

A not so 'sticky end' – an evaluation of two dressings for midline securement

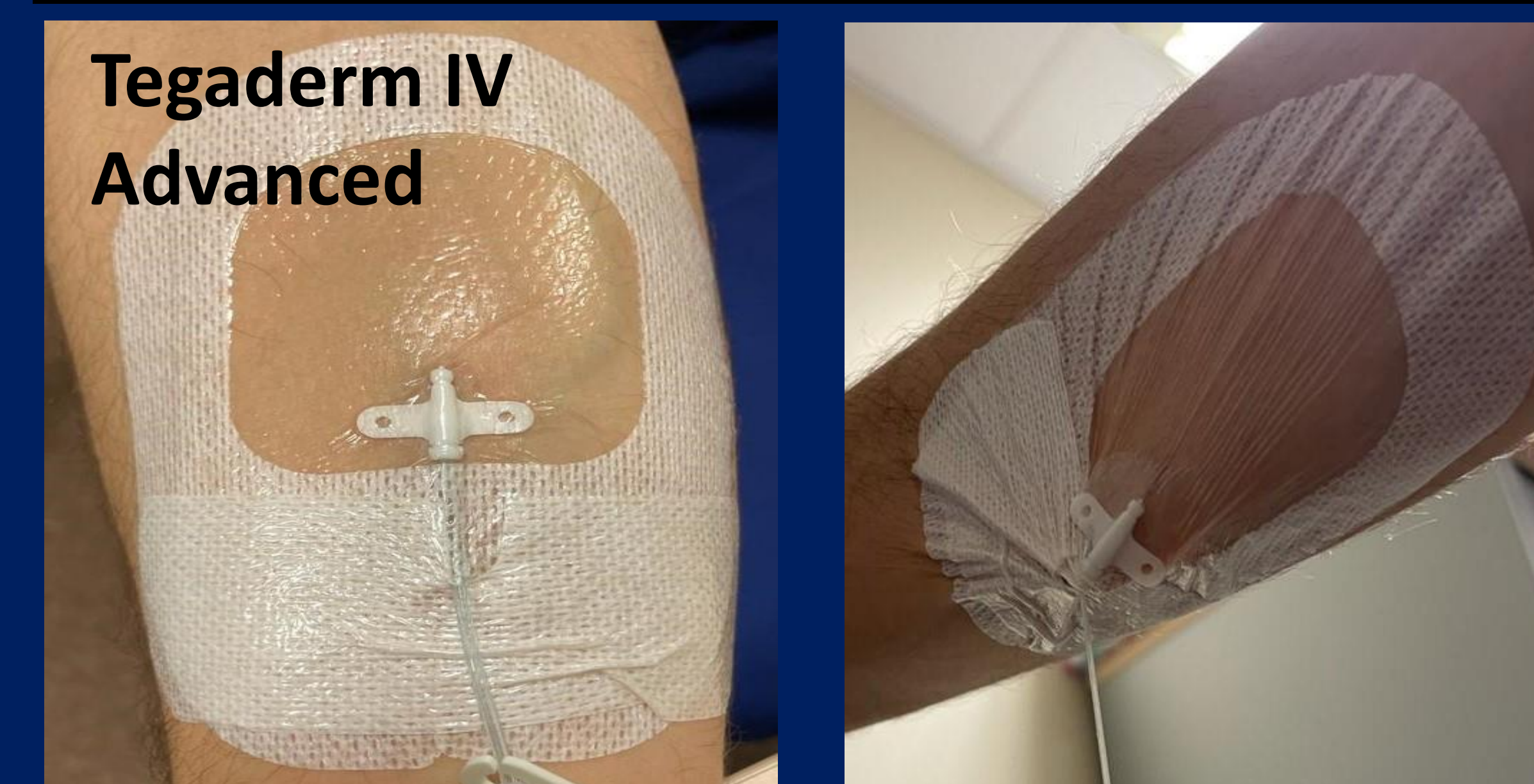
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Introduction

Partial dislodgment and accidental removal of indwelling vascular access devices (VAD) is a common issue amongst the paediatric population. Our institutional method of securing devices such as midlines consists of a transparent non-bordered rectangular dressing and wound adhesion strips. We postulated that a notched dressing with a distal securement strip and fabric borders would provide better security for VADs.

Method

Two methods of securement were trialled – wound adhesion strips (Sterip strips, 3M) and a clear rectangular dressing (IV3000 10x14cm, Smith and Nephew) as per institutional protocol and a notched bordered dressing (Tegaderm IV Advanced 8.5 x 11.5cm). A truncated Leaderflex 22G midline (Vygon) was secured to the mid-forearm of volunteers after skin preparation with CHG2% in alcohol. All ten volunteers trialled both methods of securement. A series of 100g weights (+/-10%) were added to a hook attached to the midline extension. The weight required to completely remove the dressing was recorded for both securement methods.



Results

The average weight required to dislodge the Steri strips and the IV3000 was 535g compared to an average weight of 1760g which was required to remove the Tegaderm IV Advanced. This represents a difference of more than double between the two groups. In 60% of the volunteers from the Tegaderm group, the line was dislodged leaving the dressing in place.

Conclusion

A notched bordered dressing with a distal securing strip provides better VAD security in our volunteer study using static weights. We observed that the Tegaderm IV Advanced provided 360-degree adhesion to the skin around the VAD extension. Our method has several limitations and may not reflect real-life forces exerted on a VAD, but provides an objective comparison between two dressings. These findings have led to a change in institutional practise with a cost saving of approximately £1000 per year.