

Evidence Based Intra-Operative Positioning: Devices for Supine Cardiac Patient Positioning

University of Washington Medical Center
OR Local Practice Council



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Background



Cardiac Surgical Environment

Purpose

First Study: December 2010

- To determine which occipital positioning device would best distribute posterior head interface pressure in the supine position used for cardiac surgery at UWMC.

Initial Study



Pressure Mapping Surface

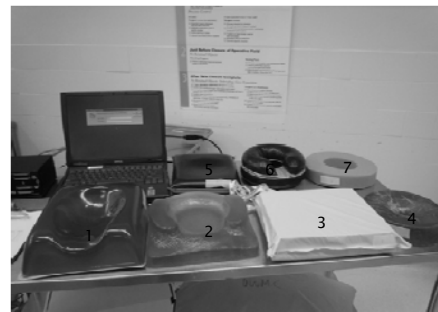


Cardiac Surgical Positioning

Demographics

- 11 subjects
- 4 Males 7 Females
- Height, Weight and BMI Variations
- Head/Neck circumference measured
- Hair: long, short, thin, partially bald, and dreadlocks

7 Head Positioners Studied

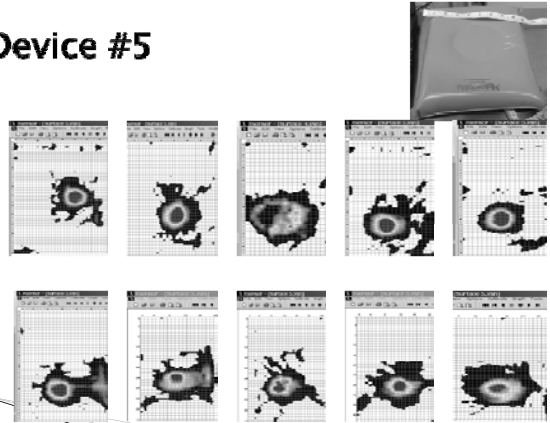


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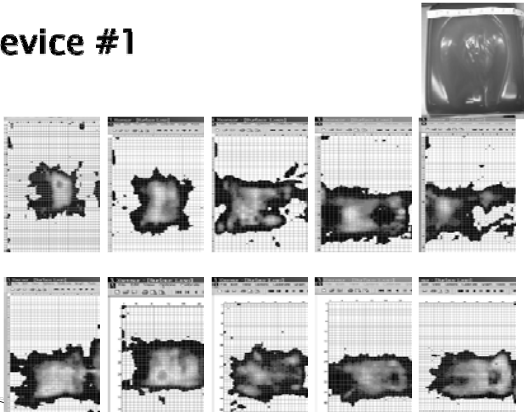
Surface Pressure and Area > 100 mm Hg

Surface	Peak Pressure (mm Hg)	Skin Interface >100mm Hg (cm2)
#1 Oasis Elite	124 ± 23	9 ± 9
#2	170 ± 18	20 ± 5
#3	161 ± 27	23 ± 6
#4 Current Gel Donut	160 ± 25	19 ± 8
#5	199 ± 16	26 ± 5
#6	183 ± 29	20 ± 6
#7 Foam Donut	130 ± 16	13 ± 9

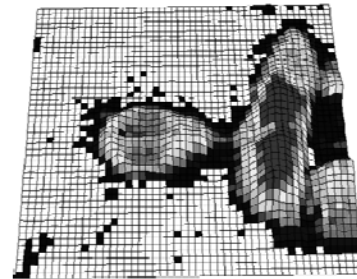
Device #5



Device #1



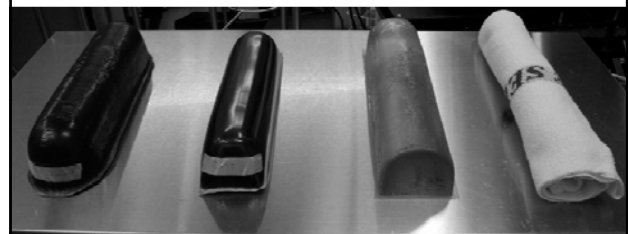
3 Dimensional Pressure Map



Follow-up Studies

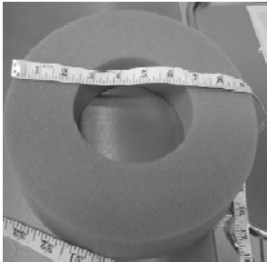
- ▶ Second Study: is there a difference in peak interface pressure and surface area > 100 mm Hg between four shoulder roll devices?

Shoulder Roll Positioning Devices



Blue Diamond Oasis Akton Standard Towel Roll

Foam Donut



Third Study: To determine how long the foam donut positioning device would continue to distribute occipital pressure.

Subject for Continual Pressure Mapping of Foam Donut



Outcome of Studies



1. Purchase Oasis Devices for supine surgical positioning
2. When to use Foam Donut
3. Further research for high risk positions

Recommendations & Conclusions

- ▶ Communicate your results to colleagues
- ▶ Do you know who your high risk surgical patients are?
- ▶ Are the OR nurses working with the skin and wound specialists at your hospital?
- ▶ Are you utilizing the expertise of OR nurses in your pressure ulcer prevention efforts?

OR Local Practice Council

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