



## Background

- Long history of concerns that burns patients are at increased risk for DVTs
- Evidence: limited and highly variable
  - Incidence of 0.25%<sup>1</sup> to 3%<sup>2</sup> in *clinical* studies with most **~1%**<sup>3,4</sup>
  - **23.3%** incidence in an Ultrasound (US) *screening* study<sup>5</sup>
  - **60%** (!) incidence in a radio-labelled fibrinogen *screening* study<sup>6</sup>
- Why is screening and determining accurate clinical incidences so different?
  - It's really hard
    - Erythema, swelling and pain are already present
  - US: difficult or impossible with dressings and burnt skin
  - D-dimer doesn't help in large (30-60%) burns
    - 80% already have a high D-dimer<sup>7</sup>
- There is limited evidence and none from Australia, that defines risk factors for DVT in these patients

# DEEP VEIN THROMBOSIS IN THE BURNS PATIENT

Andrew TURNER<sup>1</sup>, Henry SHEPHERD<sup>1</sup>, John VANDERVORD<sup>1</sup>, Jeon CHA<sup>1</sup>  
<sup>1</sup> Royal North Shore Hospital, Sydney, NSW, Australia

- Retrospective review of medical imaging (US/CT) diagnosed DVT
- Every burns patient at Royal North Shore Hospital, Sydney in the past 5 years
  - **N=977**

### Demographics:

- Age and sex

### Burns factors

- Total body surface area of burn (TBSA%)
- ? Infected burn
- # of operations
- Location of burn

### How sick is the patient

- Days in hospital
- Days in Intensive Care units
- Days ventilated
- ? Pulmonary embolism
- ? Central access

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## Findings

- 30 patients had DVT: incidence of **3.07%**
  - Patients with DVT were:
    - Older\*** 51 vs 43 years
    - Had more operations\*\*** 4.1 vs 1.3 operations
    - Higher %TBSA\*\*** 22 vs 8.2 %
    - Longer Hospital stay\*\*** 45 vs 9.4 days
    - Longer ICU stay\*\*** 19 vs 1.3 days
    - Ventilated longer\*** 13 vs 0.80 days
  - 11 had a line in the clotted vein
  - 5 had PE
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- 3% is high end of clinical evidence
    - Routine BD heparin
    - RNSH: only trauma *and* burns hospital in NSW
  - 1/3 DVTs possibly come from lines
  - Further analysis underway:
    - ? Able to define prospective DVT risk better
      - Long term: do sicker patients/bigger burns need more anticoagulation?
      - Is there a better way to screen for DVT in these patients?

Contact: andrewjturner@gmail.com