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Letters to the Editor

Prevalence of hepatitis C among dock workers

Dear Editor,

Although hepatitis C is still an important issue in public health, with near 400 thousand deaths per year, due to complications related to the disease, the World health organization reduced its estimation of hepatitis C general prevalence from 270 million in 1999 to 71 million in 2017.[1] There is a conclusion that the higher prevalence is occurring in more vulnerable, high risk, populations, with that comes the logical deduction that it is necessary to actively search for these groups. We did not find in the global medical literature any evaluation of HCV on dockworkers. We conducted a cross sectional study in Santos's Harbor, Brazil, the biggest sea harbor in the south hemisphere, in extension and in financial movement. We used a quick test (HCV ELISA TEST BIOEASY) that presents 99.9% specificity and 91% sensitivity,[2] supplied by Brazil's Health Ministry. The blood, collected by finger pricking, was taken from 190 randomly chosen male dockworkers, with ages from 18 years to 60 years, all of which had previously agreed an Informed and Agreed Consent form and to answer questions concerning HCV demographic and risk factors data, gathering 8 seropositive samples (4.21%). From these samples, three were injectable drug users and went frequently to a region near the docks known as an area for sex professionals and drug users. The HCV prevalence reported was higher than the estimated for the general population,[3,4,5] suggesting that dockworkers are a HCV higher risk community due to their surroundings, known to be promiscuous. New studies need to further evaluate this probable risk group.

Authors' contribution

1 Roberto Focaccia: advisor, conception and design of the objectives to search, review and final approval of the version to be published.
2 Adriana Silva de Moraes: Data collection, data tabulation, discussion and final review.
3 Karla Fabiana Begosso Sampaio da Fonseca Carbonari: Data collection, data tabulation, drafting of results and final review.
4 Maria Luiza Alessi Ribeiro: conception and design of the objectives to be searched, data collection, data tabulation, editor of methodology, discussion and final review.
5 Bruna de Souza Quevedo: Data collection, data tabulation, drafting of results and final review.

Conflicts of interest

The authors declare no conflicts of interest.

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Bloodstream infection by *mcr*-1-harboring *Escherichia coli* in a cancer patient in southern Brazil

Dear Editor,

The rapid spread of plasmid-mediated *mcr-1* gene has become a worldwide concern since it confers resistance to polymyxins considered as a last resource for treatment of infections caused by multidrug-resistant Gram-negative bacilli.[1] Despite its low frequency in Brazil, the *mcr-1* gene has been reported in *Escherichia coli*[2] and *Klebsiella pneumoniae*[3] clinical isolates. In this study, we report a case of bloodstream infection by *mcr-1*-harboring *E. coli* in southern Brazil.

The presence of *mcr-1* gene was investigated in 340 polymyxin-resistant Gram-negative bacilli clinical isolates (*Enterobacteriaceae*, *Acinetobacter baumannii* and *Pseudomonas aeruginosa*) collected between August 2015 and January 2018 in a university hospital located in Santa Maria, Rio Grande do Sul, Brazil. Among clinical isolates, one *E. coli* harbored the *mcr-1* gene isolated from blood cultures in September 2017. The patient was a 59-year-old woman with malignant neoplasm of middle third of esophagus and intrahepatic cholangiocarcinoma admitted to the hospital for a transthoracic esophagectomy. Four days after the procedure, the patient was transferred to the Adult Intensive Care Unit (ICU) due to hemodynamic instability and ventilatory discomfort. Empirical treatment with ceftriaxone (1 g 12/12 h) and metronidazole (1.5 mg/day) was initiated. Laboratory tests revealed leukocytosis (27,115 ± 7684.20/mm^3) with left shift (8997.75 ± 1619.14/mm^3 immature leukocytes) and increased C-reactive protein (>25 mg/dL; reference value: <0.3 mg/dL). *E. coli* isolate was recovered in two blood cultures from different peripheral sites and *Klebsiella pneumoniae* carbapenemase-producing *K. pneumoniae* (KPC-Kp) isolate in a rectal swab culture for epidemiological surveillance. Based on antimicrobial susceptibility testing (Table 1) by the VITEK® 2 system (bioMérieux, Marcy-l'Étoile, France), the antibiotic regimen was switched to amikacin (250 mg 12/12 h) and meropenem (1 g 8/8 h). Nine days after transthoracic esophagectomy, the patient had complications such as septic shock, peritonitis, surgical wound dehiscence and died.

Resistance to colistin was verified by broth microdilution according to EUCAST (http://www.eucast.org) and confirmed by polymyxin-NP test.[4] Presence of the *mcr-1* gene was verified by conventional PCR using specific primers[5] and detected

Table 1 – Antimicrobial susceptibility profile of KPC-Kp, *E. coli* harboring *mcr*-1, transconjugant and *E. coli* J53.

Antimicrobial agent	MIC range (μg/mL)	KPC-Kp	*E. coli* harboring *mcr*-1	Transconjugant	*E. coli* J53
Amikacin	2–64	4	≤2	≤2	≤2
Cefepime	1–64	≥64	≥64	32	≤1
Ceftazidime	1–64	16	≥64	16	≤1
Ceftriaxone	1–64	≥64	≥64	32	≤1
Ciprofloxacin	0.25–128	64	32	≤0.25	≤0.25
Colistin	0.25–128	≥128	64	4	≤0.25
Ertapenem	0.5–8	≥8	≤0.5	≤0.5	≤0.5
Gentamicin	1–16	≥16	≤1	≤1	≤1
Imipenem	0.25–16	8	≤0.25	≤0.25	≤0.25
Meropenem	0.25–16	≥16	≤0.25	≤0.25	≤0.25
Piperacillin/tazobactam	4–128	≥128	≤4	≤4	≤4
Tigecycline	0.5–8	2	≤0.5	≤0.5	≤0.5