

CLINICAL CASE

INTRODUCTION

Wheelchair users automatically have a higher risk of developing skin damages. When there are additional positioning needs, this risk only increases.

This clinical case describes the treatment of an 8 month old category II pressure ulcer on the buttock and solving asymmetry. The person in this case study is a Spina Bifida patient.

Solving asymmetry and treatment of a category 2 pressure ulcer wound on the buttock of a Spina Bifida patient

MEDICAL HISTORY

At home Mr. de L (73) generally uses a working chair. Outside he generally uses a manual wheelchair. This is an active Quicky Argon wheelchair without arm posts with a Jay Easy Visco cushion in it. Mr. de L also uses a handbike. Mr. de L has a normal chair, but he scarcely uses the chair as it does not offer much comfort. Mr. de L. mainly walks therapeutically and to make transfers, using elbow crutches.



EXAMINATION

Physical assessment

Mr. de L.'s left leg has a different bony structure and size than his right leg. Because of the shorter left leg Mr. de L. has a corrective left shoe. The left leg also has reduced muscle mass. While seated and laying down the abdominal mass is positioned to the left side. A seat-angle of 110 degrees is perceived as comfortable. At 100 degrees Mr. de L. starts to experience pain, mainly left hip pain.

Pressure Ulcer

Disturbance of sensation in buttocks and lower extremities. At the start of the treatment in the Seating Clinic Mr. de L. suffers from a superficial pressure ulcer, stage 2, wound edge maceration. The ulcer does not show signs of shear force. Generally the pressure ulcer does not cause pain.

Urinary or faecal incontinence

Urine stoma, but once in a while faeces incontinent. This does not affect the pressure ulcer.

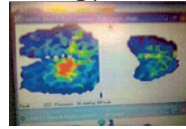
Pain

Mr. de L. experiences pain in the left side of his body. At the height of thoracic spinal cord segments 6-8 and in the left side of the torso. Treatment with pain medication has not been sufficient. The pain in his torso occurs after sitting for half an hour: VAS score varies strongly. Once a week Mr. de L. goes to bed, when the pain becomes unbearable and he wants to change his position.

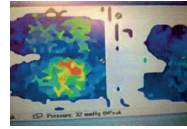
Pressure mapping

All pressure mappings show pressure on the ischial tuberosities. But when using the Jay Easy Visco cushion there is very significant pressure on the left buttock and the centre of gravity of the body shifts to the left. When using a cushion that can be setup asymmetrically the pressure is redistributed more equally across the entire surface of the buttocks. The asymmetric setup is accomplished by relatively increasing the height of the cushion's left side, because there is less buttock/leg mass on this side. A cushion that is shaped to offer extra support to the trochanters creates too much pressure on the

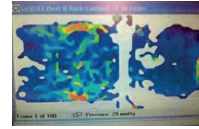
bony structure of the trochanters and does not sufficiently offer a symmetric seating position.



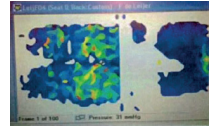
Working chair



Vicair Active without adjustments



Jay Easy Visco



Vicair Active asymmetrical setup

Trying out cushions

It was not possible to setup the working chair with the cushions. Because of this Mr. de L. has been using the manual wheelchair inside the house, to optimally try out the cushions.

THE INTENDED PURPOSE OF APPLYING THE VICAIR ACTIVE CUSHION

After pressure mapping we chose to try out a cushion that could be adjusted to a asymmetric setup. This was a Vicair cushion. By setting up this cushion asymmetrically (more volume on the left side, less volume on the right) the smaller leg/buttock mass is supported and Mr. de L. experiences improved pelvic stability while seated. Mr. de L. tried this cushion for two weeks. At that point the pressure ulcer had healed, but Mr. de L. slowly started to slide forward on the cushion.

We decided to try out a Vicair Active for the next two weeks. This cushion offered a good seating position and more stability. Mr. de L. experienced a good level of seating comfort.

What was the setup of the Vicair Active cushion:
We removed 7 SmartCells from the cushion's right rear compartment, added 3 SmartCells to the left rear compartment and kept the standard filling in the centre compartment. We also installed a seat board on top of the wheelchair's sling seat to prevent hammocking.

	BACK	
69 -/-7	49	69 +/-3
Foam		

In addition:

Mr. de L. has started to stand up and sit down more often. He tries to walk two times a day, but also walks in a functional manner for instance for toilet visits and transfers. Mr. de L. is more aware of the effect of alternating his position.

[Fillinggrade overview + adjusted compartments](#)

FINAL ANALYSIS

Mr. de L. needs a cushion that can be setup asymmetrically and that offers stability. A Vicair Active cushion, when setup in the right way, is able to provide good positioning. Mr. de L. now uses his manual wheelchair more frequently, as the working chair cannot be adjusted. Although a (electric) working chair is desirable to move around inside the house more easily and for instance to properly work in the kitchen. However, it should be possible to add an asymmetrically setup cushion (Vicair Active) to this chair.

Besides this the seating angle of the working chair has to be able to be 100 degrees, the same as the wheelchair with strap back is able to provide. Although a seating angle of 110 degrees offers more comfort to Mr. de L., his seating position is more functional (and therefore Mr. de L. more independent) when the angle is closer to 100 degrees.

Because of the large amount of time the client spends in his chair, the lateral lumbar support to the lower back should also be improved. When the manual wheelchair is replaced and/or when Mr. de L. is going to use his manual wheelchair inside more frequently it is also important to improve the lateral support, for instance by positioning Mr. de L. more in between the back posts of the wheelchair.

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