In case of limited disease, a watch-and-wait strategy or radiation therapy can be applied. It is usually approached as nodal follicular lymphoma and a multidisciplinary approach should be undertaken. In this context, as intestinal follicular lymphoma is not well established because of its rarity, but general consensus, as intestinal follicular lymphoma is usually approached as nodal follicular lymphoma and a watch-and-wait strategy or radiation therapy can be applied in case of limited disease. 1

In conclusion, rectal follicular lymphoma is a rare presentation, but faecal incontinence has not been previously reported in the literature. The histopathological evaluation of colorectal follicular lymphoma can be difficult. It is not uncommon for initial histological misinterpretation and requirement of multiple biopsies before the definite diagnosis. This case emphasises the challenge of accurate histopathological diagnosis. Suitable biopsy samples and immunophenotyping analysis are recommended for accurate interpretation of the pathological diagnosis of follicular lymphoma. 4-5

The management of gastrointestinal follicular lymphoma is not well established because of its rarity, but multidisciplinary approach should be undertaken. In this patient, after a watchful period, local radiotherapy was implemented with good effect. This appears in accordance to general consensus, as intestinal follicular lymphoma is usually approached as nodal follicular lymphoma and a watch-and-wait strategy or radiation therapy can be applied in case of limited disease. 1

In conclusion, rectal follicular lymphoma is a rare presentation, but important to consider in the differential diagnosis of rectal lesions. Endoscopists should remain alert whenever they observe ambiguous lesions in the colorectum and consultation with pathologist is advised to ensure appropriate immunostaining. Histopathologists should also maintain high clinical suspicion in differential diagnosis of follicular hyperplasia of mucosa-associated lymphoid tissue.

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**TACKLING ANTIMICROBIAL RESISTANCE (AMR) - IN VITRO EFFECT OF SODIUM CHLORIDE ON ANTIBIOTIC SUSCEPTIBILITY IN CLINICAL PSEUDOMONAS AERUGINOSA ISOLATED FROM PATIENTS WITH CYSTIC FIBROSIS (CF)**

Editor,

Relatively little is known about the potential interactions of cystic fibrosis (CF) co-therapies on antimicrobial susceptibility in CF respiratory pathogens, particularly inhaled/nebulised interventions, including those aiding sputum clearance, in particular, hypertonic saline (HTS). Whilst such interventions are not designed per se as anti-infectives, the effect (if any) of such molecules to CF patients’ microbiological status and the potential effect on antibiotic susceptibility merits careful monitoring. Hence, we examined the effect of hypertonic saline on the in vitro antibiotic susceptibility to clinical *P. aeruginosa* from adult CF patients. *P. aeruginosa* isolates (n=50) from adult CF patients were examined and were obtained from freshly expectorated sputum specimens submitted by adult CF patients, as part of the routine microbiological workup. Antibiotic susceptibility of each isolate was assessed employing standard CLSI disk diffusion assay. 1 against the antibiotics listed in Table 1, in the presence of sodium chloride (0.6M) and without supplementation, where 0.6M NaCl was chosen as a surrogate for NaCl concentration in sputum following HTS treatment. Resulting zone of inhibition were measured (mm) and compared statistically employing a two-tailed paired t-test, where p values <0.05 were considered significant, as shown (Table 1).

There was a significant effect on antibiotic susceptibility when supplemented with NaCl (0.6M). For each class of antibiotic examined, there was a statistically significant increase in zone size, ranging from a 19.3% increase with tobramycin to an 81.8% increase for piperacillin/tazobactam, with a mean increase of 60.1% over all classes of antibiotics examined.
Using CLSI interpretative criteria, these changes in mean zone size would shift intermediate resistant isolates for piperacillin-tazobactam and ciprofloxacin to being sensitive, with the others remaining sensitive, with and without salt supplementation, albeit with increased susceptibilities in the presence of salt.

The mechanisms contributing to enhanced antibiotic susceptibility in the presence of increased saline concentration (0.6M) are not fully understood, but it appears that increased osmotic pressure is responsible for altered MIC value. *P. aeruginosa* cells had been precultured in isotonic conditions and were suddenly exposed to unusual hypertonic conditions, leading to a sudden change in external osmotic pressure. The immediate result of this would have been water efflux and cell dehydration, leading to adversely altered cytoplasmic solute concentration and a disruption in normal cellular physiology. Additionally, such osmotic stress would lead to alterations in physical properties of the cell architecture, including cell volume of the cytoplasm/periplasm, turgor pressure, cell wall strain and cytoplasmic membrane tension.

The increasing burden of AMR amongst CF bacterial pathogens is clinically important, as it limits the efficacy of antibiotics used. Therefore, any positive shift in regaining susceptibility is to be welcomed and exploited, to maintain the effectiveness and value of the current CF antibiotic formulary.

In conclusion, the inclusion of NaCl demonstrated an increase in zone diameters for all antibiotics tested. Our results suggest a potential synergistic effect of NaCl and commonly used anti-pseudomonal antibiotics. Further work is now needed to evaluate the *in vivo* effect of HTS and PA antimicrobial therapy and if the reduced MIC is maintained over time.

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The authors have no interests to declare.

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