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ORIGINAL ARTICLE

Incidence of bacteria from cultures of bile and gallbladder wall of laparoscopic cholecystectomy patients in the University Hospital ''Dr. José Eleuterio González''☆

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KEYWORDS
Bactibilia;
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Abstract
Background: Through experience it has been accepted that bile in normal conditions remains sterile. Bactibilia is a common finding in individuals at high risk or with complicated cholecystolithiasis, however few data prevails about the prevalence of bactibilia in patients operated on for uncomplicated laparoscopic cholecystectomy. There is s common usage of preoperative and postoperative antibiotics in the different patients without the existence of any actual bacteriologic and epidemiologic evidence.
Material and methods: 183 patients with diagnosis of cholecystolithiasis postoperated of laparoscopic cholecystectomy had their bile sent to bacteriology.
Results: Bactibilia was identified in 31.95% of the cultures of mild cholecystitis and in 35.71% for moderate ($p < 0.0001$). A total of 125 negative cultures were obtained (68.3) and 58 positive (31.69%) with a prevalence of enterobacteria group (43.10%) and *Enterococcus* (27.58).
Conclusions: Comparing the groups according to severity there is a significant difference with regard to the presence of bactibilia, in addition to the bacterial groups cultivated. Fluoroquinolones and metronidazole is an option for the treatment of patients with the suspicion of bactibilia. The use of antibiotics is not justified in patients at low risk.

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PALABRAS CLAVE
Bactibilia;
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Antibioticoterapia

Identificación de flora bacteriana en cultivos de bilis y pared de vesícula biliar de pacientes sometidos a colecistectomía laparoscópica en el Hospital Universitario «Dr. José Eleuterio González»

Resumen
Antecedentes: Se ha aceptado a través del tiempo que la bilis en condiciones normales es estéril. La bactobilia es un hallazgo común en individuos de alto riesgo o con cuadros de colecistolitiasis complicados, sin embargo, hay pocos datos con respecto a la prevalencia de bactibilia en pacientes sometidos a colecistectomía por colecistolitiasis no complicada. Es común el uso de agentes antibióticos preoperatorios y postoperatorios en los diferentes pacientes que son sometidos a colecistectomía laparoscópica, sin que exista una base bacteriológica y epidemiológica demostrada sobre el predominio bacteriano determinado, su resistencia y sensibilidad en nuestro medio.
Material y métodos: Pacientes con diagnóstico de colecistitis litiásica, a quienes se realizó CL con una muestra calculada por proporciones de 183 unidades (IC 95%).
Resultados: Se identificó bactibilia en el 31.95% de los cultivos de colecistitis leve y en el 35.71% de los cultivos de pacientes con colecistitis moderada ($p < 0.0001$). Se recolectaron un total de 125 cultivos negativos (68.3%) y 58 positivos (31.69%) con un claro predominio del grupo de enterobacterias (43.10%) y *Enterococcus* (27.58%).
Conclusiones: Comparando los grupos de acuerdo al grado de severidad, hay una diferencia significativa en relación a la presencia de bactibilia, así como en el tipo de agentes aislados. Las fluoroquinolonas asociadas a metronidazol son una opción de tratamiento en pacientes en los que se sospecha bactobilia. Actualmente no está justificado el uso de antibioticoterapia en pacientes de bajo riesgo.

Background

Because it is one of the most common causes of admission to hospital in our environment, the interest in gallbladder and biliary tract disease is constant. The prevalence of gallstone disease is very high; in the United States 20.5 million people have the condition, i.e., 6.3 million men and 14.2 million women. Twenty percent of people over the age of 65 have gallstones, and one million new cases are diagnosed every year. Several studies carried out in our country have demonstrated that the prevalence of this entity is approximately 14.3%.[1]

Experience tells us that bile under normal conditions is sterile. Similarly, it is well known that bactibilia is a common finding in individuals at high risk or with complicated cholecystolithiasis, including obstruction of the biliary tract, choledocolithiasis, those aged >70 years, acute lithiasic cholecystitis, afunctional gallbladders, and biliary prostheses. However, there is little data regarding the prevalence of bactibilia in patients who have undergone cholecystectomy due to uncomplicated cholecystolithiasis.[2] Gutiérrez Banda et al., report in a Mexican case series (72 patients), an incidence of positive cultures of 13.9% (9.7% chronic cholecystitis and 4.2% acute), with predominance of the enteric coliform group.

This nosological entity can present with symptoms suggestive of inflammatory disease with or without superimposed infection. However, it is remarkable that many patients with no history of biliary surgery and no apparent infectious symptoms at time of surgery, present histological changes of the gallbladder walls compatible with infectious processes.

There are different guidelines in the literature on the correct use of antimicrobial prophylaxis in surgery and although most of their recommendations coincide, there remain some inconsistencies. None of the guidelines suggest the use of antibiotic prophylaxis before laparoscopic cholecystectomy (LC) for patients at low risk.[3]

Preoperative and postoperative antibiotics are commonly used in the different types of patients undergoing LC, with no demonstrated bacteriological or epidemiological basis regarding the specific bacterial predominance, its resistance or sensitivity in our environment.

Microbial resistance is a growing public health problem associated with increased morbidity and mortality and which has repercussions for both patients and institutions. The inappropriate use of antibiotics is the principal cause of microbial resistance. This is why the frequency of biliary infection in patients undergoing LC needs to be established. Expenditure on antibiotics can be reduced by knowing the specific bacterial sensitivity and the type/s of bacteria identified that are most common in bile and their spectrum of sensitivity to antibiotics. This information will be useful to design guidelines for antibiotic prophylaxis for LC.