

## COLONIC DIVERTICULOSIS: FROM ASYMPTOMATIC FORM TO MAJOR COMPLICATIONS

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### **Abstract**

**Introduction** This pathology is rare in patients younger than 40 years old (5%) and, in those older than 70 years old, almost 50% exhibit colonic diverticulosis. Most cases have mild symptoms and only 20% presents complications as: bleeding, bowel obstruction, abscess and secondary peritonitis.

**Aim.** The aim is to analyse different types of complications in colonic diverticulosis and compare the data from literature to those in Argeș geographical area.

**Material and method.** The medical records of 120 patients out of which 101 were admitted in gastroenterology department and 19 in general surgery department were analysed. Diagnosis methods: colonoscopy, computed tomography with contrast dye, simple abdominal radiograph for acute abdominal pain.

**Results.** 40 patients (33.33%) with asymptomatic colonic diverticulosis, 28 patients (23.33%) moderate diverticulitis, 25 patients (20.83%) with moderate anorectal bleeding, 25 patients (20.83%) with secondary peritonitis, and 2 (1.68%) cases with complications.

**Conclusions.** All the patients were older than 50 years old, 44 % of diverticulitis cases led to complications (almost half with bleeding and the rest with peritonitis). No bowel obstruction. In 99% of the cases, the localisation of the diverticula was at the level of sigmoid and descending colon.

**Keywords:** diverticulitis, peritonitis, bleeding.

### **Rezumat**

**Introducere.** Această patologie este rar întâlnită la pacienții sub 40 de ani (5%), iar dintre cei peste 70 ani aproape 50% prezintă diverticuloză colonică. Majoritatea cazurilor au simptomatologie ușoară și doar 20% prezintă complicații precum: sângerare, ocluzie intestinală, abcese și peritonită secundară.

**Scopul studiului** este de a analiza tipurile de complicații întâlnite în cadrul diverticulozei colonice și de a compara datele din literatura de specialitate cu cele din zona geografică Argeș. **Material și metodă.** Au fost analizate fișele de observație a 120 de pacienți dintre care



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101 internați în secția de gastroenterologie și 19 în secția de chirurgie generală. Mijloacele de diagnostic au fost reprezentate de: colonoscopie, tomografie computerizată cu substanță de contrast, radiografie abdominală simplă pentru durere acută abdominală.

**Rezultate.** Un număr de 40 de pacienți (33,33%) au prezentat diverticuloză colonică asimptomatică, 28 de pacienți (23,33%) cu diverticulită moderată, 25 de pacienți (20,83%) cu sângerare anorectala moderată, 25 de pacienți (20,83%) cu peritonită secundară și 2 cazuri (1,68%) cu complicații.

**Concluzii.** Toți pacienții au avut peste 50 de ani, 44% dintre cazurile de diverticulită au condus la complicații (aproape jumătate au prezentat sângerare, restul peritonită). Ocluzia intestinală nu a fost prezentă. Localizarea diverticulilor în 99% dintre cazuri a fost la nivelul colonului sigmoid și descendent.

**Cuvinte cheie:** diverticulită, peritonită, sângerare.

### Introduction

Colonic diverticula mean small herniations of mucous and sub-mucous membrane through the muscular layer in low resistance regions. This pathology is relatively rare before the age of 40, estimated at 30% for 50-70 year-old persons and those over 70 years of age presented it in a percentage of 50%<sup>(1)</sup>. Colonic diverticulosis is a pathology of the industrialised world where a diet lacking fibres and rich in fat and unrefined carbohydrates is predominant<sup>(2)</sup>. The majority of the population is asymptomatic. A small percentage has non-specific symptoms such as flatulence, abdominal

cramps or constipation and only 20% have complications: bleeding, bowel obstruction, abscesses and secondary peritonitis<sup>(1,3)</sup>.

### Aim

The aim is to analyse the types of complications in colonic diverticulosis and compare the data from literature to those in Argeș geographical area.

### Material and method

The medical records of 120 patients hospitalised during January 2011-2015 in Pitești County Hospital were analysed, having

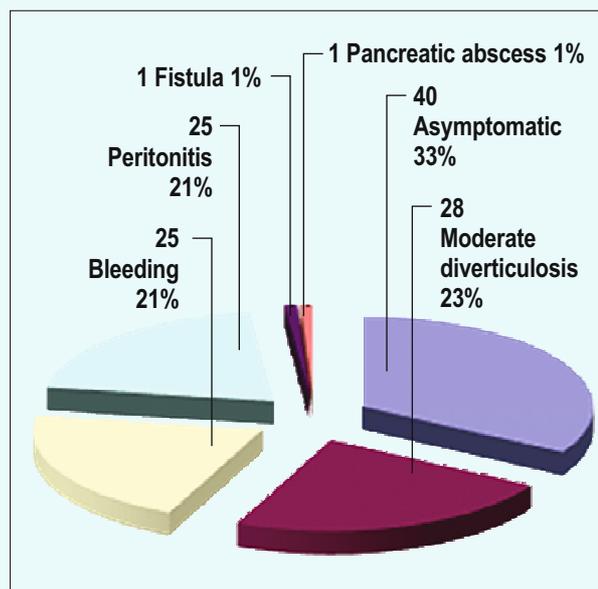
one of the diagnoses of colonic diverticulosis with or without complicated diverticulitis. 101 of them were hospitalised in gastroenterology department and 19 in general surgery department. Diagnosis methods: total colonoscopy (90 patients), computer tomography with contrast dye (5 patients), simple abdominal radiograph for acute abdominal pain (6 from the gastroenterology department and 10 from general surgery department).

## Results

Those 19 patients hospitalised in the surgery department and those 6 hospitalised in the gastroenterology department presented acute abdominal pain as primary symptom, the diagnosis of acute peritonitis being confirmed by the clinical and paraclinical examinations. For this group of patients, a surgery was performed, and during the surgery complicated acute diverticulitis was confirmed. Five patients were recommended to perform a computer tomography as primary method of diagnosis. Two of these patients had inferior digestive haemorrhage with haemodynamic instability, one with mechanical valvular prosthesis with anticoagulant and antiplatelet treatment, another patient was suspected of acute pancreatitis, but the final diagnosis was complicated acute diverticulitis with pancreatic abscess, and another patient had vesical tenesmus, the radiographic diagnosis being colovesical fistula.

The final results were: 40 patients (33.33%) had asymptomatic colon diverticulosis (symptoms at admission were dyspeptic syndrome, irritable colon), 28 patients (23.33%) with moderate diverticulitis (leucocytosis and moderate biological inflammatory bowel syndrome, left-sided pain, constipation), 25 patients (20.83%) with anorectal bleeding (anaemia and moderate leucocytosis, moderately elevated ESR), 25

patients (20.83%) with secondary peritonitis (confirmed during the surgery) and 2 (1.67%) cases with rare complications (pancreatic abscess and colovesical fistula).



**Figure 1.** Distribution of symptoms and complications in the studied group (120 patients)

## Discussions

Colonic diverticulosis, in particular its complications, is subject to increased heterogeneity depending on the geographical area, age and genetic characteristics of the population, the social and economic status. These differences arise due to the different reporting in the surgical departments compared to the medical ones. Thus, specialised surgical departments experience severe complications: colonic diverticulosis being the second non-mechanical cause of ileus after colon cancer<sup>(4)</sup>, specialised departments however, noting a high percentage of asymptomatic forms.

As regards the type of acute diverticulitis complications there are for some significant differences compared to the international literature, such as: In Canada, the rate of complications is greater (25% of acute diverticulitis cases), rarely presenting fistula and peritonitis, the most common are



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abscesses and because of the many recurrences, strictures and subsequently occlusive syndrome are developed <sup>(5)</sup>. Location is different in Asia where the shape of right colon is predominant<sup>(6,7,8)</sup>. But for other complications such as bleeding, percentages are similar: diverticular bleeding means the source of inferior digestive haemorrhage in 17-40% of cases <sup>(9)</sup>. A low prevalence is seen in oriental countries, being approximately 7.4% <sup>(10)</sup>, and in African countries, in spite of the fact that prevalence of the disease is less than 1% we can observe a slight increase in the previous years <sup>(11)</sup>.

### Conclusions

All the patients were older than 50 years old, 43.33 % of diverticulitis cases led to complications (almost half with bleeding and the rest with peritonitis). No bowel obstruction. 60% had obesity of 2nd and 3rd degree. In 99% of the cases, the localisation of the diverticula was at the level of sigmoid and descending colon and 1% at the level of transverse colon. Irregular complications were present at 1.68%.

In Argeş County, the rate of complications for those over the age of 50 is higher compared to developed countries and much lower compared to countries with a low income per capita. The percentage of cases with

peritonitis is much greater than the figures mentioned in the literature of Western countries.

These differences are largely due to a geographically specific diet and differential access to medical services.

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