CLINICAL SKILLS OF TISSUE VIABILITY NURSE VERSUS WOUNDCHEK™ TO DETECT ELEVATED PROTEASE ACTIVITY (EPA)…WHO HAS BEST OUTCOME?

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WOUNDCHEK™ Protease Status is an *in vitro*, visually read, test for the qualitative assessment of human neutrophil-derived inflammatory protease activity directly from wound fluid swab samples taken from chronic wounds.

…In chronic wounds with EPA there is a 90% probability the wound will not heal without appropriate intervention, on the other hand clinicians may be treating wounds inappropriately and ineffectively with modulating therapies when EPA is not present, again delaying wound healing and having causing unnecessary cost to the NHS.

…but only 28% of wounds have Elevated Protease Activity (EPA) and EPA is not visible to the naked eye, so how do you know which wounds to treat with protease modulating therapies. Currently clinicians rely on clinical judgment and experience…

This paper asks are the clinical skills of a TVN just as good or better at recognising when a wound has elevated EPA or not? And describes the comparison between diagnosis accuracy of TVN and WOUNDCHEK™ Protease Status and the implications for patients and the NHS.

Method

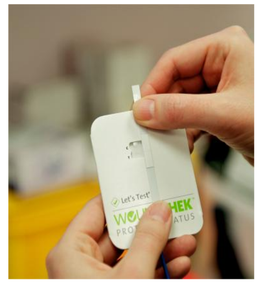
After holistic assessment of the patient photographic record of wound was made.
The Tissue Viability Nurse Specialist made diagnosis of elevated protease activity or not.
Woundchek was used to determine the protease activity carried out and the results documented.
Repeated on 10 separate wounds to determine which method was best at detecting EPA.
A cost benefit analysis determined for each case based on the TVN diagnosis.

Results

Wound Description	TVN Diagnosis ?EPA	Woundchek Result EPA	Implications for Wound care
Post –op trauma wound leg	No	No	No change in care
Pressure ulcer (6 weeks)	No	No	No change in care
Failure to heal tracheostomy (6 weeks)	Don't know	Yes	Patient was scheduled to go to theatre for closure of tracheostomy, wound modulating dressing prescribed patient discharged home.
Pressure ulcer elbow (12 weeks)	Yes	No	TVN was planning to change to wound modulating dressing
Pressure ulcer sacrum (8 weeks)	Don't know	No	No change in care
Pressure ulcer (several months)	Yes	Yes	No change in care, when wound bed less sloughy a wound modulating dressing will be prescribed
Leg ulcer (3 years)	Yes	Yes	No change in care, when wound bed less sloughy a wound modulating dressing will be prescribed
Pressure ulcer (3 years)*	Yes	Yes	Wound modulating dressing prescribed
Pressure ulcer (3 years)* * Same patient, pressure ulcers on both hips tested	Yes	No	TVN was planning to use a wound modulating dressing
Superficial dehiscence of abdominal wound (1 year)	Yes	Yes	Wound modulating dressing prescribed

TVN's results compared with WOUNDCHEK™ Protease Status?

- 60% of time correct diagnosis
- 30% of time did not know
- 10% incorrect diagnosis



Implications for wound care based on WOUNDCHEK™ Protease Status results

Modulating dressing at unit cost of £5.12 not used on two patients and dressing of unit cost £2.02 used =60% cost saving One weeks treatment cost £6.04 instead of £15.36.

PRISMA prescribed on one occasion. Patient did not go to theatre – cost saving of approx £700, patient discharged saving £400 per day. One week treatment cost £15.36 instead of £3500

Implications for patients based on WOUNDCHEK™ Protease status results

- Appropriate treatment for wound… One patient had a wound for 3 years!
- Patient did not need to go to surgery
- Length of hospital stay reduced
- Wounds heal quicker

Conclusion

As clinicians working in the field of wound healing we must be aware of modern advances that will have a positive impact on the wound healing pathway.

We must also be aware of the health economics of embracing new technologies and have the insight to evaluate the products to determine whether or not they will be of benefit.

Based on this small scale study I would conclude that WOUNDCHEK™ Protease Status is going to be an invaluable diagnostic tool for clinicians working in the field of wound care.