Empirical Enterococcal Coverage for Complicated Intra-Abdominal Infection

To the Editor—All new or updated Infection Diseases Society of America (IDSA) guidelines allow us to be in a privileged position to take advantage of an authoritative review of current knowledge and best practices on a given topic. The recent IDSA guidelines on the diagnosis and management of complicated intra-abdominal infection in adults and children [1] are no different, and I commend the authors for the amount of work that was necessary to write the manuscript.

However, on the topic of empirical enterococcal coverage for abdominal infections, there are some inconsistencies that should be addressed to clarify the recommended approach. Whether enterococci are significant pathogens in intra-abdominal infections has been a matter of much debate and research. On one hand, there have been several well-designed trials showing no clinical benefit associated with empirical enterococcal coverage [2, 3]. Conversely, prospective trials have demonstrated increased mortality among patients with documented enterococcal infection, particularly in those patients with health care–associated intra-abdominal infection [4, 5]. On the basis of these data, I agree with the position stated on pages 150 and 151 of the guidelines that it seems reasonable and appropriate to provide empirical enterococcal coverage both for high-risk community-acquired intra-abdominal infections and for all health care–associated intra-abdominal infections.

Recommendations at odds with the above are, however, to be found in Table 2 of the guidelines, in which “Cefepime, ceftazidime, ciprofloxacin, or levofloxacin, each in combination with metronidazole” are suggested as appropriate regimens for high-risk, community-acquired intra-abdominal infections. This is clearly inconsistent with the statement in point 42: “Empirical use of agents against enterococci is recommended” [1, p 136].

Along the same lines, point 34 states that “Empiric coverage of Enterococcus is not necessary with community-acquired intra-abdominal infection” [1, p 136]. This is under the heading of mild-to-moderate infections and is therefore congruent with the rest of the guidelines. Nevertheless, for clarity, this statement should probably be revised to state, “Empiric coverage of Enterococcus is not necessary with mild-to-moderate community-acquired intra-abdominal infection.”

Similar issues can be found in the recommendations for healthcare–associated infections. Table 3 offers “Ceftazidime or cecepine, each with metronidazole” for the aforementioned indication in institutions with a low prevalence of multidrug-resistant infections with gram-negative organisms. This is at odds with the statement in point 55: “Empiric anti-enterococcal therapy is recommended for patients with health care–associated intra-abdominal infection, particularly those with postoperative infection, those who have previously received cephalosporins or other antimicrobial agents selecting for Enterococcus species, immunocompromised patients, and those with valvular heart disease or prosthetic intravascular materials” [1, p 137].

These incongruities do not detract from the overall quality of the guidelines. In my opinion, an update to clarify these points would, nonetheless, be welcomed.

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References

was chosen simply because these patients
abdominal infections. This specific disease
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penicillitis, a disease that accounts for a
by recommending that local hospitals de-
guidelines would fit into antibiotic ste-
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coccal therapy to empirical therapy for
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To the Editor—In his excellent assess-
comment(s), Tarchini [1] highlights the difficul-
ties in making evidence-based recommend-
dations for the management of enteroc-
ci in intra-abdominal infections [2].
The panel discussed at some length the
placement of the enterococcal therapy rec-
recommendations, particularly those for high
severity community-acquired infections.
There was not sufficiently broad consen-
sus for any approach to warrant any level
of recommendation. It was decided, there-
fore, to mention this in text without im-
plying that this carried the same level of
Evidence or comfort as did the other ele-
ments in Table 2.
Regarding the addition of anti-entero-
coccal therapy to empirical therapy for
health care–associated infection, my col-
leagues and I agree with the concern Tar-
chini [1] has regarding a close connect-
between Table 3 and recommendation 55.
However, that table, as with all of the
tables, was intended as a summary of the
more complete material in text. There-
fore, how much detail to insert in the
tables became an assessment of relative
priorities.
Piaccenti [3] raises several important
points that focus attention on our han-
dling of stewardship concerns. An over-
arching concern to the panel was for the
incorporation of material on how these
guidelines would fit into antibiotic ste-
wardship efforts. We chose to handle this
by recommending that local hospitals de-
velop a specific pathway for handling ap-
pendicitis, a disease that accounts for a
predominant share of complicated intra-
abdominal infections. This specific disease
was chosen simply because these patients
are overwhelmingly a unique group and
do not have those patient-specific factors
that would frequently alter antimicrobial
or interventional strategies. Such neces-
changes in an individual patient’s treat-
ment was felt to vastly complicate
broader pathways to the point of this path-
way being useless.
In constructing recommendations for
mild-to-moderate severity disease for an
Evidence-based review, we included erta-
penem, moxifloxacin, and tigecycline be-
cause there are data from level 1 studies
on their use in this setting. These agents
have been approved by the US Food and
Drug Administration for the treatment of
complicated intra-abdominal infections
and are used for this indication. Table 2
is not entitled, “recommended Agents,”
but rather “Agents and Regimens That
May Be Used for the Initial Empiric Treat-
ment of Extra-biliary Complicated Intra-
adominal Infections.”
The evidence summary describes ste-
wardship concerns for empirical therapy
directed at extended-spectrum \( \beta \)-lacta-
mase–producing organisms when these
are locally uncommon and for coverage
of methicillin-resistant \( \text{Staphylococcus aureus} \)
when it is an unlikely pathogen. Rec-
ommendation 39 is given over to these
concerns. In other text, the benefits of ge-
eric agents and cephalospin/metroni-
dazole combinations are mentioned.
Recommendation 39 deals with the per-
centage incidence of resistance that re-
sues in clinical regimens for
most common complications and is
heavily weighted to a youn-
ger, healthier group with low scores.
This is because appendicitis is the most
common complication of intra-abdominal
infection treated. Similarly, “immuno-
compromise,” as defined in this guide-
line, is not common.
Experienced microbiologists and infec-
tious disease practitioners on this panel
uniformly agreed ampicillin-sulbactam
should not be used. I regret the inac-
curate citation but believe that problems
with this agent are widely and well
known. I appreciate Piaccenti supplying
the correct citations.

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