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NAP-based therapy that can achieve high rates of functional cure: HBsAg seroconversion during NAP monotherapy is weak and does not predict virologic control or functional cure.⁴ A dramatic amplification in seroconversion and transaminase flares only follows addition of pegIFN or thymosin alpha 1 (both agents with known T-cell stimulatory activity)⁴ and the increased rates and strength of transaminase flares are correlated with increased rates of functional cure.^{1,6}

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Conflicts of interest

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Most current article

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Fever and Diarrhea as the Only Symptoms of Multisystem Inflammatory Syndrome in Children



Dear Editors:

We would like to congratulate Miller et al¹ on their article about multisystem inflammatory syndrome in children (MIS-C) and express our gratitude because it helped us to establish a diagnosis in our patient. Reports about MIS-C published so far come from countries with particularly high coronavirus disease (COVID-19) prevalence^{1–3} and the majority of described cases had severe course with frequent progression to shock. However, MIS-C may occur in any country touched by the COVID-19 pandemic and it is likely that it may present in various forms, ranging from toxic shock to much milder “fever and inflammation” variant.² We want to present a case of a 14-year-old boy, who presented with fever and diarrhea only, but fulfilled the MIS-C case definition,⁴ and had insidious, but apparent cardiac involvement.

We admitted the boy on the day 5 of fever up to 41°C, with progressive lethargy. The only associating symptoms

were abdominal pain and one episode of vomiting. The boy’s father underwent febrile infection with anosmia 6 weeks earlier and tested positive for severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) IgM and IgG.

On admission, the boy seemed well, with normal vital signs. On physical examination, the abdomen was soft, but painful in the right iliac pit. Laboratory evaluation revealed lymphopenia 630/μL, hemoglobin 12 g/dL, platelets 180 × 10³/μL, increased C-reactive protein 20.6 mg/dL, and ferritin 277.7 ng/mL. Despite having no cardiovascular symptoms, considering possible MIS-C, cardiac injury markers were obtained: N-terminal pro-brain natriuretic peptide (NT-pro-BNP) was 275 pg/mL and troponin 19.2 ng/L. In the hospital, the boy developed watery diarrhea. Microbiological stool tests were negative. A nasopharyngeal polymerase chain reaction test for SARS-CoV-2 was negative, whereas IgG for COVID-19 was positive. The boy received supportive treatment with oral fluids and antipyretics. Fever resolved on day 7, but cardiac markers increased: troponin 232 ng/L, NT-pro-BNP 1764 pg/mL. A chest radiograph, electrocardiography, and echocardiography revealed no abnormalities. Troponin and NT-pro-BNP concentrations normalized over the next days.

Despite the relatively low prevalence of COVID-19 in Poland, MIS-C has occurred in our country. We present the first, to our knowledge, report of a benign course of MIS-C, clinically involving only the gastrointestinal tract.

The patient’s clinical presentation suggested acute bacterial diarrhea, but known SARS-CoV-2 exposure with lymphopenia and surprisingly elevated C-reactive protein levels warranted cardiologic evaluation, revealing concomitant heart involvement. This finding is particularly important because the risk for developing coronary artery aneurysms in the course of MIS-C does not seem to correlate with disease phenotype or severity.² The awareness of MIS-C among clinicians, raised by reports from countries with high COVID-19 prevalence, is fundamental for prompt diagnosis and appropriate approach to such patients in countries where COVID-19 is not as prevalent.

In conclusion, during the COVID-19 pandemic, children with fever and acute diarrhea must be carefully observed for possible heart sequelae.

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The authors disclose no conflicts.

Most current article

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A Meta-analysis Confirms That Antibiotic Prophylaxis Is Not Needed for Endoscopic Ultrasound-Guided Fine Needle Aspiration of Pancreatic Cysts



Dear Editors:

Although endoscopic ultrasound (EUS)-guided fine needle aspiration (FNA) of pancreatic cystic lesions (PCLs) is universally considered a relatively safe technique, with a reported risk of infections as low as 0.44%,¹ antibiotic prophylaxis (usually with fluoroquinolones or beta-lactams) is routinely used in the majority of centers and current guidelines suggest its use based on a weak recommendation supported by very low-quality evidence.²

In the last years, some retrospective comparative series^{3,4} raised serious concerns on the real effectiveness of this approach and questioned the use of antimicrobial prophylaxis before EUS-FNA of PCLs. Because the use of antimicrobial agents increases the cost of the procedure as well as the risk of drug resistance and might be associated to potentially serious allergic reactions, determining the real benefit of this practice is of paramount important to draw definitive conclusions on this topic.

The multicenter randomized controlled trial published by Colan Hernandez et al⁵ in *Gastroenterology* represents the first randomized controlled trial with the aim to assess the impact of antibiotic prophylaxis on infection rate after EUS-FNA of PCLs.

The results of this study seem to confirm previous observations and the authors' findings pushed us to conduct a systematic assessment of the available literature in the field. We found 6 studies³⁻⁸ with 1706 patients, of which 1038 treated with antibiotics and 668 who did not undergo antibiotic prophylaxis. Antibiotic regimens were based mainly on fluoroquinolones and most of the included studies used 22G FNA needles for cyst aspiration.

There was no difference in terms of infection rate between the 2 groups (odds ratio [OR], 0.65; 95% confidence interval [CI], 0.24–1.78; $P = .40$), with low evidence of heterogeneity ($I^2 = 10\%$). Overall, 8 infectious events were observed in the antibiotic group (0.77%), whereas 12 events were registered in the control group (1.7%). The findings of the main analysis were confirmed in sensitivity analysis restricted to high quality studies OR, 0.87; 95% CI, 0.26–2.94), prospective studies (OR, 0.34; 95% CI, 0.01–8.34), and full-text articles OR, 0.53; 95%

CI, 0.20–1.43). Heterogeneity was very low in all the subgroups tested (I^2 ranging from 0% to 3%).

Overall, 3 severe infection events were reported in 3 studies,³⁻⁵ one in the antibiotic group (0.3%) and 2 in the control group (0.4%). As a consequence, no difference was observed between the 2 study groups (OR, 0.88; 95% CI, 0.13–5.82; $P = .89$) with evidence of very low heterogeneity ($I^2 = 4\%$). Finally, 65 adverse events were registered in the antibiotic group (6.8%) and 54 in the control group (10%), with no difference between the 2 groups (OR, 1.09; 95% CI, 0.73–1.65; $P = .67$). Again, heterogeneity was absent ($I^2 = 0\%$). Hence these results, strengthened by the very low heterogeneity and confirmed in several sensitivity analyses, should raise doubts on the current strategy based on routinely administration of antibiotics before EUS-FNA of PCLs.

In fact, the routine use of antibiotics presents several negative implications; namely, it increases the cost of the procedure and the risk of drug resistance, and it might be associated with potentially serious allergic reactions and secondary infections. Moreover, complex regimens involving parenteral antibiotics hours in advance or oral courses after the procedure increase the complexity of the procedure and may result in nonadherence.

In conclusion, Colan Hernandez et al should be commended for conducting the first randomized controlled trial in the field, whose results allow to shed further light on the uselessness of this practice. These findings are confirmed also with a meta-analysis based on the current literature, thus suggesting the nonsuperiority of the antibiotic prophylaxis before EUS-FNA of PCLs. Therefore, current guidelines should be reappraised and the use of prophylactic antibiotics should be abandoned as this practice does not seem to substantially decrease the risk of infections.

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