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#### **Review** article

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#### ABSTRACT

The aim of this narrative review is to define the clinical-pathological characteristics and to clarify the management of right colonic diverticular disease. It is rare in Europe, USA, and Australia and more common in Asia. In the recent years its incidence has increased in the West, with various distributions among populations. Many studies have reported that it is difficult to differentiate the presenting symptoms of this disease from those of appendicitis before surgery, because the signs and symptoms are similar, so misdiagnosis is not infrequent. With accurate imaging studies it is possible to reach a precise preoperative diagnosis, in order to assess an accurate treatment strategy. Currently the management of this disease is not well defined, no clear guidelines have been proposed and it is not known whether the guidelines for left colonic diverticular disease can also be applied for it. Several authors have stated that conservative management is the best approach, even in case of recurrence, and surgery should be indicated in selected cases.

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# Diagnóstico y tratamiento de la enfermedad diverticular del colon derecho: revisión de conjunto

#### RESUMEN

El objetivo de esta revisión es definir las características clínico-patológicas y aclarar el tratamiento de la enfermedad diverticular del colon derecho. Es poco frecuente en Europa, Estados Unidos y Australia, y más común en Asia. Durante los últimos años, su incidencia ha aumentado en Occidente, con diferentes distribuciones entre poblaciones. Muchos estudios han mostrado que es difícil diferenciar antes de la cirugía los síntomas de presentación de esta enfermedad de los de la apendicitis, ya que los síntomas y signos son similares, por lo que no es infrecuente encontrarse con un diagnóstico incorrecto. Con estudios de diagnóstico por la imagen exactos es posible establecer un diagnóstico preoperatorio preciso a fin de evaluar una estrategia de tratamiento adecuada. Actualmente, el tratamiento de esta enfermedad no está bien definido, no se han propuesto recomendaciones claras y no se

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sabe si también se pueden aplicar las recomendaciones para la enfermedad diverticular del colon izquierdo. Varios autores han señalado que el tratamiento conservador es el mejor enfoque, incluso en caso de reincidencia, y que la cirugía solo estaría indicada en determinados casos.

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#### Introduction

Colonic diverticulosis is a disease characterized by the existence of multiple diverticula in the intestinal wall. If symptoms or complications arise, this is the onset of diverticular disease. The most frequent symptoms are abdominal pain, meteorism, and changes in normal bowel habits.<sup>1</sup> Uncomplicated diverticular disease is defined as mild but frequent abdominal pain. Uncomplicated diverticular disease is frequently confused with other conditions, such as inflammatory bowel disease.<sup>2,3</sup> Complications may sometimes be observed, including inflammation, bleeding, and perforation of the diverticula, all with different levels of severity. This situation is called diverticulitis and may be characterized by a chronic or acute course. The presentation of diverticulitis can range from mild abdominal pain with contained perforation to free perforation and acute peritonitis.1 Fortunately, 80%-85% of patients with diverticulosis remain asymptomatic and the symptoms are not always severe. Only a small percentage develops diverticulitis with severe symptomatic disease, which can cause complications. The development of this process is not well understood, although it is probably related to altered bowel motility and changes in the colonic microflora.4

Diverticular disease is more frequent in European, North American, and Australian (Western) populations, although its prevalence has also increased in Asia (Eastern countries)<sup>5</sup> in recent years. In Western populations, it mainly affects the left colon, especially the sigmoid colon, whereas in Asians it primarily appears in the right colon.<sup>6</sup> However, due to increased migration, right-sided diverticulitis (RSD) is being more frequently detected in the West.<sup>7</sup> Although treatment parameters have been established for the management of leftsided diverticular disease (LSD),<sup>8</sup> there are no clear recommendations for RSD. It is not clear whether it is possible to apply LSD recommendations to RSD.<sup>9</sup> In addition, it is necessary to distinguish between two different clinical situations in diagnosis and treatment: right diverticular disease and cecal diverticulitis.

The objective of this review is to specifically study the epidemiology, clinical features, and therapeutic approach of RSD and cecal diverticulitis, which could improve the treatment of this disease.

#### Methodology

For the purposes of the present study, 2 different authors carried out a bibliographic search using the keywords "right colon \* diverticul \*" in the PubMed database of articles

published in English between 2000 and 2016. This present review has included 74 articles, 15 of which are mainly about RSD, and describes their general characteristics, clinical presentation, diagnosis, and treatment.

#### **Epidemiology and Physiopathology**

RSD is a common disease in Asian countries, where 20% of patients with diverticular disease and 75% of cases of diverticulitis present right diverticulosis; meanwhile, in Western countries, RSD accounts for only 1%–2%.<sup>10</sup> At the global level, the highest incidence of diverticular disease occurs in the West and affects 50% of the population over 60 years of age, with a prevalence of 15%–35%<sup>11,12</sup> (90%–99% of cases affect the left colon<sup>13</sup>). The prevalence in Asia is 8%–25%,<sup>14,15</sup> reaches a peak between 40 and 50 years, and affects the right colon in 70%–98% of cases.<sup>15,16</sup>

In Western countries, which are characterized by a heterogeneous population that has migrated from Eastern countries, the incidence of RSD could increase considerably in the future, which is an important factor. In fact, some authors have affirmed that there is a genetic predisposition to develop this disease.<sup>17</sup> Some studies have informed that the incidence of RSD may increase in some Western populations, but none of the studies has shown a leveling in the incidence between immigrants and the native population.<sup>7,18</sup> Faucheron et al. have reported a prevalence of RSD in France of 20% in the population over the age of 70, which demonstrates that its incidence in the West is not so rare.<sup>19</sup> RSD is more frequent in the younger population, especially between the ages of 20 and 50,<sup>9</sup> and in men.<sup>20</sup>

Two important clinical situations must be differentiated: diverticular disease located in the proximal colon and isolated diverticula of the right colon, often with a solitary cecal manifestation. If numerous, these lesions are usually acquired pseudodiverticula; if solitary, they are usually congenital and true diverticula. In the Asian population, true diverticula are abundant, especially in the right colon<sup>21</sup> because of the congenital weakness of the intestinal wall. Although it was initially thought that right diverticula in Western populations were congenital and true compared to left diverticula, one study has revealed that, in the Western population, there may be pseudodiverticula even in the right colon. Thus, perhaps there is a different pathophysiology between diverticular disease in Eastern and Western populations.<sup>22</sup>

Certain factors are associated with this disease, such as a non-fiber diet or the absence of physical activity. In addition, genetic factors are involved in the pathogenesis, especially in RSD. In fact, cases of diverticular disease have been found in patients who are affected by genetic disorders, such as Download English Version:

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