

INTRODUCTION

Parry-Romberg Syndrome (PRS), also known as idiopathic hemifacial atrophy, is a rare neurocutaneous disorder characterized by progressive unilateral facial wasting. It affects the skin, fat, muscles and bone in the area of one or several branches of the trigeminal nerve, leading to significant facial asymmetry. PRS typically manifests during childhood or adolescence with an unclear etiology. A predominance in women was observed and it has a profound impact on both aesthetics and functionality, causing psychosocial distress and reduced quality of life.

The management of PRS poses significant challenges and often requires a multimodal approach. Due to the fact that it is an autoimmune disease, the initial treatment is performed with immunosuppressant therapy and in turn the aesthetic deficit can be treated. Surgical interventions, orthognathic procedures and lipofilling have been explored, but non-surgical alternatives such as the use of injectable fillers have gained attention. A perfect agent for injection must be non-immunogenic, biocompatible and stable at the implantation site.

This study presents a case of Parry-Romberg Syndrome successfully treated with a combined therapy involving Radiesse® (CaHA) and Belotero® (hyaluronic acid) (Merz Aesthetics®, Frankfurt, Germany) to address facial asymmetry and volume loss, considering product specifications and rheological characteristics. The aim is to demonstrate the potential benefits of this approach, focused of improved facial symmetry and volume restoration in PRS. The specific characteristics and concerns of the patient were taken into account to ensure a personalized and effective treatment strategy. This approach aims to achieve improved outcomes and minimize the invasiveness associated with surgical options.

CASE REPORT

A 39-year-old female patient came into the clinic for correction of asymmetry in the chin. Cutaneous examination revealed facial asymmetry with median lipoatrophy of the left side of the chin, spreading to the nasolabial folds (Figure 1). In the first intervention, 3 years ago, the patient received hyaluronic acid injections in the nasolabial fold and left side of the chin (Figure 2).



Figure 1. Before treatment, lipoatrophy of the left side of the chin spreading to the nasolabial fold (yellow arrows)

Figure 2. After treatment with hyaluronic acid injections

A satisfactory result was obtained and sustained for almost 2 years. However, due to a subsequent weight loss, the facial asymmetry became more pronounced with median lipoatrophy of the left side of the chin, spreading to the nasolabial folds, left cheek and temporal region (Figure 3). The diagnosis of PRS was suspected. Magnetic resonance imaging (MRI) and facial tomography confirmed the subcutaneous volume loss; there were no symptoms of neurological disturbances; teeth arrangement and bone mass were normal (Figure 4).



Figure 3. Asymetry became more pronounced, lipoatrophy of the left chin rising to the nasolabial fold, left cheek and temporal region (yellow arrows)

Figure 4. Magnetic resonance Imaging(A) confirmed the subcutaneous volume loss (yellow arrows) and facial tomography (B) confirmed bone mass to be normal.



Figure 5. Before treatment. Yellow arrows indicate volume loss.

Figure 6. 90 days after 1,5ml of Radiesse Plus injection in the left side of the face

Figure 7. Second session - 3ml of Radiesse Duo was injected and a significant improvement was noticed.

After diagnosis and confirmation of disease stabilization (Figure 5), the injection of 1,5ml of Radiesse Plus® (CaHA) was performed. A significant improvement of the depression was noticed in 90 days (Figure 6). Following a detailed evaluation, the treatment plan involved one more session of 3ml of Radiesse Duo® (Figure 7).

After 3 months the patient was re-evaluated and a final adjustment with hyaluronic acid was planned (Figure 8). 1ml of Belotero Volume® hyaluronic acid was injected into the chin area and 2ml of Belotero Intense® into the lips and tear trough (Figure 89)



Figure 8. Patient came back after 3 months and a final adjustment with hyaluronic acid was performed.

Figure 9. After 15 days - 1ml of Belotero Volume into the chin, 1ml of Belotero Intense into the lips and 1ml of Belotero Intense into the tear trough.

RESULTS

Evaluating treatment progress, it is possible to notice a remarkable improvement in asymmetry and facial proportions. The result was satisfactory and most importantly, none of the procedures induced disease reactivation (Figure 10-12).



Figure 10. Before treatment

Figure 11. After 2 sessions of Radiesse injection (180 days after)

Figure 12. Final result after Belotero refinement (90 days after)

DISCUSSION

The treatment involved sterile conditions, aseptic techniques, and anatomical marking. Radiesse® and Belotero® (Merz Aesthetics®, Frankfurt, Germany) were selected for volume restoration, contour correction, and facial symmetry enhancement. Customized injection techniques aimed to optimize results and minimize invasiveness.

Outcome assessment included pre- and post-treatment photographs, clinical evaluation of facial symmetry, and patient satisfaction surveys. Photographs documented changes in facial asymmetry and volume. Clinical evaluation focused on facial symmetry, contour, and appearance. Patient surveys measured subjective perceptions.

This case report contributes to understanding combination therapy with Radiesse® and Belotero® for facial asymmetry and volume loss in Parry-Romberg Syndrome. It underscores their potential as non-surgical options for improved facial aesthetics. Gained insights can guide clinicians managing this challenging condition.

CONCLUSION

This clinical case demonstrates the successful use of combined therapy involving Radiesse® and hyaluronic acid fillers (Belotero®) for addressing facial asymmetry and volume loss in Parry-Romberg Syndrome. The treatment yielded significant improvement in facial symmetry, contour, and overall appearance. The patient's high satisfaction and positive subjective feedback further support the efficacy of this approach.

These results suggest that the combination therapy of Calcium Hydroxylapatite and hyaluronic acid fillers can be a viable and less invasive option for individuals with Parry-Romberg Syndrome seeking improved facial aesthetics and reduced facial asymmetry. However, further research and investigation are needed to validate these findings, evaluate long-term outcomes, and ensure treatment safety.

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Patient allowed, through an informed consent term, the use of her images.