Steristrips, an Appropriate Means for Neck Skin Apposition?

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Consent:

As this is a retrospective review, consent was not taken and/or necessary.

Conflict of Interests:

The authors have no conflict of interests or financial interest, real or perceived, to disclose.

Introduction:

Approximation or apposition of the skin after clean surgeries in the neck without tension leads to eventual closure unless infection or dehiscence occurs. It is customary to close subcutaneous tissue with absorbable sutures while the skin is dealt with non-absorbable sutures or clips. We aim to establish that post minimally invasive neck surgery, steristrips alone can approximate the skin and result in good wound closure.

Methods:

Using the Southampton grading scheme for surgical wounds, we aimed to assess the records of 70 patients retrospectively by analysing assessment of their post-operative wounds a week after the surgery. Thirty-five subjects, randomly selected, had skin closed with non-absorbable sutures while the remaining 35 subjects had skin closed with steristrips alone. Length of incision was documented. Statistical analysis was done using SPSS software. Cumulative scores were assessed using Chi-square statistic and a p-value [<0.05] was generated to attain statistical significance.

Tables & Results:

Table 1 – Demographic Data

Variable	Value
Age	Mean 53.47 [± 14.63 (1SD)] years
	Range 23 - 78 years
Sex	Male 11 (15.71%)
	Female 59 (84.29%)

Table 2 – Sutures vs Steristrips

Variable	Patients [n=70]	
	Sutures	Steristrips
n	35 (50%)	35 (50%)
Incision size	4.7 [± 1.54 (1SD)] cm	4.3 [± 1.34 (1SD)] cm
Southampton Scores	n	n
0	23	26
Ia	6	8
Ib	4	1
IIb	2	0

Chi-square statistic calculated 0.6122. The p-value generated = .43. This result is not significant at $p < .05$.

Discussion:

Steristrips are known to enhance wound healing through rapid development of wound tensile strength. As opposed to sutures, they not only save operating time but also prevents possible infections caused by sutures. Their application can give results similar if not better than subcuticular sutures. Our results from 70 patients do not show any statistical or clinical difference between patients who underwent application of steristrips versus old fashioned sutures to the skin.

Images:

A small incision is followed by subcutaneous sutures, to approximate the platysma muscle, and application of steristrips.

Southampton scoring system	
Grade	Appearance
0	Normal healing
I Normal healing with mild bruising or erythema:	
A	Some bruising
B	Considerable bruising
C	Mild erythema
II Erythema plus other signs of inflammation:	
A	At one point
B	Around sutures
C	Along wound
D	Around wound
III Clear or haemorrhagic discharge:	
A	At one point only (<2 cm)
B	Along wound (>2 cm)
C	Large volume
D	Prolonged (>3 days)
Major complication	
IV Pus:	
A	At one point only (<2 cm)
B	Along wound (>2 cm)
V Deep or severe wound infection with or without tissue breakdown; haematoma requiring aspiration	
The wound grading system used was simplified for the use of analysis. By using the worst wound score recorded and information about any treatment instituted either in hospital or the community, wounds were regarded in four categories: (A) normal healing; (B) minor complication; (C) wound infection-wounds graded IV or V or wounds treated with antibiotics after discharge from hospital, irrespective of the wound grading given to them by the nurse; and (D) major haematoma-wound or scrotal haematomas requiring aspiration or evacuation.	

The Southampton scoring system to assess post operative wounds

Limitations:

We admit that a retrospective study with a limited sample size has the disadvantage of researchers bias as well as reliance on documentation which at times is poor. A selection bias is also possible considering we selected patients who had good documentation of the post operative wound a week after their surgery. We recommend a prospective study with a larger sample size to put more weight into the study.

Conclusion:

Steristrips alone are sufficient to close skin incisions approximately 5cm after clean surgeries in the neck specifically when the underlying tissues including the platysma muscle have been approximated well.

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