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Critical Issues on Diverticular Disease

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ABSTRACT

In this session diverse critical issues in diverticular disease (DD) were considered, including "In or outpatient management of uncomplicated diverticulitis?", "Segmental colitis associated with diverticulosis: what is it?"and "Diverticular inflammation is a risk factor for colorectal cancer?". The conclusions drawn are outlined in the statements but in summary, outpatient management is safe in selected patients, as long as correct diagnosis and stage are assured, and this can allow a cost effective treatment. Non-antibiotic management is also safe but should be confined as an outpatient treatment in carefully selected patients.

Segmental colitis associated with diverticulosis (SCAD) is a defined pathological entity (only diagnosed on biopsy) characterized by an inflammatory bowel disease (IBD)-like pathology, occurring principally in the sigmoid colon, with rectal and right colon sparing. The pathogenesis is unclear but may include a genetic predisposition, microbiome alteration and ischaemia. Treatment can last months, and depends on severity, options include antibiotics, 5-ASA and probiotics for mild cases. Severe disease needs systemic steroids or even anti TNFα treatment.

Whether diverticular inflammation is a risk factor for colorectal cancer (CRC) was debated and the conclusion was that within the first eighteen months of diagnosis of DD, associations with cancer are found, likely due to similar symptoms and misclassification of disease. After that time, DD does not increase the risk of CRC. Therefore, it is recommended to exclude cancer with imaging and colonoscopy after healing of the first episode of diverticulitis.

Key words: colonoscopy – colorectal cancer – diverticular disease – segmental colitis associated with diverticulosis.

Abbreviations: CRC: colorectal cancer; DD: diverticular disease; DICA: Diverticula Inflammation and Complications Assessment; CT: computer tomography; SCAD: segmental colitis associated with diverticulosis; UD: uncomplicated diverticulitis.

IN- OR OUT-PATIENT MANAGEMENT OF UNCOMPLICATED DIVERTICULITIS?

Since 1998, oral hydration and oral antibiotics have been proposed in patients with uncomplicated diverticulitis (UD) [1]. However, recommendations for outpatient management of UD were vague [2]. In addition, the evidence supporting outpatients with UD with oral antibiotics was limited and an important number of patients was still admitted to the hospital for DD without abscess or perforation [3].

In a Spanish study from 2010 including 96 patients with UD, ambulatory treatment was initiated in 70 (73%) patients. Only two (3%) required admission because of persisting abdominal pain and vomiting. In the remaining 68 (97%), ambulatory treatment was completed without any complication (4).

Two recent studies, one randomized trial and one systematic review confirm that ambulatory treatment of UD is safe, effective, and economically efficient when applying an appropriate selection of patients [5, 6[. Intolerance to oral intake and lack of family or social support are common exclusion criteria used for this approach, while severe comorbidities are not definitive exclusion criteria in all the studies.

Since non-antibiotic management of acute UD has been shown to be safe, the new controversy is on the efficacy

and safety of outpatient treatment of UD associated with non-antibiotic policy. In a recent prospective observational study, 155 patients with UD were managed as outpatients without antibiotics and most of them (97.4%) were managed successfully [7].

The decision for outpatient treatment without antibiotics should be based on the knowledge of risk factors potentially related with failure of non-antibiotics policy or with complications occurred in initially UD. It seems that high CRP level, systemic comorbidity, symptoms for more than five days and the presence of vomit are significant predictive factors for treatment failure [8, 9].

In conclusion, outpatient management of UD in selected patients is safe and effective allowing important cost saving. The possibility of an outpatient treatment of UD is conditioned by an accurate diagnosis and staging. Non-antibiotic management is safe, and it could be associated with outpatient management only in selected patients.

SEGMENTAL COLITIS ASSOCIATED WITH DIVERTICULOSIS (SCAD): WHAT IS IT?

SCAD is a defined pathological entity characterized by an inflammatory process of the inter-diverticular mucosa of the colonic segment involved. The rectum and the right colon are spared from inflammation [10]. Limitation of mucosal lesions to the diverticular segment is the most important diagnostic criterion for SCAD (rectal sparing). Rectal and descending colon biopsies are required to distinguish SCAD from IBD [10].

The disease is relatively rare, with a prevalence of 0.25-1.4% in the general population and 1.15-11.4% amongst DD patients. Mean age at diagnosis is early to mid 60s, with a slightly higher male preponderance [11-13]. The pathogenesis is multifactorial, and includes genetic susceptibility, alteration in bowel microbiome, local ischaemia, mucosal prolapse and more [11, 14].

The clinical presentation as well as the endoscopic and histological appearance vary in the four major subtypes. Type A is characterized endoscopically by red patches involving colonic folds and diverticular sparing with neutrophil and lymphocyte infiltrates limited to crypt epithelium. Type B and D are characterized by ulcerative colitis (UC)- like changes endoscopically and histologically, with erosions and hyperemic areas involving the colonic folds and severe inflammation involving the overall diverticula containing mucosa, respectively. Histological changes in both subtypes involve crypt distortion and crypt abscesses. Type C is characterized by Crohn's disease like changes, with isolated aphthous ulcers and transmural inflammatory changes [15, 16].

Treatment options include antibiotics (ciprofloxacin and metronidazole), 5-ASA and probiotics for mild cases. In severe disease, use of systemic steroids might be warranted. Anti TNFα treatment may be beneficial in sever disease resistant to other therapeutic options. Treatment duration might vary depending on clinical response and can last weeks to months [15-17].

IS DIVERTICULAR INFLAMMATION A RISK FACTOR FOR COLORECTAL CANCER?

Older studies searching associations between DD and CRC have described a clear overall association suggesting that long-term inflammation can lead to cancer. However, only recently this association has been questioned. Authors of three large studies analysed separately periods within vs. outside 1.5 years from the diagnosis of DD or diverticulitis.

In the first study Granlund et al. [18] performed a nationwide, case-control study. They identified 41,037 patients with CRC based on Cancer Register and age and gender matched controls without cancer, with a proportion of 1 to 2. Then they searched in the Swedish Inpatient Register preceding hospitalizations with the diagnosis of DD. Authors clearly have shown that the association between CRC and DD was present only when DD was diagnosed up to 18 months before CRC.

Using different methodology Huang et al. [19] in Taiwan first identified 45,662 inpatients with DD, that were matched by age, sex, year of hospitalisation with 182,488 controls without DD. CRC diagnosis was then searched in following hospitalisations in both groups. Again, authors have shown that after excluding the 1st year of observation CRC incidence was similar in both groups for remaining years of follow-up.

Lastly, Mortensen et al. [20] in Denmark using similar methodology to Huang et al. (40,496 patients with DD and 404,960 matched controls) showed that overwhelming majority of CRC diagnosis were within +/- 500 days from the first diagnosis of diverticulitis.

In conclusion, within the first 1.5 year of diagnosis of DD associations with cancer is strong probably due to similar symptoms and misclassifications. After that period, DD does not increase the risk of CC. Therefore, it is recommended to exclude CRC using modern technologies (including colonoscopy) after healing of the first episode of diverticulitis.

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