Successful Reconstruction of Hemifascial Atrophy By Using Stromal Vascular Fraction Added Fat Grafting in One Session

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INTRODUCTION: Craniofacial microsomia and atrophy are infrequent diseases and may include moderate to severe soft tissue defects. Serial autologous fat grafting is one of the methods for treating the soft tissue defects in microsomia and hemifacial atrophy. (1) Stromal vascular fraction (SVF) contains endothelial progenitor cell and mesenchimal stem cell and it has a wide usage in medicine, as tendon healing, bone regeneration, tissue regeneration. We aimed to present a hemifacial atrophy case and reconstruction in one session with using SVF and fat grafting for the soft tissue defect.

MATERIAL AND METHOD: 18-year-old female patient was admitted to our clinic with facial asymmetry. (Figure 1) There was no progression in the disease for 1 year. Autologous fat which was obtained from abdominal region was used for managing the soft tissue defect. 100 cc lipoaspirate were obtained and 70 cc of it was centrifuged twice at 1300 rpm (260G) for 5 min. 30 cc lipoaspirate was used for obtaining SVF. Preoperative, postoperative first day and postoperative 2 years photographs were taken. Two plastic and reconstructive surgeons,except the surgeon who performed the operation, evaluated the aesthetic result. (Figure 2) Patient was given a satisfaction questionnaire. Patient was got only one session grafting.

RESULTS: In the physician evaluation; aesthetically acceptable results were obtained. Patient satisfaction rate was 100%.

CONCLUSION: Because of the rich stem cell portion of the graft, fat graft viability was higher than expected. In these type of operations, serial fat grafting is always the option. Due to SVF, we don't need a second session. Fat grafting may be superior in case of SVF supplement to the fat graft.

REFERENCE:

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FIGURE LEGENDS:

Figure 1. Preoperative hemifascial atrophy

Figure 2. After fat grafting added SVF (postoperative 2 years)