

Category :**Sepsis/septic shock: management**

A23 - Sampling peritoneal fluid during emergency laparotomy influences 40% of subsequent antimicrobial prescriptions on the icu

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Introduction:

A key tenet of ICU care following emergency laparotomy is administration of appropriate empirical antimicrobials, with prescribing adjustment based on microbiological results. We conducted a quality improvement project with the intention of increasing the frequency of intraoperative peritoneal fluid sampling during emergency laparotomy to see how this would affect postoperative antimicrobial prescribing on the ICU.

Methods:

A baseline audit showed the frequency of fluid sampling to be 31%. Through collaboration with our surgeons, we encouraged peritoneal fluid sampling for microbiological analysis at the time of emergency laparotomy. Any prescribing changes required from our empirical antibiotics (amoxicillin, metronidazole and gentamicin) were noted.

Results:

Over an 18-month period, 120 emergency laparotomies were performed on 110 patients. A sample was sent from the peritoneal cavity during 76 operations (63%). Fifty-three samples yielded positive growth. Of these 36 (68%) samples showed antibiotic resistance patterns: 22 (42%) to amoxicillin/co-amoxiclav, 3 (6%) to gentamicin, and 4 cultures (7%) to both. Six (11%) grew candida, one of which was resistant to voriconazole. Of the samples yielding positive growth, a total of 31 (58%) therefore yielded results which would influence a change in prescribing from the hospital's empirical antibiotics.

For patients in whom a sample was sent for analysis, a prescription change would therefore be expected in 40%.

Conclusion:

Our results suggest that sampling peritoneal fluid during emergency laparotomy may alter 40% of antibiotic prescriptions on ICU. Further work is required to understand how this affects patient outcome, but in the absence of these data it seems reasonable to advocate peritoneal fluid sampling during emergency laparotomy to guide subsequent antibiotic decision making on the ICU.