THE SUPREME COURT OF APPEAL OF SOUTH AFRICA
JUDGMENT

NOT REPORTABLE
Case No: 238/2013

In the matter between:

THE HEAD: HEALTH, DEPARTMENT OF HEALTH, PROVINCIAL ADMINISTRATION: WESTERN CAPE **APPELLANT**

and

CHARLES OPPELT **RESPONDENT**

Neutral citation: *Department of Health: Western Cape v Oppelt* (238/2013) [2014] ZASCA 135 (25 September 2014)

Coram: Lewis, Bosielo, Tshiqi, Willis and Swain JJA

Heard: **29 August 2014**

Delivered: **25 September 2014**

Summary*:* 'But-for' factual causation – flexible common sense approach – spinal injury – subsequent paralysis of respondent – appellant's medical treatment of respondent not a factual cause of paralysis.

ORDER

On appeal from: Western Cape High Court, Cape Town (Van Staden AJ sitting as court of first instance):

1 The appeal is upheld with costs.

2 Paragraphs 2, 3 and 4 of the order of the court a quo are set aside and replaced with an order dismissing the plaintiff's claim against the first defendant with costs.

3 In both cases the costs are to include the costs of two counsel.

JUDGMENT

Swain JA (**Lewis, Bosielo, Tshiqi and Willis JJA** concurring):

[1] The respondent, Mr Charles Oppelt, was playing club rugby in the position of hooker on the afternoon of 23 March 2002. He was then 17 years old. A contested scrum collapsed causing a severe injury to his cervical spine, medically described as a bilateral cervical facet dislocation of the vertebra.

[2] The damage to Mr Oppelt's spinal cord has for practical purposes left him paralysed below his neck. He is medically classified as a quadriparetic. The injury tragically and irrevocably changed his life.

[3] In the result Mr Oppelt instituted action in the Western Cape High Court (Cape Town) against the appellant, The Head: Health, Department of Health, Provincial Administration: Western Cape (the department) as the first defendant. The remaining three defendants were organisations responsible for the administration of

the game of rugby at various levels. Their identity and the grounds of negligence levelled against them by Mr Oppelt are not relevant in this appeal, because the action against them was dismissed by the court a quo. This finding is not challenged on appeal.

[4] Mr Oppelt's action against the department on the preliminary issue of liability was however successful. The central finding by the court a quo in reaching this conclusion was that the employees of the defendant had wrongfully and negligently failed to treat Mr Oppelt's spinal injury by way of a closed reduction procedure, within four hours of its occurrence. The court a quo granted leave to the department to appeal to this court. Leave to cross-appeal was also granted to Mr Oppelt against the court a quo's finding that the department was obliged to pay only 50 per cent of his costs. This order was granted on the basis that only 50 per cent of his costs were expended on the claim against the department, the remaining 50 per cent being expended on the claim against the rugby authorities.

[5] The finding of liability by the court a quo was based upon the evidence of Dr Dennis Newton, the specialist in charge of the Conradie Hospital Spinal Cord Injuries Unit from 1988 to 2002. Dr Newton testified that Mr Oppelt would have had a 64 per cent chance of a full recovery if he had been treated by his closed reduction method of treatment within four hours of the injury occurring. The court a quo concluded that the department acted unreasonably in not taking Mr Oppelt to Conradie Hospital within the four hour period and that the inference that the department had 'acted unlawfully and negligently' was unavoidable. A 64 per cent chance of recovery was regarded by the court a quo as 'causation on a preponderance of the evidence'. The court a quo found that Dr Newton's method of treatment was 'well-reasoned and logical' and that 'no acceptable evidence gainsaying this theory' was presented by the department. A critical examination of the court a quo's acceptance of the evidence of Dr Newton is therefore required.

[6] Dr Newton's method of treatment was to subject the patient's injured spine to traction by the application of heavy weights attached to a pulley system, connected

via callipers to the patient's skull. The patient's body was kept immobile by straps attached to the bed. The movement of the bones in the spine under traction was monitored by x-rays and manipulated so that the dislocated vertebra could be re-aligned in the spinal column. In layman's terms the patient's neck was stretched so that the vertebra which had been forced out of position could be pulled back into alignment. The object was to relieve the pressure on the spinal cord by re-aligning the vertebra and thereby restore the blood supply to the nerve cells in the spinal cord. Deprivation of the blood supply eventually causes the death of these nerve cells which results in paralysis. The period within which the blood supply must be restored to the nerve cells in the spinal cord to ensure their recovery is the critical factor in Dr Newton's method of treatment.

[7] According to Dr Newton, this critical factor demanded that the pressure on the spinal cord be relieved within a period of four hours of the injury occurring. He stated that the period of four hours was 'the magic number', that a delay longer than four hours meant 'the horse was already out of the paddock', that the four hours was what 'makes a difference' and that as a general rule if neurological tissue is without blood for four hours 'forget it', because 'the clock is ticking'. Dr Newton's commitment to a defined period of four hours was illustrated by his evidence that he would refuse to sign the expert summary of his evidence which stated 'the need for early reduction of facet dislocations within four to six hours was well-known in the orthopaedic community at the time that Dr Newton was practising in South Africa which includes March 2002'. He stated that the summary would have to be changed by deleting the words 'to six', because four hours was 'the cut-off time'.

[8] The empirical scientific evidence which Dr Newton maintained supported his method of treatment were the results he achieved by treating a series of 57 patients suffering from acute spinal cord injuries caused by cervical facet dislocation, whilst playing rugby. Of these 57 patients, 32 were completely paralysed at the time they were treated using Dr Newton's closed reduction technique. Of these 32 patients, eight were treated within four hours of injury, and of them five made a full recovery. Of the remaining 24 who were treated after four hours of injury, none made a full

recovery and only one made a partial recovery that was useful. The conclusion that Dr Newton drew from these results was that 'a full recovery is possible and in fact probable' in about 64 per cent of cases.

[9] Dr Newton conceded that there was no consensus in the medical scientific literature regarding the relationship between timing of decompressions and the neurological outcome following an acute spinal cord injury. In addition, he conceded that his theory concerning the four hour cut-off period was 'brand new' and there was no authoritative article based on research supporting his view. He accepted that according to the classification of scientific evidence, the evidence he relied upon was class four, the lowest form of evidence, described as 'opinion'. Since 2001, being the end of the period during which Dr Newton collected his evidence, there had been no similar studies into his theory and consequently no other study which supported it. He also accepted that there were other people in the medical field who held different views to his.

[10] By reference to an article written by Dr Newton about his theory, which was in the process of being published by the Journal of Bone and Joint Surgery, he stated that certain words which were underlined indicated alterations which he had made on the recommendation of the referees of the journal. For present purposes the relevant passage reads as follows: 'To prevent permanent SCI (Spinal Cord Injury) after rugby injuries, cervical facet dislocations should <u>probably</u> be reduced within four hours of injury'. Dr Newton confirmed that this reflected his opinion.

[11] Dr David Welsh, a neurosurgeon, a consultant in the Division of Neurosurgery at Groote Schuur Hospital, a lecturer at UCT in neurosurgery and in private practice, gave evidence for the department concerning Dr Newton's theory. The spinal cord injuries unit had been moved from Conradie to Groote Schuur. He said that Dr Newton's equipment was no longer in use at Groote Schuur Hospital. The preferred treatment at present was to use MRI and CT scanners to scan patients and operate almost immediately where appropriate. Closed reduction, as opposed to surgical open reduction, was still performed in specific cases but not

necessarily using the rapid technique with heavy weights espoused by Dr Newton. In certain situations where they thought appropriate, they may utilise closed reduction more slowly over time with fewer weights, because fewer weights applied over a long period of time usually had the same effect.

[12] Dr Welsh explained that scientific data fell into one of three categories according to its reliability. Class one data was the most reliable data scientifically which was collected under very stringent conditions. Class three data was the least reliable form of scientific data. The way it was collected allowed for a lot of scientific bias, misinterpretation and inaccuracy. An example of this type of data was when a doctor would go through the records of his patients on a particular subject and sift out the data that he wanted. Although the disparity between the views of Dr Newton and Dr Welsh as to the number of categories of scientific data was not explored in evidence, it appears Dr Newton's concession that his evidence fell within the least reliable category would place it within Dr Welsh's third category.

[13] Dr Welsh confirmed that there was no consensus in the medical literature with regard to the relationship between the time of decompression and the neurological outcome following acute spinal injury. He stated that one could not generalise about four hours being the cut-off period for the survival of neurological tissue starved of a blood supply. He stated that was 'a very, very gross way of looking at it'. He conceded that the theoretical need to restore the blood supply to central nervous system tissue did import a sense of urgency in the treatment of spinal cord injury patients. He agreed that where there is bilateral facet dislocation there was some support based upon class two evidence to support urgent early reduction. There was, however, a lack of consensus as to whether early treatment was better than later treatment for spinal cord injuries.

[14] Dr Welsh explained that there was a lack of consensus whether doing something affects the outcome. In addition, there was a lack of consensus that if something is to be done, when it should be done. In other words, there was a lack of consensus as to the action as well as its timing. He accepted that the general feeling

was that early decompression was better than late, but there was an ongoing inability to define the time when intervention should take place. The current practice in regard to incomplete spinal cord injuries that may be reduced, was to try and do so as soon as possible. The four hour limit espoused by Dr Newton did not exist in the widespread literature and was not something which was applied generally.

[15] A proper evaluation of Dr Newton's theory requires an examination of two issues. Firstly, the reliability of the evidence upon which it is based and secondly Dr Newton's process of reasoning. The proper approach in assessing an expert witness' opinion is described by Wessels JA in *Coopers (South Africa) (Pty) Ltd v Deutsche Gesellschaft Für Schädlingsbekämpfung MBH* 1976 (3) SA 352 (A) at 371F-G in the following terms:

'As I see it, an expert's opinion represents his reasoned conclusion based on certain facts or *data*, which are either common cause, or established by his own evidence or that of some other competent witness. Except possibly where it is not controverted, an expert's bald statement of his opinion is not of any real assistance. Proper evaluation of the opinion can only be undertaken if the process of reasoning which led to the conclusion, including the premises from which the reasoning proceeds, are disclosed by the expert.'

[16] The evidence that Dr Newton gave as to the results of his treatment was that of 32 paralysed patients, eight were subjected to this treatment within four hours of which five made a full recovery. The remaining 24 patients who were not treated within four hours did not recover. This is the only evidence upon which his theory is based.

[17] Dr Newton conceded that the reliability of his evidence would be classified as the lowest form of scientific data namely that which is described as 'opinion'. Dr Welsh confirmed that this was the least reliable form of scientific data. The risk of scientific bias, as well as misinterpretation and inaccuracy was present. Accordingly, the scientific evidence which is said by Dr Newton to support his theory is at the very least questionable.

[18] Dr Newton's process of reasoning based upon this evidence appears to be that because five out of eight patients recovered completely, it may be stated as a general proposition that 64 per cent of the patients treated by his method, will also probably recover. Although five patients recovering out of eight produces a success rate of 62.5 per cent, the percentage of 64 per cent derives from a success rate of nine patients out of 14 contained in the details of the presentation produced by Dr Newton to publicise his theory. The distinction between these sets of figures arises from the fact that five of the patients who recovered were completely paralysed (Frankel level A) before treatment, whereas the other four who recovered were not completely paralysed before treatment (varying between Frankel level B and D). This is obviously a very small sample from which to generalise. In addition, it gives insufficient weight to the fact that of the other three patients who were treated by his method, one did not improve at all and one only improved from a Frankel level A to a Frankel level C. Dr Newton explained that Frankel level A signified complete lack of motor and sensory function below the level of the injury. Frankel level B was slightly better in that there was sensation below the injury but no motor function. Frankel level C was 'motor useless' and Frankel level D was 'motor useful'. Frankel level E meant that the patient was normal. The third patient unfortunately passed away. Consequently, the results obtained in 25 per cent of the patients treated by Dr Newton's method (two out of eight) do not support his theory. This again emphasises the inadequacy of the size of the sample.

[19] This inadequacy is not ameliorated by Dr Newton's evidence that of the 24 patients who were not treated by his method within four hours, none recovered. To argue that the outcome in these patients was caused solely by the fact that they were not treated within four hours is to assume that which has to be proved. That they remained paralysed does not necessarily lead to the conclusion that if they had been treated within four hours, they probably would have recovered. It simply means his method was not tested on them. If it had been tested, the results obtained may have contributed to a more meaningful assessment of the validity of his theory.

[20] Dr Newton's theory is not supported by any other study and no independent study into his theory has been conducted in the last 13 years. According to Dr Welsh, the theory has not been accepted by the medical profession which does not generally apply it in practice. Seen in this context, Dr Newton's opinion as an expert as to the probable success of his method of treatment on patients generally, and Mr Oppelt in particular, has little probative evidentiary value. The court a quo accordingly erred in finding that Dr Newton's theory was valid.

[21] I consequently find that Mr Oppelt failed to prove on a balance of probabilities the validity of Dr Newton's method of treatment, the success of which was expressly restricted by Dr Newton to a period of four hours after the injury is inflicted.

[22] This conclusion has as its consequence that Mr Oppelt failed to prove that he probably would have recovered, but for the fact that he was not treated by the department's employees with Dr Newton's method of treatment, within four hours of his injury. It cannot be found that this was 'probably a cause' of his paralysis.[1] Common sense dictates that a failure to prove the validity of Dr Newton's theory means that a failure to apply it could not be a factual cause of Mr Oppelt's paralysis.[2] This does not mean that Mr Oppelt had to prove the causal link with certainty, or mathematical precision, but simply on a balance of probabilities, which he failed to do.[3]

[23] The evidence reveals that Mr Oppelt's injury was unsuccessfully treated by closed reduction 14 hours after he was injured. Whether he would have recovered

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[1] *Minister of Safety and Security v Van Duivenboden* 2002 (6) SA 431 (SCA) para 25.

[2] *Minister of Finance & others v Gore NO* 2007 (1) SA 111 (SCA) para 33.

[3] *Minister van Polisie v Van der Vyver* (861/2011) [2013] ZASCA 39 (28 March 2013) para 33, *Crafford v South African National Roads Agency Ltd* (215/12) [2013] ZASCA 8 (14 March 2013) para 21.

either fully or partially, if he had been treated in this way at an earlier stage, cannot be determined on the evidence. Although the general consensus in the medical world is that early intervention was preferable in the case of an injury of the type suffered by Mr Oppelt, there is no consensus as to when this should occur. In any event, this was not the cause of action advanced by Mr Oppelt, restricted as it was to intervention being required within four hours of the injury occurring.

[24] A finding that the conduct of the department's employees was not a factual cause of his paralysis, renders an examination of the issues of wrongfulness and negligence on the part of the department's employees unnecessary. In any event, if the validity of Dr Newton's method of treatment is not accepted, there was no legal duty on the part of the employees of the department to administer it within the requisite four hour period. Their conduct in not doing so would not be wrongful.

[25] Similarly, a reasonable doctor in the position of the employees of the department would not foresee the possibility that a failure to apply Dr Newton's method of treatment within a period of four hours of Mr Oppelt's injury, would result in his paralysis. In not doing so their conduct would not be negligent. The court a quo accordingly erred in finding that the conduct of the employees of the department was unlawful and negligent.

[26] In the light of these conclusions, it is unnecessary to examine the evidence led by both parties as to the reasonableness or otherwise of the time it took to convey Mr Oppelt to the Conradie Hospital where he was treated. An enquiry as to whether he could reasonably have been treated within four hours is likewise irrelevant.

[27] The success of the appeal has as its consequence that Mr Oppelt's cross-appeal against the form of the order of costs granted in his favour falls away.

[28] The following order is made:

1 The appeal is upheld with costs.

2 Paragraphs 2, 3 and 4 of the order of the court a quo are set aside and replaced with an order dismissing the plaintiff's claim against the first defendant with costs.

3 In both cases the costs are to include the costs of two counsel.

K G B SWAIN

JUDGE OF APPEAL

Appearances:

For the Appellant:	T Potgieter SC (with him M Salie)
	Instructed by:
	The State Attorney, Cape Town
	The State Attorney, Bloemfontein
For the Respondent:	WRE Duminy SC (with him JA Van der Merwe)
	Instructed by:
	Scheibert Attorneys, Cape Town
	Lovius Block, Bloemfontein