Stem Cell Skin Gun Developed for Wound Treatment

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INTRODUCTION

Skin gun is a medical device used for secondary burns. It is pneumatic device which generates and utilizes compressed air.

Introduction types of Burnes

• First-degree burns
• Second-degree burns
• Third-degree burns

First degree (superficial)

Only the epidermis is involved. The skin is red and painful. There is usually no blistering and skin will blanch when touched. It heals without scarring.

Second degree (partial thicknessIn shallow dermal burns (SDB)

As it were the papillary dermis is included. In this case the skin is excruciating. Rankles are seen. When the bullae are deroofed, the skin is damp and blanches when touched. It mends with negligible pigmentary changes without hypertrophic scarring. On the off chance that the reticular dermis is included, it is considered as profound dermal burn (DDB). In this case, there's less torment and no bullae or rankling. There's eschar and the skin is white or yellow. It does not whiten on weight. It recuperates with scarring.

Third degree (full thickness)

There is small or no torment. It includes the epidermis and dermis and amplifies to the subcutaneous layer. The skin is rough, dim, and inelastic. It does not whiten. It does not mend suddenly, comes about in hypertrophic scar and contractures, and requires joining.

Comparision to traditional methods

Stages: Whereas it takes more hours to prepare and administer stem cells with the stem cell gun, it takes 2-3 weeks to produce a skin sheet and harvest it from an external lab. Once the skin sheet has been attached to the wound, blisters form under the newly attached skin, pushing the sheet up, damaging the wound
and increasing the risk of infection. The skin gun applies its stem cells directly to the patient’s cells, which alleviates the concern of further tissue damage [1,2]. The artificial vascular system network also provides a reliable source of protection to the skin stem cells. After the wound has been treated, it takes months for the skin sheet to heal over, yet only days for the skin gun to fulfill its function. Reducing fragility of the cells and time frame of the operation cleverly employing differentiated stem skin cells in such a way that offers a renewable source of replacement is an essential component of the Skin gun’s capability. Skin gun application and its stages.

CONCLUSION

Since 2008 the skin gun has been under development for the treatment of second-degree burns. It is not yet approved by the FDA. Stem cell damage the spraying procedure is a current process handled. This treatment is only for recently burned victims, it will not yet work for those who suffered the injury a few months prior. A few days are required for the wound to internally cure with this new process, but after those few days the wound still looks damage. The skin will not form to look as it did before the injury until months afterward. Because pigment cells are much deeper in the part of the skin than keratinocytes are pigment cells need much more time to develop.

REFERENCES