



Clinical Audit

Cautery burns: A clinical audit

Anandhi Sathiyakumar^{1,*}, Deepa², Devika³, Stella Towncent⁴

¹Nursing Director, Kauvery Hospital, Alwarpet, Tamilnadu, India.

²Nursing Superintendent, Kauvery Hospital, Tamilnadu, India.

³OR Assistant Nursing Superintendent, Alwarpet, Tamilnadu, India.

⁴Clinical Nurse Educator, Kauvery Hospital, Alwarpet, Tamilnadu, India

*Correspondence: nursingdirector.kch@kauveryhospital.com

Abstract

To eliminate the incidence of cautery burns among surgical patients. To assess the effectiveness of Long Absorbable Sheet in elimination of cautery burns among surgical patients in the operating room.

1. Background

Cautery burn sustained at the hospital by IP patient is an adverse parameter. It is one of the quality indicators of patient safety; it increases the length of stay, which results in additional burden - physically and financially, to both patient & family members. Consequently, that would lead to impaired quality of service and loss of hospital reputation. Hence, we chose to study this major problem.

An electrocautery burn is a clinical error that also has medico legal and ethical implications.

There is a long list of such errors, from simple misdiagnosis to more serious harm that may culminate in the patient's death.

Initially, Cautery burns identified as pressure injury.

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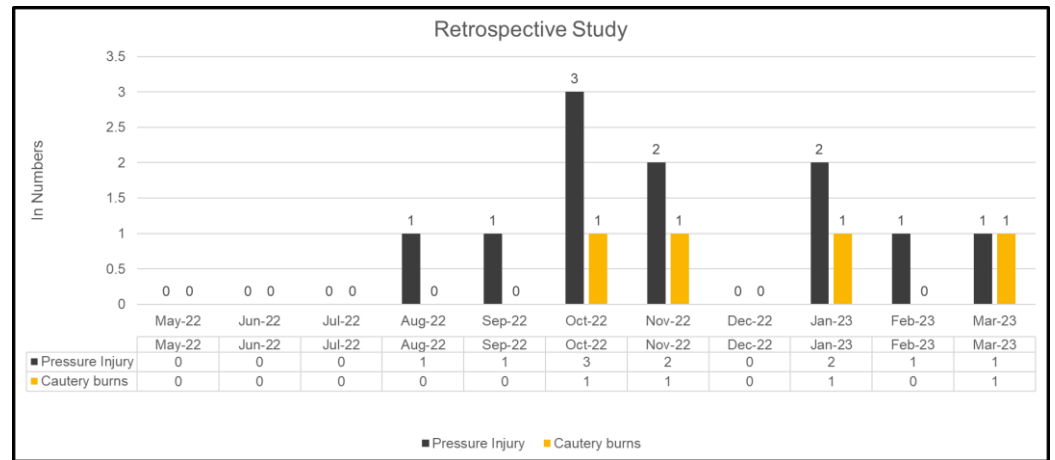
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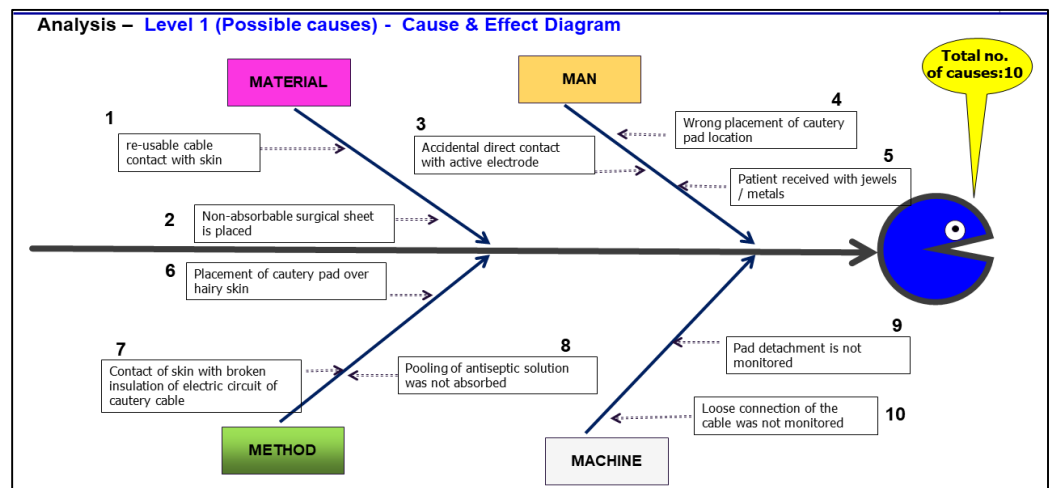
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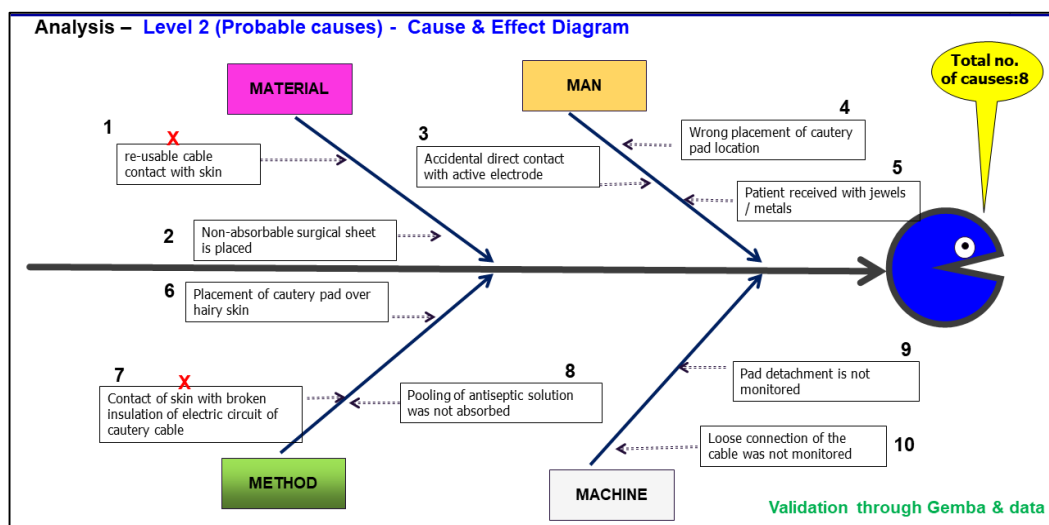
2. Case presentation



In the month of March 2023, we found 01 cautery burn was misinterpreted as a pressure injury. Therefore, we did a retrospective study, where we found, in the month of Oct 2022, out of 03 pressure injuries, 01 was cautery burn. Similarly, in the month of Nov 2022 and Jan 2023, out of 02 pressure injuries, 01 was cautery burn.



Analysis of possible causes of cautery burn using Gemba and data analysis. The findings are plotted using Ishikawa diagram



2. Case presentation

After Root Cause Analysis, we found that the cautery burns were due to Non-absorbable surgical sheet, accidental direct contact with active electrode, and pool of antiseptic solution that was not absorbed (this was out of 8 probable causes).

As a counter measure long absorbable sheet size to be standardized after clinical trials.

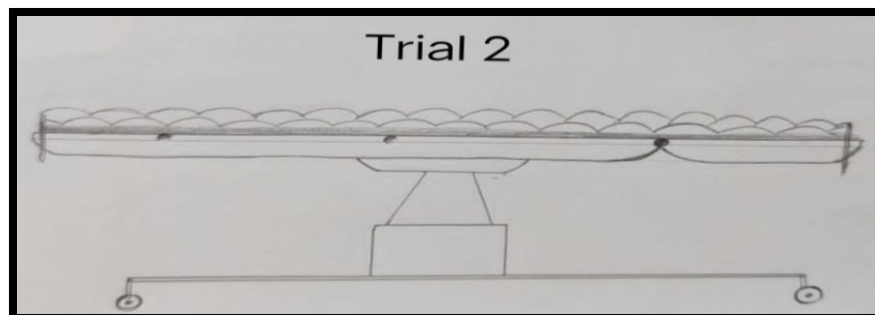
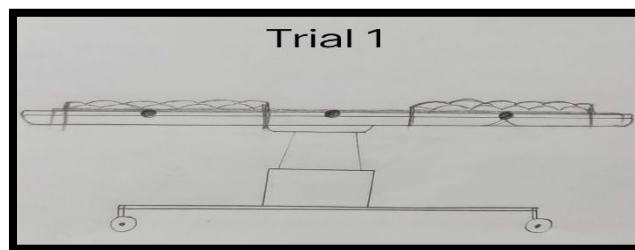
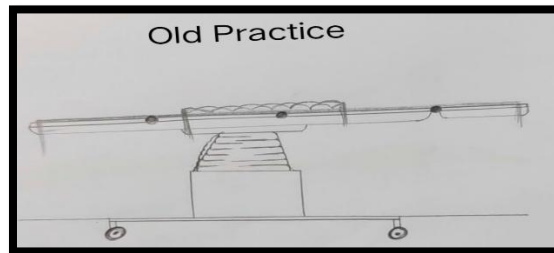
2.1. Data analysis

Analysis	Responsible person	Action taken	Remarks
Checking of quality of cautery pad and product	Discussed with company person	Cross-verified about the brand Requested the company to recheck the quality Company rechecked with the productivity	Quality was not compromised
Checking of any electrical issues	Maintenance department	Preventive maintenance was done All connections and power ports were re-checked for short circuit	There were no evidence of any electrical issues
Checking placement of cautery pad locations	OR Technician	Observed their practice on cautery pad placement	The pads were placed as per the surgical site
Checking of presence of jewels or metals	OR staff and ward staff	Observed their practice in receiving patients	There were no patients received with jewel and it is confirmed using

		Counter checked by OR charge nurse	pre-operative checklist
Checking the pooling of solution in the surgical field	Ms. Devika (OR ANS)	Observed the pooling of solution in the operating field So trial implementation done using absorbable sheets	This was the significant cause and started to rule out the solution to eliminate the cautery burn

2.2. Trial implementation

- In old practice – 70cm of under pad used
- As a trial 1 - 140cm of under pad placed (as a split in head end and foot end)
- In trial 2- 300cm of absorbable sheet was placed and it noted there were no leakage

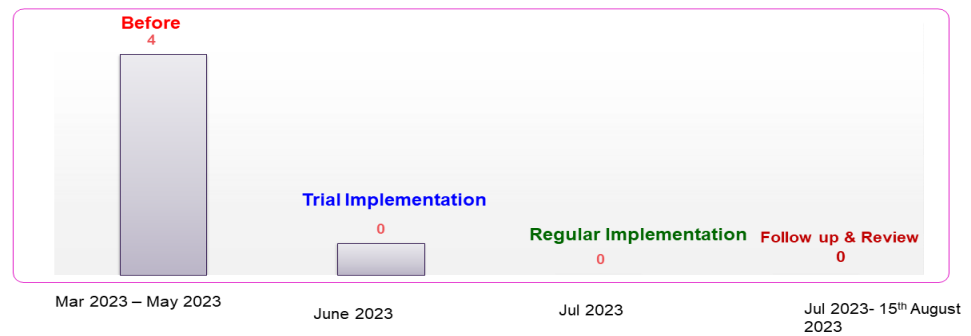


2.3. Regular implementation

To ensure the usage of long absorbable sheet, regular audit was done. This assured the sustenance of practice.

Follow – up

During the trial implementation itself, cautery burn was eliminated and achieved the target value 0.



2.4. Benefits

For the patient	For the institution	For the staff
Length of stay reduced	Improved quality of care	Employees burden reduced
Psychological well-being	Good Brand Image	Employee morale improved
	Quality Indicators within Bench Mark	
	Increased Customer Satisfaction	

3. Result

- 1) Eliminated Cautery burns
- 2) Patient length of stay reduced from 30 days to 5 days (Patient discharged as per plan).

4. Conclusion

Problem: Cautery burns identified as pressure injuries

Observation & Analysis: Pool of antiseptic solution on the OT sheet as it was non-absorbable

Solution Development: Modification done by OT committee members

Action: Based on trials Implemented Absorbable OT sheets with Standard length

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