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Biofiller new boom over HA – review

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ABSTRACT
Blood derivatives from past used for regeneration repair volume gain natural product where as dermal fillers HA (NASHA) synthesized product main work to increase the volume in few seconds to give immediate results but comparisons between both is also very researchable topic some suggest blood derivatives for the treatment some HA , Depending on patient choice , this review showing the differences between both and how blood derivatives used as fillers

I. INTRODUCTION

In late 1970 importance of growth factors within wound healing , growth cascade were identified .Studies however have shown that a single growth factor applied , for growth is not as effective as multiple growth factors this understanding Has led to the need for bio-tissue engineering 1

Strategies which can provide release of many growth factors which give healing , growth , repair at same time over the past different procedures come in front in which blood derivatives play important role so role of PRP PRF and modification become so popular it is safe ,convenient easy cost effective and natural without any side effects and more acceptable 2

Dermal fillers isHyaluronic acid (HA) is a carbohydrate, more specifically a muco-polysaccharide, occurring naturally in all living organisms. It can be several thousands of sugars (carbohydrates) long. When not bound to other molecules, it binds to water giving it a stiff viscous quality similar to "jelly". Physiologically Hyaluronic acid has a role in several process including angiogenesis, extracellular matrix, homeostasis, wound healing and the mediation of long-term inflammation . 3

People of all ages find themself concerned with fighting different signs of skin aging some of most popular choices for patient are injectable like dermal fillers and prp these are two non surgicalenhancement techniques that will help patient to give younger look than actual age, but which prp and dermal filler is right for patient is main debatable topic .one is synthesized product(NASHA) and one is natural product both products replaces the collagen one give immediate filling effect and one forms collagen 4

But meanwhile its patient choice he she wants immediate results or wants no. of sessions there are some pro and cons of both procedures

Pro of prp-

Utilize the growth factors found in the blood as no chances of hyper reaction 0r sensitivity is see, heal the skin wound new growth combine with different procedures , end results remains for long time period as compare to others 5

Cons of PRP –

required many sessions , give volume but that volume is stabilize according to mechanism

dermal filler – sudden or immediate results , non surgical quick recovery time

cons – result depends on action of enzyme which decrease the amount of fillers by the time

result of PRP is typically longer than dermal fillers depending on no of session and depending on condition main issue come with prp is the nature of prp that prp is liquid in nature as compare to dermal filler which is gel like so we prp is infiltrate sudden volume occurs but after 2 or 3 days that liquid volume subside by itsown 6. on otherhand fillers remain same for days or months depending on consistency of fillers soprp as fillers consistency is new concept is known as bio-fillers in which consistency of prp is changed from liquid to hard and than used as a dermal fillers so it is better accepted by patient than high density HA with different advantages like a natural product that form collagen , no risk of allergy in recent year plasma gel gain very popularity some studies show biofillers is madeup of different layers of prp , like poor layer , pure layer and whole prp, some studies showing use of PPP is more good than whole prp layer reason the consistency of ppp in term of hardness stay for longer time reason growth factors are more in prp bottom layer which is pure layer on other hand upper layer which is poor amount of growth factors are less but on otherhand amount of fibrinogen is more in upper layer as compare to

bottom so that fibrinogen gives longer durability of gel which is formed 7

when heat apply to protein , protein gain energy and literally shake apart the bonds btw the parts of aminoacids strings causing the protein to unfold as temperature increase the protein gain new energy to form new stronger bonds with other protein molecules , as heat applied first unfolds protein breaks then protein link up with other to form new strong bonds ,water that surrounded each protein is forced out that structure becomes hard , chemical is added to activates the growthfactors and to break the weak bonds btw protein molecules 8 9

II. METHOD

20ml of patient blood was drawn and mixed with 1ml of anti-cog ACD vial , now rotated for 12 min for 2700 RPM in centrifuge machine , now plasma solution withdraw in plan test tube and again centrifuged at 800 rpm for 8 mins

Now in some studies whole prp is used or in some studies poor plasma layer upper is taken out and chemical called activator calcium gluconate is added in upper layer , now this solution is incubated in hot water at 100c for 10mins than takeout and putting back in cold water bath at 10c for 5mins

After that cold water bath viscous gel is ready for use this gel is hard in consistency so according to area we can change the consistency to light , medium and hard with lucer look

III. CONCLUSION

Prp gel injection as dermal filler is cost effective simple ,non surgical procedure ,it is autologous material easy to obtained from patient own blood and main give immediate results with benefit of growth factor release material which forms new collagen by neocollegenosis these growth factor also enhance synthesis of extracellular material component such as HA 10

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