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A brief review on behcet's diseases

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ABSTRACT

Recurrent aphthous stomatitis, uveitis, genital ulcers, and skin lesions characterize behcet's disease (bd). Although its contribution to the overall genetic susceptibility to behcet's disease was estimated to be only 19 percent, the function of the hla-b51 gene has been verified in recent years. In the middle east, the mediterranean region and asia, the prevalence of bd is greatest. The usual starting age is around 30. The ratio of male to females varies according to ethnic context. Bd's cause remains unclear. It is believed to be multifactorial, which includes infectious causes, genetic predisposition, and immune system dysregulation.

Keywords: Behcet's disease, HLA-B51 gene, Prevalence, predisposition

INTRODUCTION

Behcet's Disease (BD) is a chronic inflammatory systemic disorder characterized by a relapsing and remitting course. BD may start with one or more of the below symptoms, but over the years, other signs can slowly emerge. Oral and genital ulcers, eye inflammation, skin lesions, and articular, vascular, neurological, respiratory, gastrointestinal, renal, vascular and genitourinary symptoms are clinical characteristics. A large vasculitis of the arteries and veins of any size or thrombophilia, depending on the site of involvement, is the main histopathological finding.[1]

Recurrent episodes of remission and the exacerbation of different symptoms are the clinical aspects of Behcet's disease. Sustained chronic inflammation is rare in many tissues. Usually, recurring uveitis attacks, the consequence is a loss of vision that deeply affects the patients' everyday life activities. Life is typically endangered by the intervention of the vascular system, the intestinal system, and the central nervous system. There was no complete explanation of the etiology and pathogenesis of Behcet's disease. However, substantial progress in these areas has been made through recent inquiries. In addition, increasing attention has been paid to the antitumor effect therapy for necrosis factor alpha in this condition.[2]

History

Hulusi Behcet's (Fig:1) was born on 20 Feb1889 in Istanbul. He studied and learned French, Latin and German at a French school. In 1906, when he was only 16 years old, he founded Kuleli Military Medical School and graduated in 1910. After specializing in skin and venereal disease training at Gulhane Military Hospital, he spent four years working at Edirne Military Hospital. He went to Europe afterwards, worked for a short time in Budapest and Berlin, and returned to his country. He served as a freelance doctor for a while and then worked at the Haskoy Venereal Diseases Hospital and Guraba Hospital in 1933; he became head of the Department of Skin and Venereal Diseases at Istanbul University and continued this position until 1947. [3,4]

He first studied about behcet's disease in 1924. The patient was diagnosed in Istanbul and Vienna with persistent hypopyon uveitis accompanied by ulcerations in the mouth and scrotum, painful nodules on the legs, fever, and joint pain and was later treated by Hulusi Behcet for several more years [3,4,5]. He examined a female patient with recurring

ocular symptoms and oral and genital lesions in 1930, and a male patient with oral pemphigus-like injuries, acneiform back lesions, scrotal ulcers, night fever, abdominal pain, and ocular symptoms in 1936. [3,4,5]

Hulusi Behcet first proposed in 1937 that recurrent oral aphthal lesions, genital ulceration, and recurrent hypopyon uveitis were the symptoms of a single disease as a triple symptom complex, as a result of his studies on these three patients. [6]

Figure 1: Husuli Behcet's

Sign and symptoms

The symptoms of Behcet's disease differ from person to person, and can come and go or become less severe over time. The signs and symptoms depend on the affected parts of your body. The affected part of body byBehcet's disease includes:

- **Mouth:** The most common symptom of Behcet's disease is painful mouth sores that look similar to cancer sores. They start as raised, round lesions in the mouth that develop into painful ulcers quickly. Usually, the sores recover within one to three weeks, even though they recur. (Fig:2)
- **Skin:** Some individuals have acne-like sores on their bodies. Others, especially on the lower legs, develop red, raised and tender nodules on their skin. (Fig:3)
- **Genitals:** The scrotum or the vulva may have swollen, open sores. In general, the sores are painful and can leave scars.
- **Eyes:** Inflammation of the eye (uveitis) causes, usually in both eyes, redness, discomfort and blurred vision. The disorder will come and go in individual's withBehcet's disease. . (Fig:4)
- **Joint**:In individuals with Behcet's disease, joint swelling and discomfort frequently affect the knees. There may even be knees, elbows or wrists involved. They will last one to three weeks for signs and symptoms and go away on their own.
- **Blood vessels**: When a blood clot results, inflammation in veins and arteries can cause redness, discomfort, and swelling in the arms or legs. Complications, such as aneurysms and artery narrowing or blockage, may result from inflammation in the broad arteries.
- **Digestive system**: The digestive system may be affected by a number of signs and symptoms, including stomach pain, diarrhea and bleeding. (Fig:5)

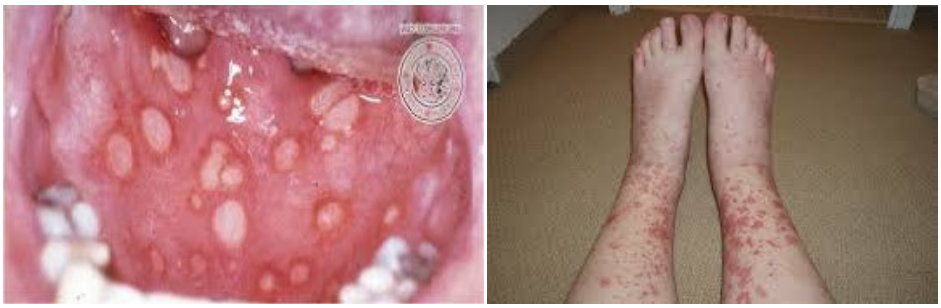

Figure: 2,3: Mouth sores, tender nodules in skin

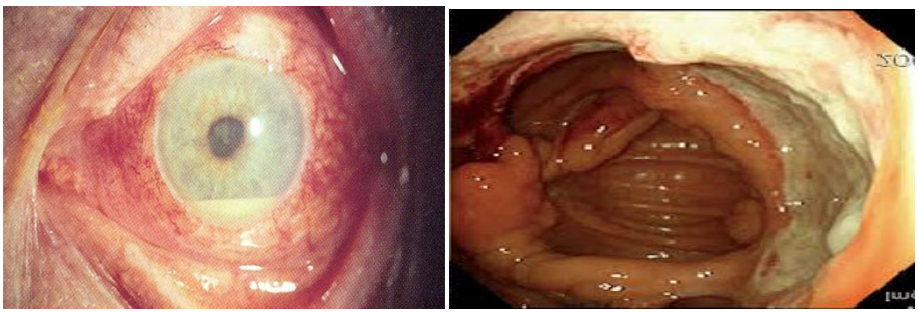

Figure:4,5: uveitis, GI Bleeding

- **Brain.** Brain and nervous system inflammation may cause headaches, fever, disorientation, poor balance, or stroke.[7]

Causes

Behcet's disease may be an autoimmune condition, meaning some of its own healthy cells are wrongly attacked by the body's immune system. Genetic and environmental influences possibly play a role. The signs and symptoms of behcet's disease are deemed to be related to blood vessel inflammation (vasculitis). Arteries and veins of all types may be involved in the disease, destroying them all over the body. There have been multiple genes found to be associated with the disease. In individuals who have certain genes that make them vulnerable to behcet's, some researchers suggest a virus or bacterium may cause behcet's disease. [8]

Risk factors

Age: men and women in their 20s and 30s are generally affected by behcet's disease, while children and older adults may also develop the disorder. Location: behcet's is more likely to grow in individuals from countries in the middle east and east asia, including turkey, iran, japan and china. Sex: although both men and women have behcet's disease, the disease is typically more severe in men. Genes: genes. A greater risk of developing behcet's is associated with possessing certain genes. [8]

Action of behcet's disease

Behcet's (beh-chets) disease is a rare illness that causes inflammation of the blood vessels in the body. The illness may lead to multiple signs and symptoms that may at first seem unrelated. They may include mouth sores, inflammation of the eyes, lesions and skin rashes, and genital sores. [9] the disease occurs in order and cause the severe pain in the body. And affect in skin lesions, uvetis, genital, joints, blood vessels, brain, and digestive system.

Clinical manifestation

Vasculo-Behcet's disease

Vasculo-disease behcet's is commonly called the presence of veins and arteries in behçet's disease. In 7-33 percent of behcet's disease patients, venous thrombosis seemed to be the primary vascular presence, accounting for 85-93 percent of vasculo-disease. Behcet's deep vein thrombosis and a positive pathergy test were substantially correlated with the male sex. [10, 11] recent studies have revealed the existence of antiendothelial drugs. Behcet's disease cell antibodies. In addition, increased expression of e-selectin was seen when endothelial cells were incubated with sera from patients with active behcet's disease or with sera from patients with anti-endothelial cell antibodies and elevated myeloperoxidase levels or purified myeloperoxidase alone. Since active behcet's disease neutrophils release increased amounts of myeloperoxydase, neutrophil activation and the expression of antiendothelial cell antibodies are LIKELY TO PLAY AN IMPORTANT ROLE IN PRODUCTION OF INFLAMMATORY ENDOTHELIAL HARM.[12]

Orogenital Ulceration

Oral ulceration is typically the initial symptom of BD and ogenital ulcers. At any point in the clinical course, it is seen in all patients. Sometimes, this symptom precedes other symptoms by a number of years. In the lips, gingiva, or tongue, ulcers may occur. The lesions are very painful and, without scarring, generally heal. Genital ulcers typically happen in males on the scrotum and penis and in females on the vulva. They are painful and larger and deeper than oral ulcers in general. Such lesions recur and generally leave scars.[13]

Ocular Manifestation

In 60-80 percent of patients, ocular disease happens and bears the most severe morbidity. It is characterized by chronic repeated attacks that can improve with remission, but if not properly and effectively lead to total loss of vision. The mean age of uveitis onset ranges from 25 to 35 years. Males experience attacks faster and more often than females. [14,15]

Gastrointestinal Manifestation

It is estimated that the frequency of intestinal involvement in bd patients is 3-25 percent, with geographic variations. In mediterranean patients, it is uncommon, but more common in the east, with geographical variations; the level of intestinal involvement in bd patients is estimated to be 3-25 percent. In mediterranean patients, it is uncommon, but more common in the east. Abdominal pain, nausea, vomiting, diarrhea with or without blood in the stools, and constipation are the most common signs.[16]

Neurological Manifestation

The more common type is cns parenchyma in a focal or multifocal way. It is due to a venous-predominant vasculitic condition. The other one is secondary to thrombosis of the cerebral sinus vein and is associated with the prognosis is greater than that of parenchymal disorder. Psychiatric disease and peripheral nervous system involvement are other unusual types of neurologic bd. Parenchymal disease primarily affect the brainstem. Cranial nerve abnormality, dysarthria, corticospinal tract symptoms, cerebellar findings, such as ataxia, and mild confusion may occur and may be present.[17,18]

Pulmanory Manifestation

Pulmonary artery aneurysms are the second most common site of arterial involvement, as previously described, and primarily affect young men. In the right lower lobar artery, followed by the right and then left main arteries, pulmonary artery aneurysms occur at the most common location. Hemoptysis, due to aneurism rupture and erosion into a bronchus, secondary to active vasculitis, is the most common symptom of pulmonary artery aneurysms. Pulmonary infarction secondary to thrombosis, pleural effusion (either from svc thrombosis or pleura vasculitis), bronchiolitis obliterans coordinated pneumonia, recurrent pneumonia, atelectasis, are other recorded pulmonary manifestations of bd. [19]

Renal Manifestation

Glomerulonephritis (gn) is perhaps the most prevalent form of renal disease found in bd, and most are asymptomatic. Crescentic gn, proliferative gn, and iga nephritis are common forms of glomerular lesions. There is a broad variance in the range of clinical findings in gn, observed by regular urine examination, ranging from asymptomatic hematuria and/or proteinuria (most of the cases), to rapidly progressive gn and renal failure. There may also be hypertension and moderate renal failure. The prognosis is not known for patients with silent glomerular disease, although it seems positive.[18] in less than 1 per cent of patients with vascular bd, renal vascular disease is identified. The most common form of renal vascular disease among the patients reported in the literature is renal artery aneurysm . Renal amyloidosis is uncommon in bd and is recorded mainly in the mediterranean and middle east regions. While there is not adequate evidence to support it, bdd is associated with poor prognosis when this manifestation is present.[20]

Dignosis

If you have behcet's disease, no scans will decide if you have it, so your doctor can depend mostly on your signs and symptoms. Since almost everyone with the disorder develops mouth sores, a diagnosis of behcet's disease usually includes mouth sores that have recurred at least three times in 12 months. Moreover, behcet's disease diagnosis requires at least two additional indications, such as: recurring genital sores, eye inflammation, skin sores

Tests you might need include: blood tests or other laboratory tests may rule out other circumstances. Pathergy examination, the doctor inserts the skin with a sterile needle and tests the area one or two days later. A tiny red bump develops under the skin where the needle has been inserted if the result is positive. This shows that the immune system overreacts to a minor injury. [21]

Treatment

There has been identification of abnormal activation of neutrophil functions .in becet's disease pathogenesis. Colchicine has been commonly used for the treatment of behcet's disease as a basic medicine, based on the argument that colchicine has beneficial effects by neutrophil activity inhibition. Recently, the findings of a 2-year randomized, double-blind, placebo-controlled study found that colchicine substantially decreased colchicine levels. In both female and male patients, arthritis occurred, while the frequency of genital ulcers and erythema nodosum decreased only in female patients. This can suggest less serious illness among women.[22,23]

Thalidomide is a drug that, after its teratogenicity was demonstrated in the 1960s, practically vanished from clinical use. The 24-week results of a randomized, double-blind, placebo-controlled study showed that in adult patients with Behcet's disease, thalidomide is successful in treating mucocutaneous lesions, including oral and genital ulcers, and follicular lesions, although the effect has rapidly decreased after discontinuation of therapy. In pediatric patients with Behcet's disease, the beneficial effects of thalidomide have also been identified. Knowledge of the danger of axonal neuropathy and teratogenesis during thalidomide at all times, however, There is obligatory counseling. [24,25]

The drugs mostly used are azathioprine (Azasan, Imuran), cyclosporine (Gengraf, Neoral, Sandimmune) and cyclophosphamide. As described earlier, in patients with the chronic progressive form of neuro, Behcet'sdisease low-dose weekly methotrexate has been shown to be efficient. Methotrexate has also been shown to have beneficial effects. In Behcet's disorder, in ocular manifestations. Further trials to investigate the effectiveness of methotrexate in Behcet's disease in different manifestations would be worthwhile. [26,27] (Figure 6)

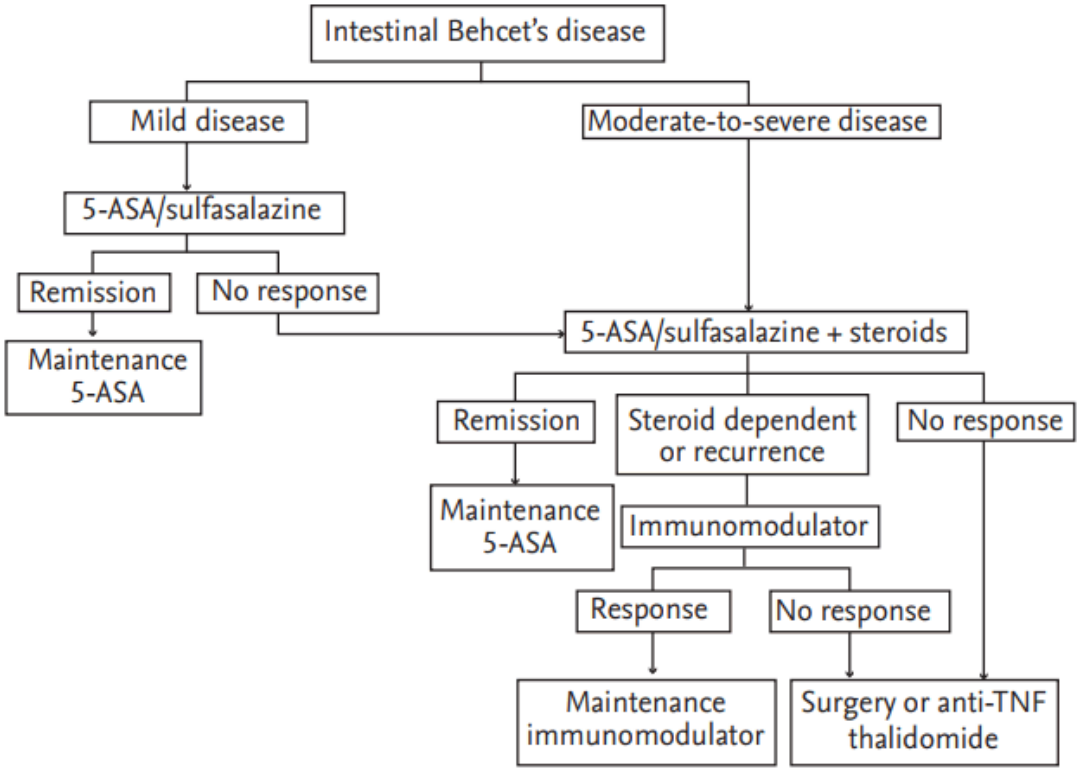

Figure 6: Behcet's disease & its treatment strategies

CONCLUSION

Behcet's disease is an unexplained etiological inflammatory condition, and many of its distinctive repeated manifestations coincide with those that are characteristic of auto-inflammatory illnesses. Behcet's disease has a complex genetic disease, unlike inherited auto inflammatory disorders, therapeutic etiology. Epidemiological research, however, genetic factors contribute greatly to pathogenesis and are close to pathogenesis. Behcet's disease is more common in such autoinflammatory disorders, geographical areas, and/or ethnic groups in particular. It may help to explain its pathogenesis and also to recognize the missing links in the shared inflammatory pathways by delineating the similarities of behcet's disease to other inherited autoinflammatory diseases. Further characterization of the inflammatory features of behcet's disease may potentially lead to better treatment options being created. Behcet's disease is a rare project was to create systemic disorder that affects young people. After around 10 years of operation, it is a chronic disease with relapses and recurrences that' burn out'. Ocular involvement is normal and, if the patient is not treated correctly, the visual survival rate is low.

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