Nail Fold Capillaroscopy abnormality in Behcet's Disease and Relation to Disease Activity among Egyptian Patients

Thesis

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Magdeldin Naghim

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List of Abbreviations

Abb.	Full term
AIDS	*Acquired immunodeficincy syndrome*
ASA	*Amino salicylic acid*
BC	*Before Christ*
BD	*Behcet Disease*
BDCAF	*Behcet's disease current activity form*
CCR	*C-C Motif Chemokine Receptor*
CRP	*C reactive protein*
CT	*Computed tomography*
dcSSc	*Diffuse Systemic sclerosis*
DM	*Dermatomyositis*
DVT	*Deep venous thrombosis*
EN	*Erythema nodosum*
ESR	*Erythrocyte sedimentation rate*
GA	*Genital aphthosis*
GIMAP	*GTPase of the immunity associated protein*
HLA	*Human leucocyte antigen*
IFN	*Interferon*
IG	*Immunoglobulin*
IL	*Interleukin*
ISG	*International study group*
KLRC	*Killer Cell Lectin like Receptor*
LcSSc	*Limited cutaneous systemic sclerosis*
MRI	*Magnetic resonance imaging*
NBD	*Neuro-Behçet's Disease*
NSAIDs	*Non-steroidal anti inflammatory drugs*
OA	*Oral aphtososis*
PF	*Pseudofolliculitis*
PM	*Polymyositis*
RA	*Rheumatoid arthritis*

List of Abbreviations (Cont...)

Abb.	Full term
RAS	*Recurrent aphthous stomatitis*
RNP	*Ribonucleoprotein*
RR	*Relative risk*
STAT	*Signal transducer and activator of transcription*
SVC	*Superior vena cava*
TLC	*Total leucocytic count*
TLRs	*Toll like receptors*
TNF	*Tumor necrosis factor*
UBAC	*Ubiquitin-associated domain containing*

Abstract

Patients had statistically significant affection of anterior and posterior chamber, but with no correlation to BDCAF score, posterior chamber affection was significantly correlated to capillary ramification and tortuosity.

Patients had higher total leucocytic count, higher ESR and lower hemoglobin levels, ESR was also significantly correlated with capillary dilation and tortuosity, CRP didn't show statistically significant difference.

It was found that 70% of the patients had nailfold capillary changes, the most prevalent changes were tortuosity 64%, microhemorrhages 54%, and capillary dilation 24%, the disease activity wasn't related to the capillary changes.

We conclude that Behcet's disease causes nailfold capillaroscopic changes and that capillaroscopy can be used to complete the picture to diagnose Behcet's disease and that further studies are required to see a more specific pattern.

Keywords: Ubiquitin-associated domain containing - Total leucocytic count - Superior vena cava

INTRODUCTION

Behçet's disease is a systemic vasculitis of uncertain aetiology characteristically affecting blood vessels. It usually begins with recurrent oral and genital ulcers, eye affection, arthritis, skin manifestations, neurological affection, and a tendency for thrombosis in young adults. It has a worldwide distribution but is prevalent more in Middle East, Japan and some Mediterranean countries. Many criteria had been offered, however diagnosis can be problematic, particularly if the characteristic ulcers are not obvious at presentation. Treatment is difficult and must be individualized for each person ***(Kontogiannis and Powell, 2000).***

Behçet's disease was named to Huluci Behçet a Turkish physician, who in 1937, described the classical triad of iritis, hypopyon and orogenital ulcers**,** however, the first note of the disease probably was 2500 years ago. In his book *Epidemion,* Hippocrates (460–377 BC) describes a disease which is endemic in Asia Minor with "oral ulcers" "genital discharging" "watery eyes of a chronic character... which destroyed the vision of many persons" ***(Verity et al., 2003).***

The disease wasn't mentioned again in the medical books until early 1900s, when the classical triad was re-described in Europe. At first it was thought to be related to syphilis, but the entity Behçet proposed by 1947, had gained international recognition. In the absence of a diagnostic test, Behçet's

disease is a clinical diagnosis, for the aim of research the diagnostic criteria proposed by the International Study Group in 1990 and revised in 2010, is now widely accepted ***(Davatchi et al., 2010).***

Capillaroscopy is a non-invasive technique which was made to evaluate the capillary microcirculation. Nailfold capillaries were first noticed in the 17th century with magnifying glasses, at the early 19th century the first link between inflammation and capillary changes were noticed. A link between the capillary abnormalities and some diseases were made. With the progress of modern devices, capillary microscopy is starting to see a renaissance and more applications in medicine ***(Chojnowski et al., 2016).***

AIM OF THE WORK

To Find out Nail Fold Capillaroscopy abnormality in Behçet's Disease and its relation to the disease activity.

Chapter 1
BEHÇET'S DISEASE

Definition:

A systemic vasculitis, which was first discovered by Hulusi Behçet, a Turkish dermatologist. It causes oral and genital ulcers, uveitis, arterial or venous pathology, gastrointestinal and neurological affection these can be present in different combinations through time ***(Yazici et al., 2007).***

Epidemiology:

BD is a worldwide disease with clinical characteristics differing between countries, the disease is more severe in males than females ***(Oguz et al., 2017).***

Prevalence depends on many factors:

1- Genetic factor:

Genetic factor is supported by the geographical distribution of the disease, occurrence of family aggregations, Correlation with Class 1 HLA antigens especially the (HLA-B51) ***(Kobayashi et al., 2000).*** Turkey has the highest disease prevalence with 602/100, 000 affected other Silk route countries has the prevalence of 14-20/100, 000 the disease is less frequent in African, North European and American countries ***(Mahr et al., 2014).*** The prevalence of BD in Egypt is 3.6/100, 000 population being highest in Alexandria (15.27) and Cairo (8.72) ***(Gheita et al., 2019).***