Introduction:
Early debridement of burned tissue reduces infection rate, ICU stay and mortality. The use of proteolytic enzymes such as bromelain allows a faster, more effective and selective debridement of denatured tissue, preserving and exposing healthy tissues, reducing debridement times compared to standard of care.

Methods:
Retrospective observational study performed in the Critical Burn Unit (March 2016 to September 2017) including 27 patients >18 years old with a total body surface area (TBSA) burned > 15% and < 75%, or > 65 years old with a TBSA burned > 10%, who underwent enzymatic debridement. Mean and standard deviation were used for normal quantitative variables and median and interquartile range in the opposite case. Qualitative variables were presented by absolute and relative frequencies.

Results:
Mean age was 47.6 ± 17.8 years old, 74% males, APACHE II 11 (RI 5-18), ABSI 7 (RI 5-9). Median TBSA burned was 29% (RI 18-50%), 21% (RI 16-39) were deep dermal or full thickness. Time until debridement was 21 hours (RI 8-35). 7.4% (n=2) had incomplete debridement after first application, 33% (n=9) received regional anesthesia, 91% (n=25) didn’t need blood transfusion. 25% of patients who didn’t have vasopressors prior debridement, needed the use of it with a mean dose of 0.6mcg/Kg/min. 25% of patients with vasopressors prior treatment, required an increase of dose by a mean of 0.9 mcg/Kg/min. Median ICU stay was 19 days. Mortality was 22%.

Conclusion:
Topical bromelain allows a fast start of tissue debridement with a low rate of failure. The need for fasciotomy and blood transfusion was very low. Topical treatment involved a fast and simultaneous debridement of the TBSA burned, generating an inflammatory response that in some cases required vasopressors.