Introduction: Irritable Bowel Disease is an autoimmune disease that affects the digestive system of humans. The main symptoms are GI bleeding, diarrhea, vomiting, weight loss. It cannot be treated but can only be managed by medications and surgery. There are two major forms of IBD: Ulcerative Colitis and Crohn’s Disease. They affect different areas of the digestive system as shown below:

Four epidemiological stages of IBD globally:

The evolution of IBD can be divided into four epidemiological stages: Emergence of IBD, Acceleration in Incidence, Compounding prevalence and Prevalence equilibrium. Stratifying the countries into these stages will help understand which countries need what actions to fight this disease.

Emergence of IBD: The emergence of IBD in Asia occurred later in the twentieth century. This stage includes all the recently developing countries.

Acceleration in incidence: This stage includes newly industrialized countries. India is in the Acceleration stage.

Compounding prevalence: After the acceleration stage, the disease progresses to the Compounding stage where the countries need to manage the prevalence of the disease. Failure to manage the disease in this stage can lead to serious consequences. This stage has countries in the Western region of world.

Prevalence Equilibrium: Well managed Compounding stage will finally lead to the equilibrium where the prevalence of disease is kept in control. The western regions will eventually transition into this stage.

Factors leading to increase in Prevalence of IBD in India:

The leading risk factors causing an increase in prevalence of IBD in India are genetics, smoking, microbiome, and other factors like hygiene hypothesis.

Genetics: Until today, more than 200 such IBD-specific genetic loci have been identified through genome-wide association studies (GWAS) across the globe. Some of the most prevalent genes causing IBD in Indian population are rs2395185 (HLA-DRA), rs3024505 (IL10), rs6426833 (RNF186), rs3763313 (BTNL2), and rs2066843 (NOD2).

Microbiome: IBD is probably the result of an abnormal immune response to intestinal microbiota in genetically susceptible individuals. The microbiome signature in the Indian IBD population matches that of patients in the West, indicating that the players in the pathogenesis of IBD are not different between the West and the East.

Smoking: Many studies have shown that people who smoke are more likely to develop Crohn's Disease, and research suggests that smoking increases the severity of the disease.

Other factors: The other factors that lead to IBD are hygiene hypothesis, breast feeding for more than 12 months, antibiotics used, etc.

Management of IBD in India compared to Western region:

|  |  |  |
| --- | --- | --- |
| Management | Western Region | India |
| Colonoscopies for Diagnoses | 85% | 62% |
| Biologics for treatment | 33% | <10% |
| Crohn’s & Colitis foundations for awareness | Available | Unavailable |
| Patient support | Widely available | Sparsely available in big cities |
| Is it considered a disability? | Yes | No |

Timeline of India’s IBD status if not managed:

As we know, India is in the Acceleration in Incidence phase, the number of cases of IBD are bound to increase. The increasing IBD cases need to be managed for providing better healthcare to the patients. Failure to manage the rising incidence may cause burden on the Indian healthcare system and lead to severe outcomes like an epidemic. To avoid such serious consequences the Indian healthcare system should adapt to the managerial changes to fight this ongoing battle.

Sources:

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