Republic of IRAQ

Ministry of Higher Education

College of Dentistry

Association of Oral Manifestations, Microbiological and Salivary IgA Changes with Patients of Iron Deficiency Anaemia

A thesis

Submitted to the council of the college of Dentistry at the University of Baghdad in partial fulfillment of the requirements for the degree of Master of Science in Oral Medicine.

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Abstract

Iron deficiency anaemia: is the most common cause of anemia in all countries of the world. It is the most important cause of a microcytic hypochromic anaemia ,in which the two red cell indices mean corpuscular volume(MCV) and mean corpuscular haemoglobin (MCH) are reduced and the blood film shows small (microcytic) and pale (hypochromic) red cells. This appearance is caused by a defect in haemoglobin synthesis.

Aims of study

1- Determines the oral manifestations of iron deficiency anaemia.
2- Isolation and identification of different microorganisms (aerobic, anaerobic and Candida species) from oral micro flora of patients with iron deficiency anaemia and compared with clinically healthy individuals.
3- Determines the level of salivary IgA and compare it with clinically healthy individuals.

Subjects, materials and methods

The study performed in Marjan General Hospital in Babil, samples consist of (50) patients with iron deficiency anaemia and (30) healthy group of both sexes and with different ages to detect the prevalence of oral manifestations, microbiological and salivary IgA changes .This study approved by Ministry Of Health and all the patients would given their informed consent.

Instruments used in oral examination

Plane mouth mirror, disposable plastic spatula, Piece of gauze, dental chair and artificial light.

Materials used in the microbial study

culture media: Blood agar ,MacConkeys agar ,Saborouds agar ,Brain heart infusion broth,Nutrient broth agar and Swab with transport media.

Materials used in immunological analyses Equipments and kits

Secretary IgA ELISA kit Cat. No.# K8870.

Results:

It was found that:

1. There is a direct positive correlation between oral manifestations such as (pale oral mucosa, angular stomatitis, burning mouth sensation…) and iron deficiency anemia.
2. There is a direct positive correlation between *Staph. aeurus* and *Candida albicans* infection and iron deficiency anemia.
3. Salivary IgA level is not altered during iron deficiency anemia

Conclusions:

. Iron deficiency anemia impairs the immune response but it has no effect on humoral immunity (Salivary IgA) .

.The oral cavity is greatly affected by iron deficiency anemia.

.Saliva is a dependable sample for evaluating the level of salivary IgA.