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EC MICROBIOLOGY
Case Study

Psoriasis is Candidate for Intestinal Microbiota Transplantation?

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Abstract

More frequently we observe articles that deal with the role of intestinal microbiota in other conditions that are not strictly the impact of *Clostridium difficile*.

We see good results in intestinal inflammatory processes such as Nonspecific Chronic Ulcerative Colitis, and although to a lesser extent in Crohn's Disease and other problems.

But What's going on in other conditions such Psoriasis?

We presented a patient with this pathology and observed improvement, although not remission.

What happened with comorbidities presented by the patient in question?

Keywords: *Psoriasis and Microbiota; Fecal Microbiota Transplant (FMT); Intestinal Microbiota Transplant (IMT)*

Introduction

Psoriasis is a chronic disease, in which immunity intervenes. People may have cutaneous, joint and systemic manifestations that generate significant morbidity and increased risk of mortality.

Presentation of the Case

A 34-year-old male, who has been suffering from Psoriasis in plaques for 25 years, characterized by small rashes on the scalp and on the right side of the auricular pavilion.

Explanation for figure 1

The lesions appeared later in both the auricular pavilions, as well as in the frontal region. Erythematous plaques and whitish scales extend to the nose and eyebrows, accompanied by itching, without Koebner's phenomenon. He has used a spray, lotion and creams, based on cortisone, with little improvement.

Edema in the hands when carrying something heavy. It happened 7 times and now no longer; It was 2 - 3 years ago. Anxiety, 24 points on Hamilton's scale (Hamilton M. The assessment of anxiety states by rating. Br J Med Psychol. 1959; 32: 50-55).

Abdominal bloating when eat spicy or exaggerates his social responses. Dry eyes. It moistens them when blinking and there is no need for drops. Insomnia.

Ultrasound before FMT with grade I Non-alcoholic hepatic steatosis. Glutamic pyruvic transaminase 57. Alkaline phosphatase 38. Total bilirubins 1.52; Direct 0.59 and indirect 1.23. Blood count with mean corpuscular hemoglobin in 26. Normal coagulation tests. Weight 180.78 pounds. Size 5´9". Pulse 90 X'; blood pressure 120 - 180; Temperature 97.7°F; Abdominal perimeter 39.76 inches.

It is diagnosed:

1. Plaque psoriasis (scalp and face).
2. Anxiety degree 24 Hamilton scale.
3. Non-alcoholic hepatic steatosis Grade 1.
4. Abdominal perimeter 39.76 inches. For investigating cause.
5. Spastic colon.
6. Overweight grade 1.
7. Mycosis in small fingers of both feet.

IMT is performed, finding only spastic colon. They are deposited: 250 ml of Microbiota in ascending colon, 250 ml in transverse colon and 200 ml in descending colon. No incidents photographs of scalp are taken, including small toe nail, right, where there is fungal infection (black color) in external third of it. (There is in both feet, only that in the left, it is smaller). It is prescribed Probiolog (*Lactobacillus acidophilus* and *Bifidobacterium lactis*). 1 x 3; one month.

Two weeks after the IMT, reported a 10% reduction in the manifestation of Psoriasis. The one located on the forehead. Pruritus has reduced to 4 on a scale of 1 to 10, in all injuries. He is more hungry. The dream is refreshing. There was a feeling of evacuation (6 times a day), after IMT, evacuating semiliquid, on 3 occasions; giving without medication.

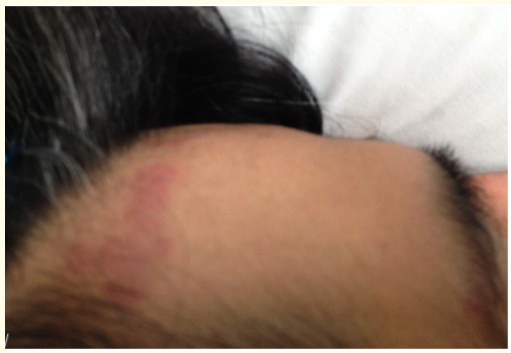

Figure 1: *Frontal eruption.*

Explanation for figure 2

Abdominal perimeter 40.55 inches (Increased). The current Hamilton survey is 9 points. Reduced 15 points. Probiolog 1 x 3 is prescribed; one more month.

Ultrasound of control liver without steatosis. A month later, he reports improvement. Dermatological lesions only increase in color when angry. Now he gets angry less.

The current color of Psoriasis located in the right temporal region is smaller in size and in coloration. It tends to match the color of the skin. Eat twice a day Masseter contracture occurs, although sparingly.

We advise you to exercise and eat 3 times a day. We prescribe: Rebiot I, ingestible solution. One a day (*Lactobacillus paracasei*/Vitamin B-6), *Bifidobacterium lactis* (BB-12), Vitamin B-12); BB-12; FOS fiber, Inulin).

The nail lesions and both small toes of the feet remain the same.

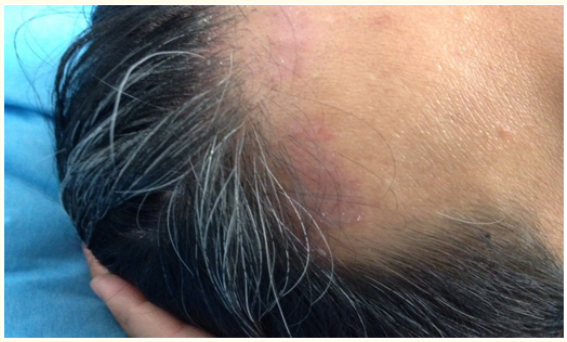

Figure 2: *Decrease in frontal rash.*

Discussion

Psoriasis is a chronic disease, in which immunity intervenes. People may have cutaneous, joint and systemic manifestations that generate significant morbidity and increased risk of mortality. In addition, it affects the quality of life and is a risk factor for cardiovascular diseases, metabolic syndrome, peripheral vascular disease, inflammatory bowel disease, malignant tumors and nephropathies [1-3].

The skin is usually the most affected organ, but the joints, nails, eyes and the cardiovascular system can be compromised [4-6]. All of the above has stimulated us to look for treatment schemes that help solve this significant problem. That is why we have carried out an Intestinal Microbiota Transplant in the case in question, in order to offer other therapeutic alternatives, since there are few publications that treat Psoriasis with IMT, since they usually refer to the pathology. In children, nail involvement or complications such as arthritis [7-12] or something more complicated, such as cardiovascular [13,14] ocular [15-17] or the implementation of brilliant standards or meta-analysis studies [18-20]. Also, we see interesting reports, where Psoriasis is linked to digestive disorders, such as intestinal inflammatory processes, affecting the possibility that there is a link between these two diseases Psoriasis and Intestinal Inflammatory Disease [21-23].

Di Cesare., *et al.* they approach the disease from the immunological point of view, providing diverse tools for development in this sense [24].

Also, processes such as tobacco or some medications have been referenced as causes of Psoriasis and its complications [25]. Although we began to see other considerations, such as alterations of the microbiota, intrinsically related to Psoriasis, such as the study by Scher., *et al.* [26] those who observe coincidence with psoriatic arthritis, dysbiosis and psoriatic manifestations. They conclude that patients with PsA (psoriatic arthritis), as well as patients with cutaneous Psoriasis had relatively lower abundance of intestinal bacteria multiples.

Although some genera decreased concomitantly in both conditions, the PsA samples had lower abundance of taxa that reportedly are beneficial. This intestinal microbiota profile in PsA was similar to that described previously in patients with Inflammatory Bowel Disease and was associated with changes in specific inflammatory proteins exclusive of this group and different from those of patients with cutaneous Psoriasis and healthy controls. Therefore, the role of the gut microbiome in the pathogenesis of Psoriasis-PsA and the associated immune response deserves further study.

Numerous studies address the coincidence of Inflammatory Bowel Disease and dermatological processes [21,27-29].

There are few observations that indicate the importance of specific bacteria in the psoriatic processes, which highlights the great interaction that exists between these two major conditions [30-32].

With all the above, we cannot underestimate the management with Intestinal Microbiota Transplantation, and thus, have a new tool that contributes to the integral management of the psoriatic processes [34-37].

It has been found that serum concentrations of interleukin-23 (IL-23) are elevated and polymorphisms in the IL-23 receptor are associated with ankylosing spondylitis, which translates the importance of the inflammatory process [38].

Conclusions

We consider that the intrinsic relationship between Intestinal Microbiota and dermatological alterations exists, as is the case of Psoriasis, and intervenes in the development process of this skin disease.

The dysbiosis, generated by imbalance in the concentration of bacteria, with poor development of the microbiota, contributes much to some dermatological alterations. Often being accompanying phenomena.

For all of the above, the Intestinal Microbiota Transplant should not be underestimated in these patients. Even when, as in our case, it improved a bit, there was a clear improvement in anxiety, digestive, hepatic and psychological alterations, which undoubtedly are part of the dysbiosis, and which generates a good number of added medical alterations.

Conflicts of Interest

The authors declare that they do NOT have affiliation or participation in organizations with financial interests.

Ethical Approval

The present report does not contain any study with human or animal subjects made by the authors.

Informed Consent

The authors obtained written informed consent from the patient in order to develop the present case.

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