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EFFICACY OF AUTOLOGOUS PURE PLASMA RICH IN PLATELET (P-PRP) FOR THE TREATMENT OF LARGE FULL-THICKNESS MACULAR HOLES

Oral

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Purpose:

To compare closure rates (CR), uncorrected (UCVA), best-corrected visual acuity (BVCA), and Ellipsoid zone reconstruction, after a single vitreoretinal inverted flap fill technique (IFFT) in 2 groups of patients with macular hole stage IV, with or without pure plasma rich in platelet injection (P-PRP).

Methods:

This is a non-randomized consecutive retrospective clinical study of 40 patients with full-thickness idiopathic macular hole stage IV. All cases were examined and treated between January 2021 and April 2022 at the ARNAS Civico Di Cristina Benfratelli Hospital and Paolo Giaccone University Hospital in Palermo. The patients were divided into two groups: the P-PRP group and the NP-PRP group, both of 20 patients each. Either group underwent a 25G IFFT, but the first received the P-PRP, assisted by intra-operative optical coherence tomography, to fill the holes. All patients received at least 6m of follow-up.

Results:

We analyzed 40 patients (average age 64) with stage IV macular holes. In the P-PRP group, the mean minimum hole opening measured on average 670.65 ± 206.99 while in NP-PRP was 496 ± 120.38 ($p < 0.0056$). The macular holes were closed in 88% of cases. No statistically significant difference in closure rates and BCVA between groups was found ($p < 0.1193$; $p < 0.2698$). Statistically better results in reestablishing od Ellipsoid zone were found in the P-PRP group ($p < 0.1193$, $t = 1.5938$). Compared to others, patients who showed a re-establishment of the Ellipsoid zone had a statistically significant visual improvement ($p < 0,0007$)

Conclusions:

The addition of PRP in IFFT does not modify results in terms of VA and CR. But, considering the better restoration of the Ellipsoid zone in the P-PRP group despite P-PRP's greater hole dimension, a photoreceptor regenerative action could be hypnotized. In addition, P-PRP's sticky characteristics, help fulfil the procedure.