

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

Title

EFFECT OF INFRA RED LASER THERAPY VERSUS HONEY THERAPY ON POST- OPERATIVE WOUND HEALING IN PATIENTS WITH ANAL FISTULA



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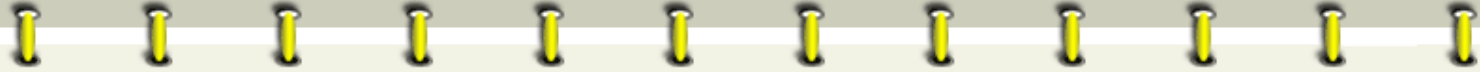
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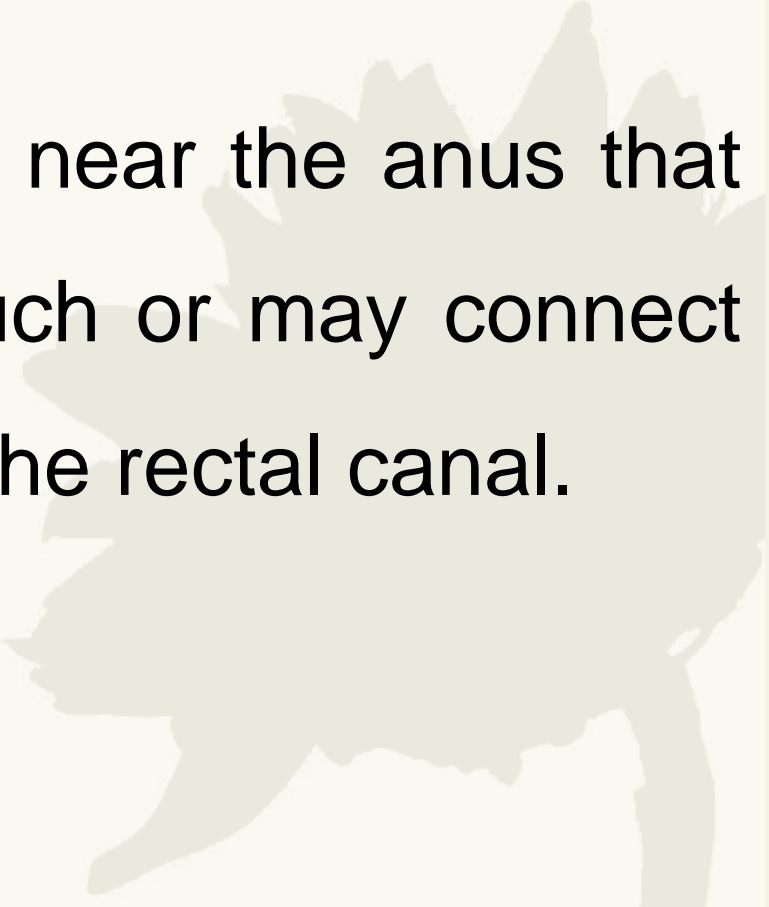
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PHYSICAL THERAPY, CAIRO UNIVERSITY
FOR ACCEPTANCE TO DISCUSSING MY STUDY

Introduction

Anal Fistula :

is opening in the skin near the anus that leads into a blind pouch or may connect through a tunnel with the rectal canal.



Introduction

Honey therapy It evacuates fluid from the wound, accelerates wound closure, Increase tensile strength of wound, removal of offensive swell, It facilitates tissue regeneration and has a chemical debridement effect of wound.

Introduction

Low level laser therapy Increase collagen organization, Improve local blood supply, stimulates biological reaction of wound, It reduces pain sensation and muscle spasm

Statement of the problem

- Does honey therapy have a positive effect on wound healing of post-operative anal fistula?
- Does laser therapy have a positive effect on wound healing of post-operative anal fistula?
- Which one of them was the best?

The Purposes of this study

- To determine the therapeutic efficacy of honey therapy on wound healing after anal fistula surgery
- To determine the therapeutic efficacy of laser therapy on wound healing after anal fistula surgery
- To compare between the effect of honey therapy and Laser therapy on wound healing after anal fistula surgery

METHODOLOGY

Subjects:

Thirty patients who had anal fistula surgery participated in this study. Their ages ranged from 30-50 years. The patients selected from Department of Surgery, Cairo University Hospitals. The patients were classified into two equal groups in numbers. The study was carried out from Jan 2015 to May 2015

METHODOLOGY

**Group A
(honey
therapy)**

**Patient in This group 15
patients (7 male and 8
female) received honey
therapy . Treatment
conducted for 8 weeks,
3Times per week, day
after day**

METHODOLOGY

**Group B
(LLLT
group)**

In this group, 15 patients (8 male and 7 female) received low level laser therapy with frequency 904 nm and intensity 25 Mille Watts . Treatment conducted for 8 week, 3 times per week day after day

METHODOLOGY

Equipment used

Measurement equipment

- Ulcer surface area



METHODOLOGY

Equipment used

Measurement equipment

- Ulcer volume measurements



METHODOLOGY

Equipment used

Therapeutic equipment

- Honey therapy



METHODOLOGY

Equipment used

Therapeutic equipment

- Phyaction 740 Laser Therapy Device



METHODOLOGY

Procedure of the study

Measurement procedures

- **Ulcer surface area**
- The area of the wound was assessed by using the USA. Each patient was measured and score the results of measurement before starting the first session and after the end of the treatment

METHODOLOGY

Procedure of the study

Measurement procedures

- **Ulcer volume measurements**
- The area of the wound was assessed by using the UVM. Each patient was measured and score the results of measurement before starting the first session and after the end of the treatment

METHODOLOGY

Procedure of the study

Therapeutic procedures

- Honey therapy



Procedures of honey therapy

METHODOLOGY

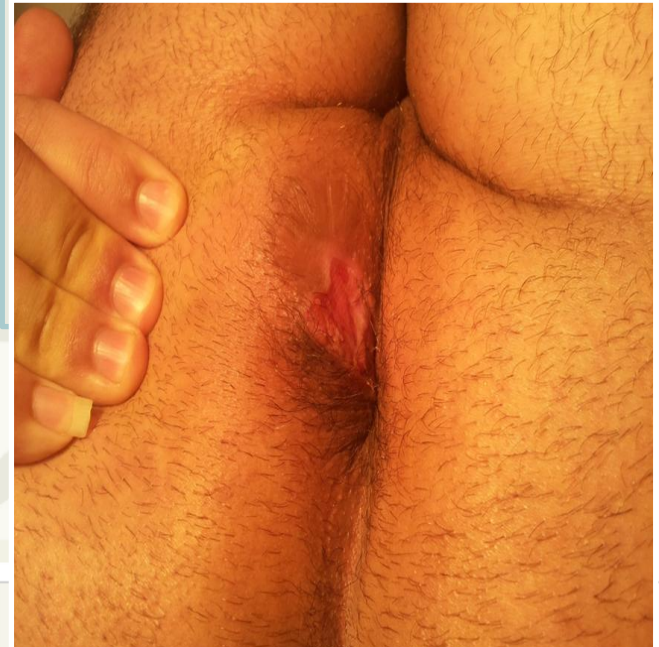
Procedure of the study

Therapeutic procedures

Laser therapy



Complete healing



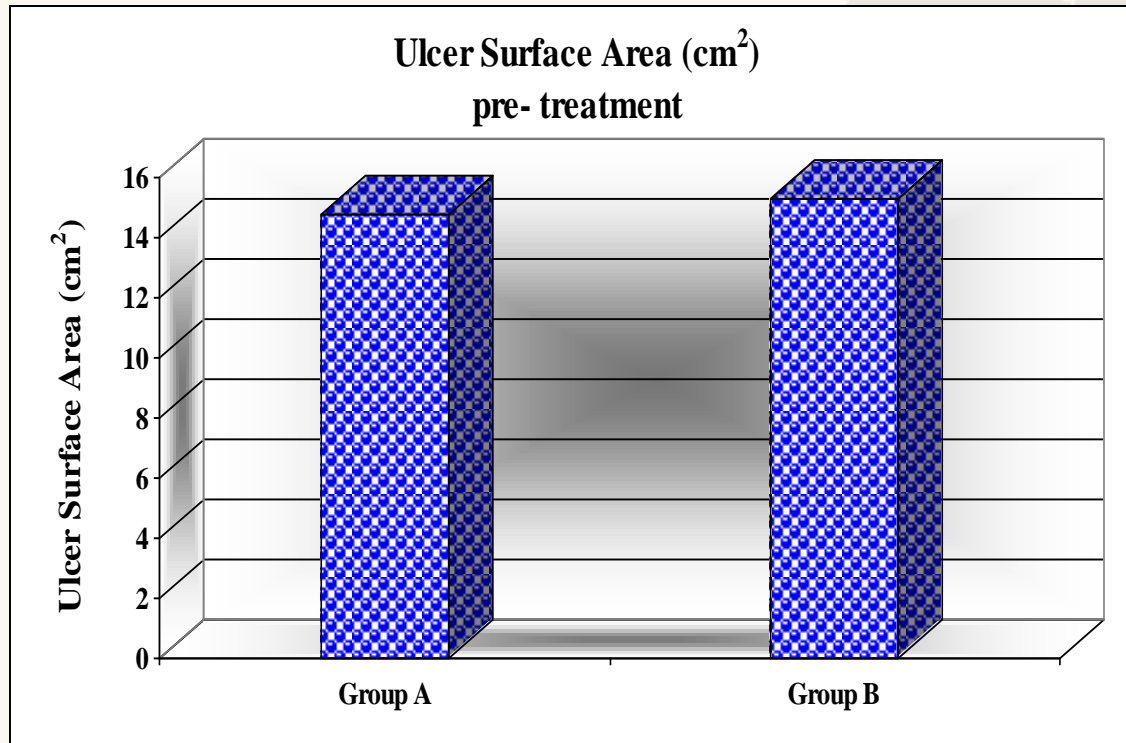
RESULTS

Ulcer Surface Area values before treatment in group A and group B

item	Ulcer Surface Area (pre- treatment)	
	Honey Therapy Group (Group A)	B- Ga-As Laser Group (Group B)
Mean	14.78	15.3
± SD	± 3.26	± 1.86
MD	0.52	
T-value	0.53	
P-value	0.599	
Level of significance	NS	

RESULTS

Ulcer Surface Area values before treatment in group A and group B



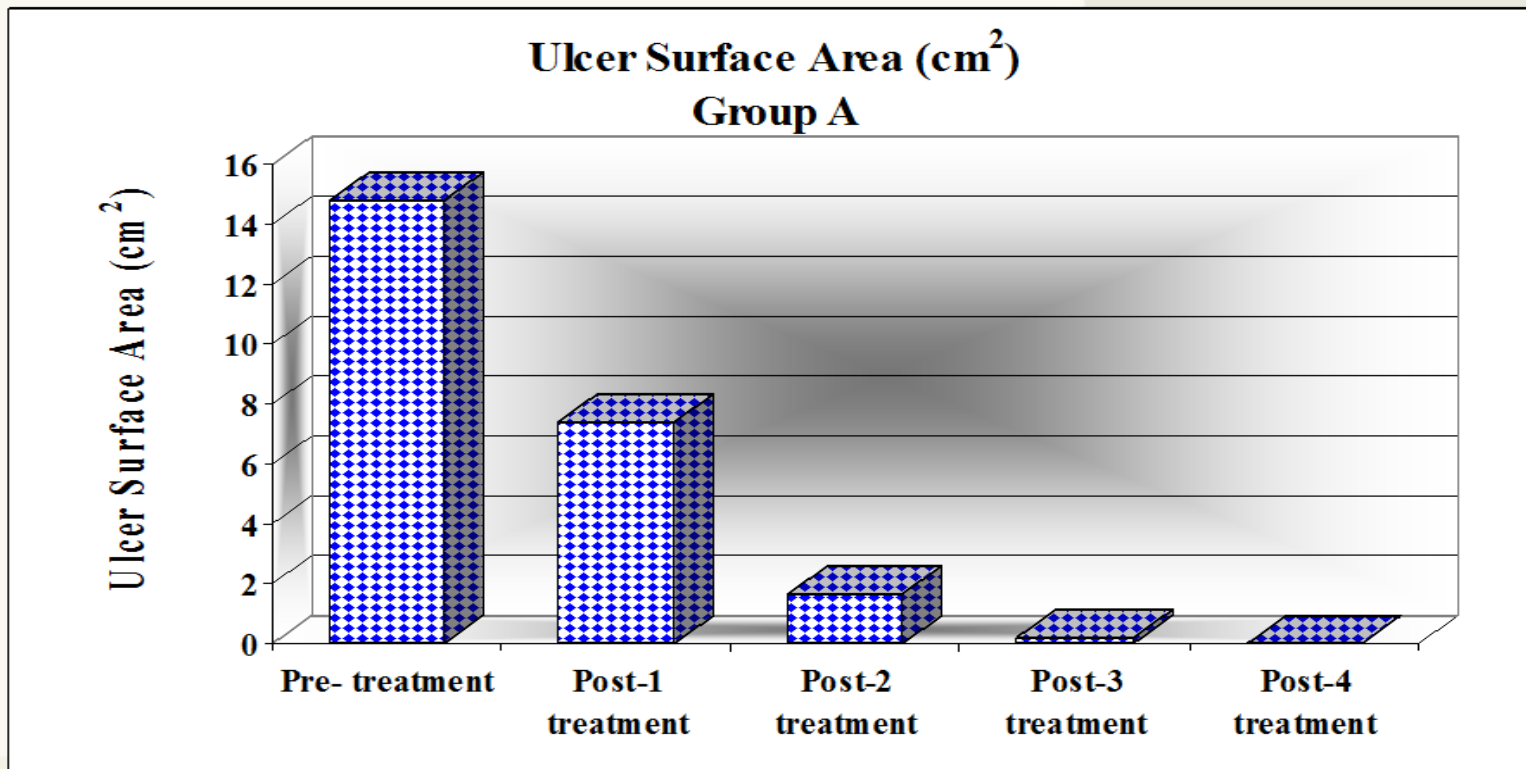
RESULTS

Ulcer surface area values after treatment in group A

items	Pre-treatment	Post(1)	Post(2)	Post(3)	Post(4)
Mean	14.78	7.4	1.68	0.23	0
SD ±	3.26 ±	1.99 ±	1.05 ±	0.2 ±	0 ±
Max. value	18				
Range	18				
Min. value	0				
F-value	191.1				
P-value	0.000				
Level of significance	S↓				

RESULTS

Ulcer surface area values after treatment in group A



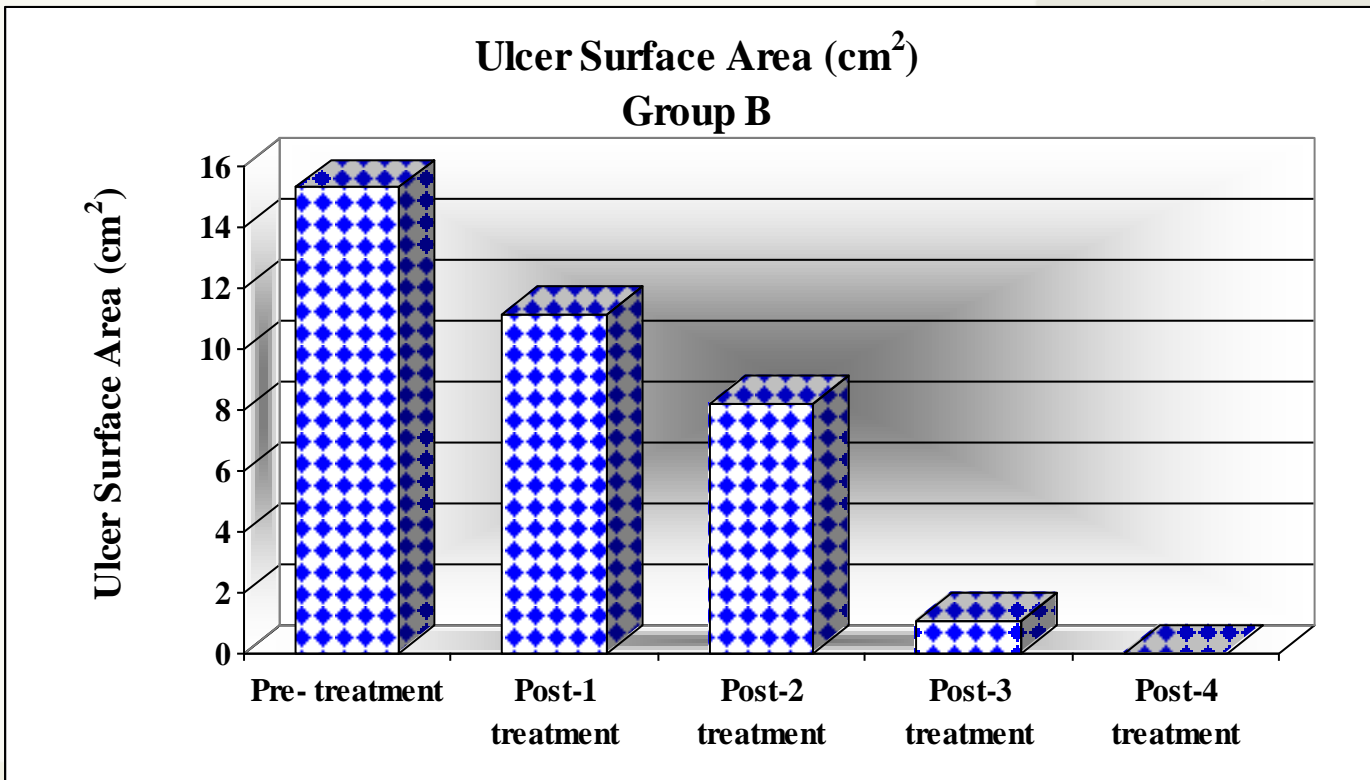
RESULTS

Ulcer surface area values after treatment in group B

items	Ulcer Surface Area (cm ²)				
	pre treatment	Post(1)	Post(2)	Post(3)	Post(4)
Mean	15.3	11.13	8.2	1.07	0.03
SD ±	1.86 ±	1.88 ±	1.34 ±	0.64 ±	0.09 ±
Max. value	18				
Range	18				
Min. value	0				
F-value	348.53				
P-value	0.000				
Level of significance	S↓				

RESULTS

Ulcer surface area values after treatment in group B



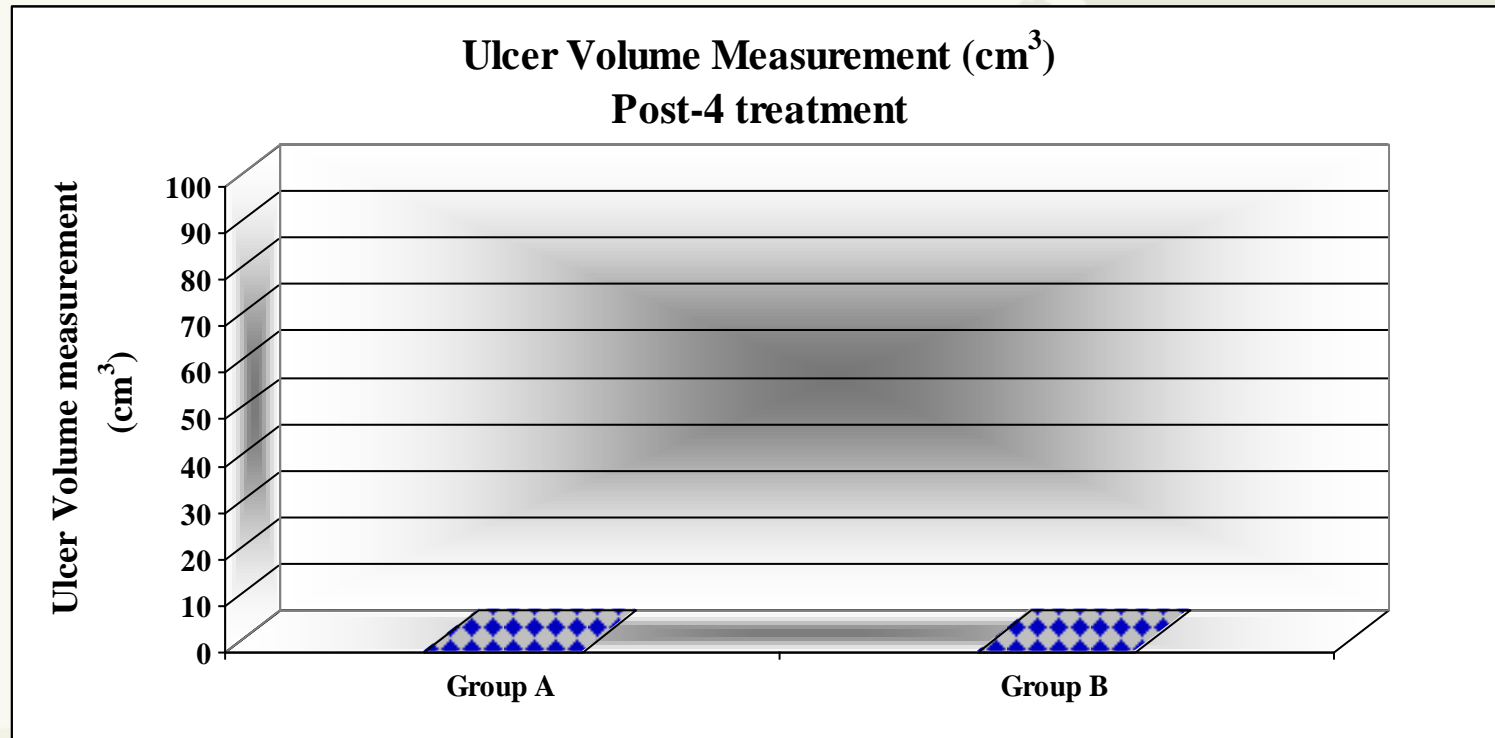
RESULTS

Ulcer Volume Measurement (cm³) post (4) treatment between both groups of the study (A and B groups)

item	Ulcer Volume Measurement (post-4 treatment)	
	Honey Therapy Group (Group A)	B- Ga-As Laser Group (Group B)
Mean	0	0.08
± SD	± 0	± 0.3
MD	0.08	
T-value	0.23	
P-value	0.039	
Level of significance	S	

RESULTS

Ulcer Volume Measurement (cm³) post (4) treatment between both groups of the study (A and B groups)

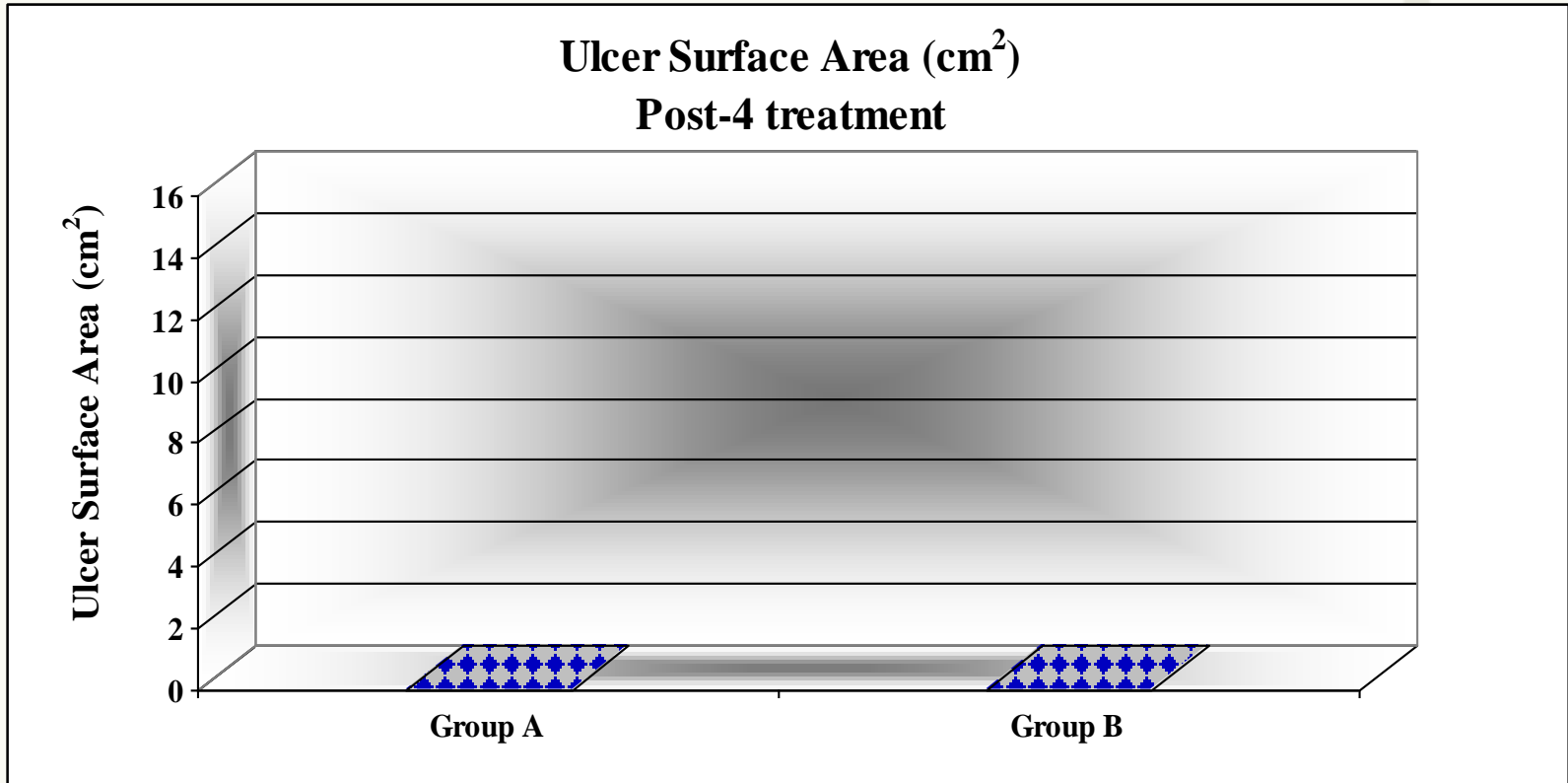


RESULTS

the Ulcer Surface Area (cm²) post (4) treatment between both groups of the study (A and B groups)

item	Ulcer Surface Area (post-4 treatment)	
	Honey Therapy Group (Group A)	B- Ga-As Laser Group (Group B)
Mean	0	0.03
± SD	± 0	± 0.2
MD	0.03	
T-value	0.19	
P-value	0.045	
Level of significance	S	

RESULTS



Conclusion

- Honey therapy and Laser therapy have a significant improvement on anal wall healing for post anal fistula patients as evidence by decrease ulcer surface area and volume. The percentage of improvement in both modalities (honey and laser therapy) was significant.

Recommendation

It is recommended to add both honey therapy and infrared laser therapy with different approaches and protocols to standard lines of physical therapy of post anal fistula cases.

Similar study should be conducted on anal wall healing with other types of surgical anal cases.

Recommendation

- A similar study should be conducted with other physical therapy modalities.
- More extensive studies assigning the efficacy of honey therapy and the laser in wound healing are needed

Recommendation

- Further studies should be undertaken to a large number of patients providing better statistical analysis of data.
- Further researches should be extended for a longer period than 8 weeks.
- Further researches could include a comparison between another physiotherapeutic modalities and protocols.

Thanks

Discussion??