Kampo Medicine - Current Research

Irritable Bowel Syndrome

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Summary

Abdominal pain or abdominal discomfort occurring in conjunction with bowel movements, but where colonoscopy etc. cannot demonstrate any organic lesions are called irritable bowel syndrome (IBS). The Roma III criteria (Table 1) are used as diagnostic criteria for IBS. Based on the predominant symptoms the condition is further classified into the four disease types constipation, diarrhea, mixed and an unclassified varied type[1]. Moreover, the definition of "abdominal pain decreases with bowel movement" is important and constipation of diarrhea not associated with abdominal pain is classified as functional constipation or diarrhea, while the independent symptom of abdominal distension is classified as functional abdominal distension. Similar to functional dyspepsia (FD) IBS too has a high prevalence and is a disease severely impairing the QOL, but society in general often dismisses it.

Similar to FD the three major factors related to the pathology of IBS are anomalies of gastrointestinal motility, visceral hyperesthesia and psychological factors. Moreover, there are also patients developing IBS following infections of the intestinal tract, so that the influence of minimal intestinal inflammation, cytokines and intestinal bacteria are also considered as etiologic factors.

Western medical therapy of IBS uses macromolecular polymer preparations and drugs improving intestinal motility on a foundation of lifestyle guidance and dietary improvements. Depending on the disease type 5HT3 receptor antagonists, Lactobacillus preparations, anticholinergics and cathartics are combined with aforementioned measures. If these measures prove to be ineffective and in case of severe abdominal pain, or in the presence of strong depressive symptoms, antidepressants or anti-anxiety drugs may be added and psychotherapy administered.

Table1 Irritable Bowel Syndrome (Rome III)

Diagnostic criterion*

Recurrent abdominal pain or discomfort** at least 3 days/month in the last 3 months associated with two or more of the following:

1. Improvement with defecation
2. Onset associated with a change in frequency of stool
3. Onset associated with a change in form (appearance) of stool

* Criterion fulfilled for the last □ months with symptom onset at least 6 months prior to diagnosis

** “Discomfort” means an uncomfortable sensation not described as pain.

In pathophysiology research and clinical trials, a pain/discomfort frequency of at least 2 days a week during screening evaluation is recommended for subject eligibility.

IBS classification based on bowel movement condition

1. Constipational type IBS (IBS-C): hard or scybala-like stools (a) in more than 25%, soft (mushy) or watery stools (b) in less than 25%, (c)
2. Diarrhetic type IBS (IBS-D): soft (mushy) or watery stools (a) in more than 25%, (b) hard or scybala-like stools in less than 25%, (c)
3. Mixed type IBS (IBS-M): hard or scybala-like stools (a) in more than 25%, soft (mushy) or watery stools (b) also in more than 25%, (c)
4. Unclassified IBS: stool anomalies do not meet the characteristics of either IBS-C, IBS-D or IBS-M

a) Bristol Stool Chart 1-2
b) Bristol Stool Chart 6-7
c) not using any antidiarrheal agents, laxatives

Treatment

In Chinese medicine diarrhea is called 'fu xie' or 'xie xie (loose stools and diarrhea)', while constipation is called 'pi yue' (the restrained spleen, constipation due to deficiency of circulatory fluids) or 'da bian nan' (constipation). The causes leading to diarrhea include external cold, food included damage, stagnation and sluggishness of liver Qi, Qi deficiency, Yang deficiency etc., while the causes for constipation include heat bind, Qi stagnation, Qi deficiency, Yang deficiency, Blood deficiency, Yin deficiency etc. In Chinese medicine IBS is often classified into the subtypes of liver depression and spleen deficiency, cold-heat complex, intestinal liquid depletion, combined with spleen/stomach deficiency and weakness, but based on the concept that IBS is a disease influenced by mental stress, liver depression and spleen deficiency can be considered to be the underlying condition to which the other factors are added.

Diarrhetic, constipational and mixed types can all be found within the condition of liver depression and spleen deficiency, for which in China the formula *tsushayoho* (痛瀉要方 tong xie yao fang) is used for the diarrhetic type. In Japan *shigyakusan* is the first choice, but *kamishoyosan* is occasionally used too. Also, viewed as a liver-spleen disharmony *keishikashakuyakuto* or *keishikashakuyakudaioto* as well as *shokenchuto* are used. For cold-heat complex Ubaigan is used in China, while in Japan *hangeshashinto* is used. A constipational type of IBS is interpreted in China as intestinal liquid depletion and treated with *ikkansen*, while in Japan *mashiningan* or *junchouto* are used. A diarrhetic form of IBS is considered to be a spleen and stomach deficiency and weakness and treated in China with *jinryobyakujutsusan*, but in Japan the similar formula *keihito* is used. In particular, for the pathology caused by spleen and stomach deficiency and weakness *ninjito* or *shinbuto* are used.

EBM

In Japan the formula *keishikashakuyakuto* is used most frequently, but there are also reports about *saireito*, *keihito*, *heiisan*, *daikenchuto* etc.[2].

In a DB-RCT Sasaki et al. investigated the effects of *keishikashakuyakuto*[3]. The study showed that among the total of 232 patients with IBS (122 patients with diarrhetic type, 38 patients constipational type, 53 patients with an alternating type presenting with diarrhea and 19 patients with an alternating type presenting with constipation effects were observed in the normal dose group (1) treated for more than 4 but less than 8 weeks with *keishikashakuyakuto* and the low dose group (2) receiving 1/20 of the normal dose. These results showed that 1) the degree of final improvement (the ratio of a more than moderate improvement) for all IBS patients was: (1) 50.9%, 47.9% (n.s.). Classified by disease type this ratio was for diarrhetic type: (1) 54.4%, (2) 48.2% (n.s.), constipational type: (1) 63.6%, 57.9% (n.s.), alternating diarrhea type: (1) 39.4%, 40.0% (n.s.), alternating constipational type: (1) 57.1%, (2) 37.5% (n.s.). 2. The degree of improvement of bowel movements and intestinal organ symptoms: (n.s.). 3. Improvement classified by disease type (ratio of more than moderate improvement) was for the diarrhetic type: (1) 57.9%, (2) 37.0% (p=0.037). 4. The usefulness for all IBS patients (ratio of being more than useful) was: (1) 46.2%, (2) 44.7% (n.s.), where significant improvements of bowel movements and intestinal organ symptoms were observed for the diarrhetic type of IBS.

In cumulative case studies *keihito*, *saireito*, *keishikashakuyakuto*, *heiisan*, *daikenchuto* have reportedly been effective.

Regarding reports from abroad there is the DB-RCT by Bensoussan et al.[4]. In this study 116 IBS patients were divided into 3 groups: (1) a group receiving individual prescriptions based on pattern identification, (2) a group receiving a standard formula (Codonopsii Radix, *Pogostemi* Herba,

Saposhnikoviae Radix, Coicis Semen, *Bupleuri* Radix, *Artemisiae* Capillaris Flos, *Atractylodis* Rhizoma, *Magnoliae* Cortex, *Citri Unshiu* Pericarpium, *Zingiberis* Rhizoma Processum, *Fraxini* Cortex, *Poria*, *Angelicae Dahuricae* Radix, *Plantaginis* Semen, *Phellodendri* Cortex, *Glycyrrhizae* Radix Praeparata, *Paeoniae* Radix, *Saussuerae* Radix, *Coptidis* Rhizoma, *Schisandrae* Fructus) and (3) a placebo group that were all treated over a period of 16 weeks. After that (1), (2) and (3) were compared to each other and a significant improvement of the IBS symptoms observed that continued in group (1) even beyond the end of the administration period. Moreover, the report by Wai K. et al.[5] describes the inclusion of 133 patients with diarrhetic IBS, who were divided into a (1) regular prescription group (*Atractylodis* Rhizoma, *Astragali* Radix, *Angelicae Dahuricae* Radix, *Atractylodis Lanceae* Rhizoma, *Bupleuri* Radix, *Citri Unshiu* Pericarpium, *Saposhnikoviae* Radix, *Granati* Cortex, *Murrayae* Folium et Cacumen, *Portulacae* Herba, *Coptidis* Rhizoma) and (2) a placebo group and treated correspondingly. Yet, no significant differences between the groups regarding the QOL score regarding the SF36 were observed. Otherwise the pain and diarrhea formula has frequently been examined in cumulative case studies.

References

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