:** All public hospitals (n=5) and in 4 selected private

hospitals in Kuwait from December 2022 to March 2023. Participants: All OB/GYN surgical patients admitted to wards who received at least one dose of SAP within 24 hours of the start of surgery were included. Data Collection: Data were collected by inspecting patient files and medication charts in each ward, with each ward's survey completed on the same day. Outcome Measures: The primary outcomes were SAP duration and timing in Kuwait. The secondary objective included comparing SAP practices between public and private hospitals.

Results: Of 233 surgical patients who received SAP, 163 (68.5%) patients received multiple doses of SAP for over 24 hours, with a median duration of 3 days (IQR=2-7 days). IV antibiotics were administered for a median of 2 days (IQR = 1-3 days), while oral prophylaxis lasted for 5 days (IQR =5-7days). The public sector hospitals had a median of 2 days (IQR = 1-3 days), while the private sector had 7 days (IQR = 6-8) ($Z=-8.84$, $p\text{-value} < 0.001$, $r=-0.57$). For timing, 139 of the 233 patients (59.6%) received SAP before surgery, with only 98 patients (42.1%) doses administered within 1 hour. Meanwhile, 54 patients (23.2%) received SAP during surgery, and 40 patients (17.2%) received SAP post-surgery.

In the public sector, 84 of 155 patients (54.2%) received SAP before surgery, with 63 patients (40.6%) within 1 hour before the procedure. In the private sector, 55 (70.5%) of 78 patients received SAP before surgery, with 35 (44.8%) receiving it within 1 hour. The odds of receiving SAP within 1 hour of surgery were significantly lower in public hospitals compared to private (OR= 0.257, 95%CI=0.092-0.716, $p=0.009$). There was a statistically significant association between SAP timing and hospital type ($\chi^2 = 18.05$, $df = 5$, $p < 0.003$, Cramer's $V=0.28$).

Conclusions: This study reveals a concerning level of inappropriate prescribing of SAP in Kuwait for OB/GYN surgery in terms of prolonged duration and inappropriate timing. Improved adherence to SAP protocols is crucial to enhance patient safety, reduce SSIs, mitigate antimicrobial resistance (AMR), and optimise healthcare practices in OB/GYN surgery in Kuwait.