Evaluation of LiquaCel™

A protein supplement with added arginine and it's correlation with expedited wound healing in recalcitrant wounds

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Introduction: The healing of wounds can be a non-achievable goal in the presence of poor nutrition. A key lab which measures and landmarks excellence in nutritional health is the pre-albumin level. In healthcare it is used to accurately measure visceral protein stores and decline over a short period of time. Nutritional supplements are used to speed stability and unfortunately, many are in large volume bases or have a milk-like base and can leave a terrible after-taste. Refusal rates can be high and a costly undertaking for a facility. This study examines a new supplement with added arginine and its' effect on wound healing as well as boosted pre-albumin levels in a four week time frame.

Methods: Seven residents all with either multiple pressure ulcers, vascular wounds, burns or non-healing incisions were chosen. All has a history of poor absorption and nutrition and all were on some type of protein supplement, which they has refused, all had weight loss and all had failed to progress in healing for 4 weeks or more. Pre-albumin levels were drawn on all 7 residents and measurements were done on all wounds. Each resident was started on a grape flavored protein (16 gm/oz) and arginine (2.5gm/oz) supplement of one ounce twice per day. Weights were also monitored for gain or loss. Tolerance and acceptance of the new supplement was examined.

Results:

Resident	Wound Type(s)	Pre-Supplement / Pre-Albumin	Post Supplement/Post Albumin	Weight Gain/Loss	Tollerance Acceptance %	Heal
Resident 1	One second degree deep tissue burn	6 on 5/24/08	13 on 6/24/08 16 by 8/15/08	None	100% Tolerance & Acceptance	burn healed 30% over 4 weeks and 100% by 8/15/08
Resident 2	One Stage I and One Stage II	16 on 8/21/08	No change	2lb weight gain	100% Tolerance & Acceptance	Stage I healed by 8/26/08 and Stage II by 9/9/08
Resident 3	Six Stage IV's Two Stage III's OneStage II	12 on 8/18/08	19 on 9/6/08 (in hospital at time)	None	100% Tolerance & Acceptance	Stage IV's decreased in size and granualted by 9/6/08, all Stage II's were now visualized Stage II's (MDS), and Stage II healed on 9/5/08
Resident 4	Two Stage IV's Three Stage III's Four Stage II's One Stage I	24 on 8/21/08	24 on 9/18/08	5 lb weight gain	100% Tolerance & Acceptance	One Stage IV smaller and granulated and other now an MDS Stage II, one Stage III granulated and smaller and two now MDS Stage II's, two Stage II's now MDS Stage I's and two Stage II's healed as well as Stage I healed
Resident 5	One Stage IV	23 on 8/28/08	24 on 9/18/08	2lb weight loss	100% Tolerance & Acceptance	Stage IV size unchanged but necrosis gone and granulation present
Resident 6	Non-healing incision with 50% necrosis	12 on 8/20/08	20 on 9/15/08	None	100% Tolerance & Acceptance	wound clean with epithelization on edges on 9/15/08
Resident 7	Five Stage IV's and two Stage II's	11 on 8/21/08	21 on 9/21/08	6 lb weight increase	100% Tolerance & Acceptance	All Stage IV's resolved by 9/9/08 and one Stage II resolved by 9/9/08; one Stage II existing with 50% decrease in size

Conclusion: 100% showed expedient wound healing, 86% of the group improved visceral protein stores and 14% remained stable, 86% of the group remained stable in their weights or showed needed weight gain and 100% tolerated and accepted the supplement with no fiscal loss from refusal.

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