

ARE PATIENTS WILLING AND CAPABLE OF REMOVING THEIR OWN NON-ABSORBABLE SUTURES?

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CONFLICTS OF INTEREST

- This is to certify that the authors of this paper have no financial or other conflicts of interest related to this submission.



JUSTIFICATION

- Pts with non-absorbable sutures in the ED are often asked to f/u with their GP or local clinic for suture removal.
- This is inconvenient to the pt and may result in time loss from work.
- Prospective study from Grand Rapids, Michigan found (2009):
 - 24% pts removed their own non-absorbable sutures
 - 85% pts would have preferred to remove own sutures (if had info).



HYPOTHESIS

- Providing pts with the necessary instructions and equipment will enable some pts to remove their own non-absorbable sutures.



OBJECTIVES OF STUDY

- Primary :
 - determine if pts were willing and capable of suture self-removal (with proper instructions and equipment).
- Secondary:
 - complications related to self-removal of sutures
 - if self-removal avoided a visit to a physician
 - if self-removal avoided time loss from work
 - self-reported comfort level with suture self-removal.



METHODS

- First phase
 - Survey of all EP's working in two hospitals – a tertiary trauma center and a community hospital.
 - Clarification regarding current suture removal practice.
- Second phase:
 - Enrolled pts into two groups in a pseudo-randomized manner (odd/even day design).
 - Exclusion criteria:
 - < 19 yr of age
 - unable to give consent 2° EtOH, drugs, Ø english
 - complicated lac /lac needing close medical supervision
 - Lac inaccessible to the pt (i.e. scalp, back or buttock)
 - Unable to contact pt by phone for f/u
 - immunocompromised (i.e. DM, AIDS, chemo, steroids)



- Two groups:
 - Control group – even days
 - Study group – odd days

- For this study, ‘suture self-removal’ defined as:

“the ability to remove sutures by oneself or with the help of a family member or friend”



- Pts phoned at 14 days post enrollment.
- Asked a series of scripted interview questions to address primary and secondary outcomes.

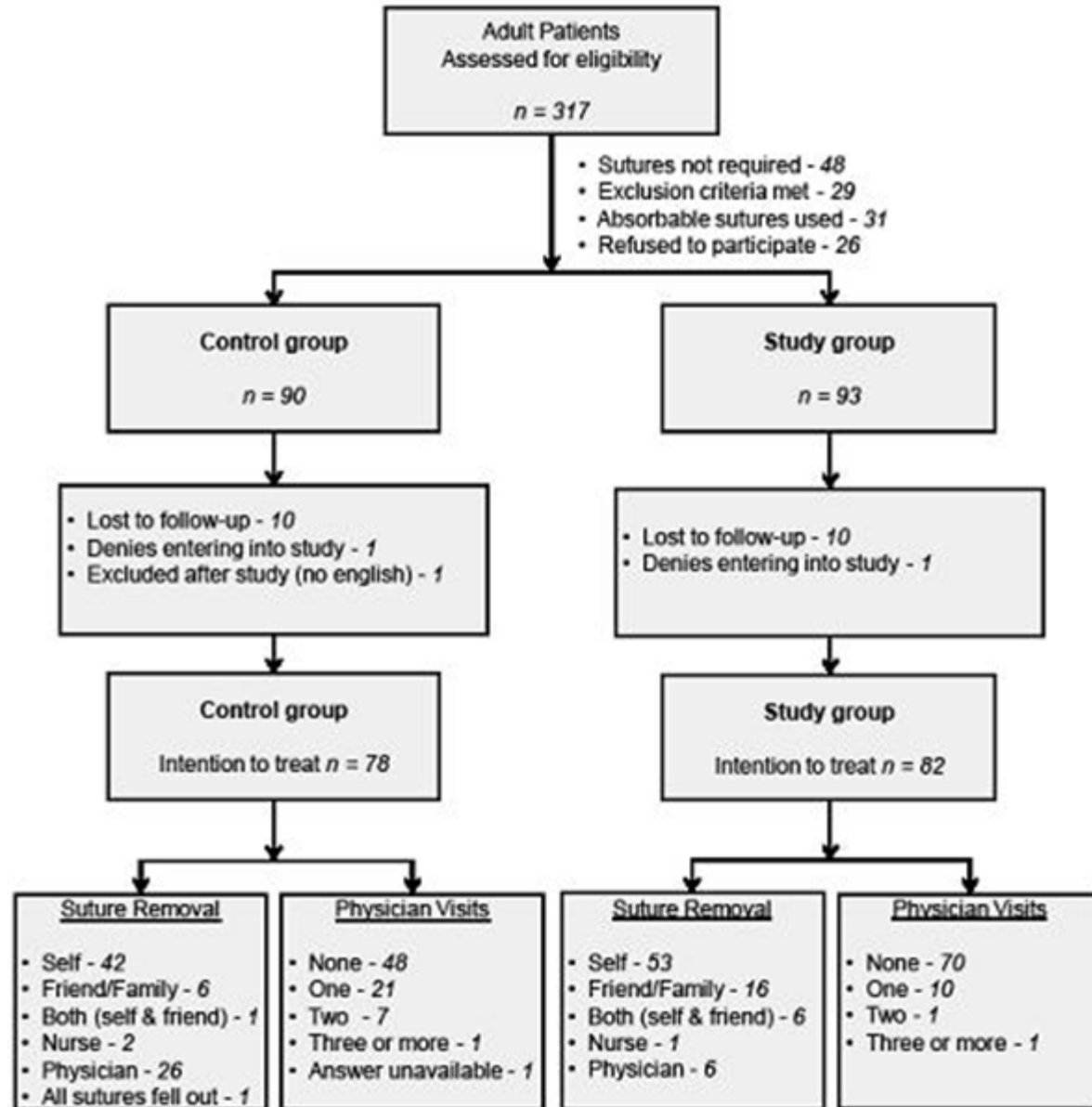


RESULTS

- First phase:
 - 26/30 EPs (86.7%) completed the survey
 - Non – absorbable sutures used on
 - hands (24, 92.3%)
 - extremities (22, 84.6%)
 - trunk (21, 84%)
 - face (16, 61.5%)
 - scalp (7, 26.9%)
 - 23/26 (88.5%) routinely asked pts to f/u GP/clinic for suture removal
 - All agreed – safe, simple and pts would be able to remove their sutures themselves
 - Specific concerns re suture self removal:
 - wound dehiscence (12, 48%)
 - wound infection (4, 16%)
 - inability to successfully remove sutures (3, 12%)



○ Second phase



DEMOGRAPHICS

	CONTROL N = 78	STUDY N = 82
Age (average)	42.6	42.4
Sex (male)	61 (78.2%)	65 (79.3%)

LOCATION OF WOUND

	CONTROL N = 78	STUDY N = 82
Scalp	6 (7.7%)	3 (3.7%)
Face	8 (10.3%)	13 (15.9%)
Extremity	59 (75.6%)	65 (79.3%)
Trunk	1 (1.3%)	0 (0%)



BY WHOM WERE SUTURES REMOVED

	CONTROL N = 78	STUDY N = 82	<i>p-values</i>
Self	42 (53.8%)	53 (64.6%)	<i>0.1983</i>
Family/friend	7 (9.0%)	22 (26.8%)	<i>0.0039</i>
Nurse	2 (2.6%)	1 (1.2%)	<i>0.6133</i>
Physician	27 (34.6%)	6 (7.3%)	<i>0.0001</i>



COMPLICATION RATES

	CONTROL N = 78		STUDY N = 82		
Wound infection (requiring Antibiotics)	4 (5.1%)	PO: 1/4	5 (6.0%)	PO: 1/5	<i>p</i> = 0.7402
		IV: 1/4		IV: 0	
		Topical: 2/4		Topical: 4/5	
Dehiscence‡	10 (12.8%)		13 (15.9%)		<i>p</i> = 0.6557
Bleeding (>30min)	0 (0%)		2 (2.4%)		<i>p</i> = 0.4972
Physician Visits	27 (34.6%)		6 (7.3%)		<i>p</i> = 0.0001

‡Control group – 2/21 dehiscence > 5mm Study group – 1/13 dehiscence > 5mm



COMFORT LEVEL OF SUTURE SELF-REMOVAL

	CONTROL N = 78	STUDY N = 82
Very Comfortable	56 (71.8%)	59 (72%)
Somewhat Comfortable	15 (19.2%)	14 (17.1%)
Neutral	2 (2.6%)	5 (6.1%)
Somewhat uncomfortable	2 (2.6%)	3 (3.7%)
Very uncomfortable	1 (1.3%)	0



DISCUSSION

- > 90% of pts in study group were able to remove their own sutures successfully.
- Higher than expected # pts in control group were able to self-remove their sutures.
- Why?:
 - Control group affected by power of suggestion (suture self-removal was acceptable, simple, safe).
 - selection bias : study only selected pts who were motivated and willing to consent to suture self-removal.



- Physician visit (BC): MSP cost of \$30.00
- Inconvenience of the patient to see GP/time off work or family
- Suture removal kit: \$1.40/kit
- Use of kits could represent overall saving in health care dollars
- Would lead to a minor additional expense to the individual hospital emergency departments



LIMITATIONS

- Our sample size permitted adequate power only for our primary outcome.
- Further studies needed with larger cohorts to properly determine the advantages and safety concerns of suture self-removal with respect to our secondary outcomes.



CONCLUSION

- Suture self-removal for simple lacerations is relatively safe and easy.
- With proper instructions and equipment, most patients are willing and able to remove their own non-absorbable sutures.



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