The Risk of Ileocolonic Perforation in Patients with Behçet's Disease: Report of Three Cases and Review of the Literature

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(M.B.) using an advanced imaging technique videocolonoscopy (Fujinon E400 Tokyo, Japan). 2480 colonoscoy were done in the same time period because of other indications. In the current study, the BD patients who suffered from perforation during or after colonoscopy were retrospectively analyzed.

Results

We included 77 female, 58 male BD patients whose mean age was

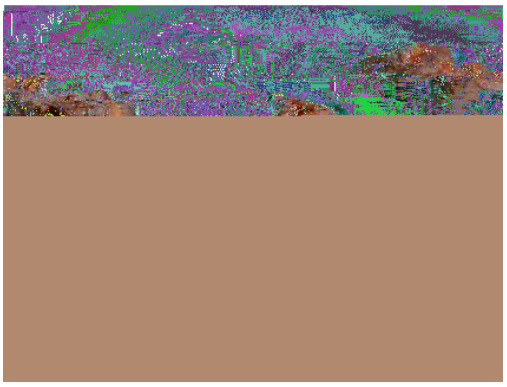

Figure 2: Right hemicolectomy material

Figure 3: Severe inflammation and vasculitis in the ileum wall (H&E, x40, inset: H&E, x100).

Discussion

Intestinal involvement of BD is seen in between 1 to 60% of all patients [14,16,17]. Intestinal BD may be diagnosed in a patient if she/ he correspond to the criteria for BD by systemic findings and typical ulcers are seen either in small intestine or colon [15-17]. Documentation of typical ulcerative lesions with objective modalities is done in only 3- 25% of BD patients [12,14]. In this study out of 135 patients only 8 (5.9%) of whom were determined to have ileocolonic involvement; 4 (2.9%) of whom had superficial aphthous ulcers and the other 4 (2.9%) had volcano-shaped profound ulcers. Köklü et al. had reported endoscopic colitis in only 2% had endoscopic colitis whereas the given rate increased up to 15% with histopathological examination in 50 BD patients [19].

Intestinal BD may cause serious complications. Massive hemorrhage, fistulisation and intestinal perforation are encountered complications in approximately 50% of patients suffering from intestinal BD. Free perforation can lead to panperitonitis, requiring emergent operation with a poor prognosis [14,18,19]. The studies reveal that free intestinal perforation is more frequently seen in far eastern countries [26,27]. The pathophysiology of perforation in intestinal BD is not really clear; nevertheless we have put forth the following into consideration: 1.Typical intestinal BD ulcers are usually large, separate and excavated in shape [28-31]. 2. Combined intestinal dilatation may contribute to perforation. High intraluminal pressured intestinal distention proximal to obstruction segment may increase perforation risk [32-34]. 3. Long term steroid use may be related to intestinal perforation development. Steroid treatment may develop peritonitis via inhibiting the closing process of perforation [35].

Some risk factors for intestinal perforation are defined in the literature which may be listed as follows: young age at the time of diagnosis, a history of operation and volcano shaped intestinal ulcers [36-39]. Kim et al. were found to cause of volcano shaped ulcers more often than other ulcer types for spontaneous intestinal perforation [33]. In our study on the other hand, all patients with intestinal perforation had either volcano shaped or profound ulcers. There was no usage of steroid history of in these patients. The perforated cases were aged between 18 and 56; 3 of them were evaluated because of hematochezia and 2 of their colonoscopies revealed volcano shaped ulcers in both ileum and proximal colon whereas the other one had profound ulcers in sigmoid, descending and transverse colon. Another study, Moon et al. 33 patients (25.6%) out of 129 symptomatic intestinal Behcet's were diagnosed with intestinal perforation; it was emphasized that all cases were operated and the age interval was between 12 and 70, mean age of the group was 33.8 years [38]. In this study, there were no history of acute abdominal pain and free perforation from colon and ileumin our BD patients. All perforations were occurred after colonoscopic procedure. Our experience is the first documentation that highlights the high risk of ileocolonic perforation during colonoscopic procedure in intestinal BD.

Ileal segmental resections and right hemicolectomy preferred for spontaneous perforation in order to decrease both perforated intestinal BD incidence and relapse rates [18-19]. In a study conducted with 7 cases in 1991 by Sayek et al. 6 cases were applied right hemicolectomy and ileal resection whereas the last patient was applied right hemicolectomy only secondary to intestinal anastomosis leakage [18]. Many other studies composed of small surgical series have evaluated perforation patients after the incident in means of relapse after operation and yielded the results as follows: a history positive for intestinal perforation and fistulisation increases risk for re-perforation;

colonoscopy is estimated to be 0.03% to 0.8% for diagnostic colonoscopy and 0.15% to 3% for therapeutic colonoscopy [52]. Perforations that occur during diagnostic colonoscopy are due to direct mechanical penetration with the instrument tip, sharp flexion of

38. Moon CM, Cheon JH, Shin JK, Jeon SM, Bok HJ, et al. (2010) Prediction of free bowel perforation in patients with intestinal Behçet's disease using clinical and colonoscopic findings. Dig Dis Sci 55: 2904-2911.
39. Toynton SC (1994) Behçet's syndrome: an unusual cause of ileal perforation. J ClinGastroenterol 19: 84-85.
40. Isik B, Ara C, Kirimlioglu H, Sogutlu G, Yilmaz M, et al. (2005Ú