Neutral Citation Number: [2011] IEHC 482

THE HIGH COURT

2009 772 SP

IN THE MATTER OF THE GARDA COMPENSATION ACTS 1941 – 1945

BETWEEN

RAYMOND FRANCIS ROCHE

APPLICANT

AND

MINISTER FOR FINANCE

RESPONDENT

Judgment of Ms. Justice Irvine delivered on the 14th day of December, 2011

1. The applicant in these proceedings, Raymond Roche, was born on the 4th October, 1955. He is a former member of An Garda Síochána and he resides at Armagh Road, Dundalk. The applicant claims compensation under the provisions of the Garda Compensation Acts 1941-1945 in respect of injuries sustained by him on the 20th November, 1999, in the course of his duties. This judgment relates solely to the issues of causation and liability in relation to a bacterial infection which he contracted some time after that assault.

The Assault

2. On the 20th November, 1999, the applicant, who was then on crutches because he had had an arthroscopic procedure carried out on his right knee on the 16th November, 1999, was assaulted by a member of the public. He was kicked and struck repeatedly by his assailant and he received at least one kick to the knee which had been the subject matter of the arthroscopic procedure.

3. Whilst the applicant did not fall to the ground in the assault, he nonetheless experienced severe pain in the right knee and when he attended Dr. Byrne, his general practitioner on the 23rd November, 1999, his knee was swollen and tender and its movements were restricted. Likewise, when he attended Mr. Babu, the surgeon who had carried out his arthroscopy, on the 1st December, 1999, his right knee was swollen, he had tenderness over the medial ligament and a restricted range of movement.

4. The applicant returned to light duties in September, 2000 at which stage it is clear from his evidence and from the report of Dr. Byrne that he was still having pain in his right knee and that this was affecting his mobility. There is little medical evidence as to the extent of the symptomology in the applicant's right knee following his return to work until the second half of 2001 when his general practitioner noted that he was still experiencing pain in the right knee which, whilst considered to be stable, had evidence of slight crepitus. At that stage he was still on non-confrontational duties.

5. Whilst the applicant sustained other physical and psychological injuries in the assault of the 20th November, 1999, I only intend to deal with the injuries which he sustained to the right knee in the course of this judgment.

6. It is clear from all of the medical evidence that the applicant ultimately developed septic arthritis in his right knee. I will return later to the likely date of infection as this is a matter in dispute between the parties. Suffice to state that Dr. Murphy suspected septic arthritis in late 2001 and the condition was formally diagnosed by Ms. Geraldine McCarthy, Consultant Rheumatologist at the Mater Hospital, Dublin, in August, 2002.

7. It is common case that the septic arthritis which developed in the applicant's knee was caused by the bacterial infection known as staphylococcusaureus ("staph aureus"). Unfortunately, because the bacterial infection could not be brought under control in early course, this infection eventually caused the destruction of the right knee joint with fairly catastrophic consequences for the applicant. The knee joint required replacement but this could not be carried out until the infection had been cleared. To this end the applicant was subjected to prolonged treatment with antibiotics and he was hospitalised for regular washouts of the joint. He spent significant periods of time in hospital due to ongoing chronic infection including a period of 55 days in 2004 when he was on intravenous antibiotics. Apart from washouts of the knee on other occasions the knee joint was manipulated, drained and placed in a plaster of Paris cast to support the joint.

8. The applicant was initially treated by Mr. Frank McManus, Consultant Orthopaedic Surgeon. Following his retirement the applicant came under the care of Mr. Keith Synnott, Consultant Orthopaedic Surgeon. In November, 2006 when there had been no evidence of active sepsis for a long time, the applicant received a total knee replacement. However, subsequently the applicant again developed significant septic arthritis in the right knee joint. He required acute drainage, washout of the joint and underwent an excision arthroplasty in March, 2007 with implantation of an antibiotic loaded spacer. He then had a fusion of the knee joint in 2007 and a revision arthrodesis in January, 2008. Notwithstanding all of this intervention, the applicant's knee has continued to remain painful and stiff and his prognosis is poor. He will require chronic antibiotic treatment for the rest of his life and he may well require to have his right leg amputated above the knee.

9. It is in the aforementioned circumstances that the applicant maintains an entitlement to compensation under the provisions of s. 2 of the Garda Síochána Compensation Act 1941. Put in its most basic form, the applicant now claims that by reason of the assault perpetrated on him on the 20th November, 1999, he has gone on to develop septic arthritis in the right knee, a condition that would not have developed if it had not been for that assault.

The Issue

10. The issue which I have to decide on this application is whether or not the applicant is entitled to compensation in relation to the pain and suffering he has experienced and will experience in the future by reason of the staph aureus infection to which I have earlier

referred. If I am satisfied that he is entitled to such compensation under the provisions of the Garda Compensation Acts 1941-45 I will then hear evidence to allow me determine the proper level of that compensation.

Garda Síochána (Compensation) Act 1941
11. Section 2 of the Garda Síochána (Compensation) Act 1941 provides the basis whereby a member of An Garda Síochána is entitled to compensation in respect of personal injuries maliciously inflicted upon them in the course of their duties.

12. The Court's approach to the issue of compensation is provided for in section 10 of the act where it is provided, *inter alia*, at s.10(2)(c) that the Court:

> "(2) In fixing the amount of compensation under this Act in respect of personal injuries not causing death, the Minister or the judge, as the case may be. –
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> …
>
> (c) shall have regard to the pain and suffering occasioned by the injuries to the applicant and also, in a proper case, to any disease or tendency to disease caused by the injuries."

13. In my decision in the case of *Carey & Ors v. Minister for Finance* (Unreported, High Court, Irvine J., 15th June, 2010), having considered at length the workings of the Garda Compensation Legislation, I concluded that causation was a matter to be determined by the court in an appropriate case and that in such circumstances it was for the applicant to discharge the burden of proof. I further concluded that the causation test to be applied by the court is "whether or not the assailant's malicious conduct was the substantial cause of the injuries complained of".

14. Counsel for the applicant has submitted that he has, primarily through the evidence of Prof. Muiris X. Fitzgerald, Prof. of Medicine at St. Vincent's University Hospital, established that the substantial cause of the septic arthritis in his right knee was the assault that took place on the 20th November, 1999. In the alternative, he submits that the evidence establishes that by reason of that assault, the applicant had a tendency to develop staph aureus and that this entitles the court to compensate him by virtue of the provisions of s. 10(2)(c) of the Act.

15. I think it is convenient to deal with my interpretation of s. 10(2)(c) of the Act at this point in the judgment prior to my consideration as to whether or not the substantial cause of the applicant's staph aureus was the assault of the 20th November, 1999.

16. I am satisfied that s. 10(2)(c) relates solely to the approach to be taken by the court when considering its approach to the issue of damages. It has nothing to do with liability or causation. The section does no more than acknowledge, in the context of this statutory scheme, the right of the judge to approach the issue of damages in the same manner as would be appropriate in a personal injuries action. This is clear from the use of the words "in fixing the amount of compensation under this Act", in the introduction to section 10(2).

17. The provisions of s. 10(2)(c) do not relax or ameliorate the burden of proof on an applicant to show that the substantial cause of any injury in respect of which compensation is sought was an assault maliciously inflicted upon them in the course of their duties. Damages may be awarded in respect of an injury that has actually occurred as of the date of the hearing or where by reason of the injury they are at risk of prospective injury or disease. As regards any injury in respect of which compensation is claimed, causation must be established. In this case, the injury to the applicant arising from the staph aureus infection in his knee has occurred and therefore cannot attract compensation unless the causation has been established. That injury is not a prospective injury or a hypothetical injury or a tendency to disease such as might be considered to fall within the provisions of section 10(2)(c).

18. Section 10(2)(c) merely allows the court, as would be the case in an ordinary personal injuries action, to reflect in its award of damages the fact that an applicant may have a tendency to, or be at risk of developing, some particular disease as a result of the wrongdoing concerned. For example, in a negligence action, if due to a particular injury, a plaintiff is at risk of developing a condition such as arthritis or perhaps a disease such as epilepsy in the future, they are entitled to recover damages proportionate to the risk of that hypothetical injury taking place. This is precisely what is covered by s.10(2)(c) which provides the mechanism whereby the court, on a garda compensation application, may award damages in respect of something that has not yet happened but which is at risk of occurring because of the malicious assault.

19. The provisions of s. 10(2)(c) insofar as it allows a court award damages in respect of any "tendency to disease caused by the injuries" cannot relate to something which has *de facto* occurred and in respect of which the applicant has not established causation. It only relates to the prospective risk of an injury which has not occurred as of the date of the award of damages.

20. Accordingly, the applicant's reliance upon s. 10(2)(c) is misplaced and does not provide a backdoor to allow him recover compensation in respect of an injury which has been sustained if he cannot prove it was substantially caused by the assault perpetrated upon him.

Causation
21. The question of the applicant's entitlement to compensation in respect of the consequences of the staph aureus infection in his right knee cannot be decided in abstraction but is dependant on my conclusion on a number of factual issues which I propose to address before considering whether the applicant has discharged the burden of proof. These questions are:-

> (i) When and why did the applicant contract the staff aureus infection? And;
>
> (ii) What role did the Applicants assault play in the fact that the infection ultimately seeded in his right knee.

Staph Aureus
22. Staph aureus is a bacterial organism which is known, *inter alia*, to be responsible in many cases for the development of septic arthritis. The organism is carried by about 25% of the population on the skin or in the mucosal cavities and it normally causes no harm. The court heard evidence that staph aureus may enter the bloodstream or obtain access to the host body in many different ways. The bacteria may enter through small lesions on the skin such as a normal cut or wound. It may even enter through skin which is affected by psoriasis but where there is no obvious sign of the skin's protective layer having been breached. Further, staph aureus can be introduced into the host body in the course of trauma including any invasive medical procedure or surgery.

23. If staph aureus manages to penetrate the skin and go into deep tissue it may cause pustules to develop due to efforts of the body's immune system to isolate the infection. However, if the bacteria gets into the bloodstream, it can seed to bones, joints, or various organs of the body including the brain and heart. Where the bacteria takes hold may simply be determined by the location to which the blood which is carrying the infection flows. Once it gains entry into the bloodstream, it proliferates and activates an acute inflammatory process. The host will mount a response in an effort to contain an invasion of the pathogen and this will often manifest as a major swelling if the bacteria colonises at a joint. Staph aureus does not cause a chronic condition. It is an acute infection that produces very significant symptoms with immediate effect. Within days and weeks the bacteria will destroy cartilage and bone.

24. When the proceedings were initially instituted it was the applicant's contention that he had contracted staph aureus in the course of the assault of the 20th November, 1999. When the application came before me for hearing on the 25th July, 2011, I was advised by the applicant's General Practitioner, Dr. Murphy, that he believed that the staph aureus bacteria must have entered the applicant's bloodstream through one of the small scars on the applicant's knee where instruments had been inserted in the course of his arthroscopy procedure. It was his opinion that these scars would not have been fully healed at the date of the assault and that they provided a route for the infection to take hold.

25. The initial hearing was adjourned to allow for the production of the applicant's medical records and to facilitate a more in-depth investigation into the causation issue. The hearing resumed before me on the 8th November, 2011. Originally, the court had received a number of reports from the applicant's treating doctors. It also had received a report from the chief medical officer and a report from Dr. Pat O'Neill, Consultant in Sports and Orthopaedic Medicine dated the 7th April, 2011. However, as of the date of the resumed hearing, the court had the benefit of additional expert reports from Prof. Fitzgerald, who reported on behalf of the applicant, and Prof. Samuel McConkey, consultant in infectious diseases, who reported on behalf of the respondent. The court also received extensive medical records which the parties agreed could be admitted into evidence without the necessity for formal proof.

26. In relation to the evidence, it should be stated that the court heard oral evidence from Prof. Fitzgerald and Prof. McConkey and it was agreed between the parties that the report of Dr. Pat O'Neill could be admitted into evidence, save insofar as that report dealt with the issue of causation.

When and why did the applicant contract staph aureus?
27. Regrettably, Prof. Fitzgerald and Prof. McConkey were not *ad idem* in relation to the issues most pertinent to this application, namely, when the applicant had contracted his staph aureus infection, and why the infection, once contracted, colonised in his right knee joint.

28. It was only after the applicant's General Practitioner, Dr. Murphy, had given evidence in support of the causation theory earlier referred to, that Prof. Fitzgerald advised the court that the applicant did not contract the staph aureus infection at or near the time of the assault in November, 1999. Having advised the court as to the acute nature of the staph aureus infection he stated that, based upon the applicant's evidence and the content of his medical records, it was likely that he had developed the infection in late November, 2001 at which stage he had many of the hallmark symptoms of that infection, including significant pain and swelling of the right knee.

29. Regrettably, Prof. Fitzgerald's report was confined to conducting a review of the earlier medical reports and did not express his opinion as to when or how the applicant had likely contracted staph aureus. Thus, the respondent was led to the belief that the causation case it was being asked to meet on the resumed hearing was that which had been advanced by Dr. Murphy at the initial hearing, namely that the bacterial infection had taken hold in the immediate aftermath of the assault in November, 1999 with its route of entry being the portal sites referable to the arthroscopic procedure. Accordingly, the report of Prof. McConkey did not address itself to the evidence ultimately offered by Prof. Fitzgerald as to when and how the applicant contracted the staph aureus infection or why it seeded in the joint of his right knee. For these reasons, the causation issue was in reality only addressed in detail for the first time in the course of the oral evidence at the resumed hearing.

30. Prof. McConkey was in agreement with Prof. Fitzgerald that the infection could not be traced back to the assault of November, 1999. He agreed that because of the acute nature of the infection that it could not have entered through the portal sites generated by the arthroscopic procedure as contended for by Dr. Murphy. However, he disagreed with Prof. Fitzgerald as to the likely date of infection and advised the court that he believed that it was far more likely that the applicant contracted the infection much later than November, 2001 and probably as late as August, 2002. In coming to that conclusion, he relied upon the acute nature of the staph aureus infection and the fact that it produces extreme symptoms in the absence of ongoing antibiotic treatment. He also sought to support his conclusions by reference to the applicant's condition and the results of a number of investigative procedures carried out through the latter months of 2001 and the first six months of 2002.

31. Having carefully considered the evidence of Dr. Murphy, Prof. Fitzgerald and Prof. McConkey, and having heard their testimony challenged by counsel, I have to say that I prefer the evidence of Prof. McConkey as to the likely date upon which the applicant became infected with staph aureus. In this regard, I feel his evidence is consistent with the nature of the infection as described to the court, is supported by the test results and history to be gleaned from the applicant's medical records and is further validated by the medical literature produced to the court.

32. In coming to my conclusions on this issue, I have been influenced by the following factors:-

> (i) The applicant had synovial fluid aspirated from his right knee whilst in Our Lady's Hospital, Navan on the 23rd November, 2011. It is the microbiological assessment of that synovial fluid that is the diagnostic test for septic arthritis. The microbiology results reported that the culture showed no growth. This is relatively strong evidence that the applicant had not developed staph aureus at that time and that it was not responsible for the symptoms he was experiencing at that time.
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> (ii) The applicant had co-morbid conditions in his right knee as of November, 2001 namely, cellulitus and gout. Either of these conditions were capable of producing symptoms similar to those of septic arthritis, namely redness, swelling and pain due to inflammation. In particular, the applicant had uric acid readings above the upper limit of normal in the course of his hospitalisation in late November, 2001. Further, he had a long history of gout affecting his right knee. He was out of work for several months in 1999 by reason of the condition of his right knee. He was hospitalised in Louth County Hospital for in excess of one week in June 1999. The discharge letter dated the 22nd June, 1999, referable to that admission recorded the applicant as suffering from "gout (acute) right knee".
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> (iii) The applicant was in receipt of two high doses of antibiotics at the time of the aspiration of fluid from his right knee for microbiological testing on the 23rd November, 2001. I accept Prof. Fitzgerald's evidence that at times

intravenous antibiotics may have the effect of masking staph aureus infection on microbiological examination. However, I accept Prof. McConkey's evidence in this case that this did not occur and this is borne out by the fact that precisely the same test was carried out on the applicant when he was hospitalised in Our Lady's Hospital in Navan in May, 2002. At that time staph aureus was within the differential diagnosis being considered as a cause for the applicant's difficulties with the right knee. The applicant's drug chart for the whole of the period of his hospitalisation was available to the court and this establishes that the applicant was not in receipt of any antibiotics which might have masked infection in the course of the microbiological testing which was carried out on the 5th May, 2002, and was reported as negative for the presence of staph aureus. Consequently as of the 5th May, 2002, the applicant had not contracted staph aureus.

(iv) At the time of the microbiological testing of the aspirate from the applicant's right knee on the 5th May, 2002, the applicant's uric acid readings were again outside the upper limit of normal. Further, on this occasion, a report from the Department of Pathology, dated the 5th May, 2002, stated that "uric acid crystals" were seen on microscopic examination and these results were considered to be indicative of the applicant's inflammation in his right knee being caused by his gout. Accordingly, there were objective findings in support of an alternative cause for the applicant's difficulties with his right knee as of May, 2002.

(v) X-ray examination of the 27th April, 2002, demonstrated some degenerative changes to the right knee joint perhaps accounting for some of the applicant's symptoms at that time.

(vi) If the applicant had, as was the opinion of Prof. Fitzgerald, contracted staph aureus in late November, 2001 the medical records ought to have been littered with complaints as to the applicant's ongoing acute symptoms from that point on. Whilst I accept Prof. Fitzgerald's evidence that ongoing high doses of intravenous antibiotics would suppress the natural history of septic arthritis, there is no evidence to suggest that following his discharge from hospital in late November, 2001 that he was in receipt of any ongoing antibiotics which could have suppressed the acute symptoms associated with ongoing septic arthritis. Further, the medical records do not demonstrate that the applicant had severe symptoms throughout all of the period commencing in late November, 2001 as might have been expected in the presence of ongoing septic arthritis.

(vii) The consultant's report dated the 13th May, 2002, advised as follows:-

> "This man has gout confirmed in the aspirate from his knee. There was no infection. The knee is improving slowly but he still has some pain from it and difficulty weight bearing on it. We can restart his colchicine and continue with his existing painkillers. I think he is ready for discharge at this stage. We will see him back in the clinic in six weeks time.
>
> D. Reidy."

(viii) The hospital discharge summary of the 13th May, 2005, included a diagnosis of "gouty arthritis of the right knee".

(ix) Dr. Murphy's records show that the applicant attended him in early July, 2002. At that stage, Dr. Murphy noticed that his right knee was improved but was still significantly swollen. The applicant reported improved mobility and less pain. Nonetheless, Dr. Murphy decided to refer the applicant to Dr. Geraldine McCarthy, Consultant Rheumatologist, for her expert opinion. Following the arrangement of that appointment the applicant represented with what Dr. Murphy noted on the 19th August, 2002, as "recurrence of acute gout in the right knee" after which he saw Dr. McCarthy and was admitted to the Mater Hospital where he had a wash out of the right knee. In the course of that procedure on the 23rd August, 2002, fluid was taken from the knee for microbiological testing and on the 26th August, 2002, was reported positive for staph aureus.

33. For the aforementioned reasons, I am satisfied that the applicant contracted staph aureus sometime between the 5th May and the 22nd September, 2002, and most probably in late August, 2002. In such circumstances, the pain and suffering experienced by the applicant in his right knee joint prior to that period cannot be ascribed to staph aureus and must be ascribed to other causes including gout, possible degeneration of the joint, meniscal injury and/or soft tissue injuries sustained in the assault of the 20th November, 1999.

34. As to how the staph aureus entered the applicant's bloodstream, it appears that there are any number of possibilities. It may have entered through the area of psoriasis on the applicant's right leg or it may have entered at anytime through an area of the body where the skin membrane was even temporarily or marginally compromised. Prof. Fitzgerald told the court that it was increasingly recognised that this bacterial infection was known to penetrate the skin at areas which were not even obviously broken on ordinary clinical examination. What was, however, agreed by Prof. Fitzgerald and Prof. McConkey was that neither of them was in a position to say that the applicant contracted the staph aureus infection as a result of the assault given that it is accepted that he did not develop that infection for at least two years post the date of the initial trauma.

What role did the applicant's assault play in the fact that the infection, once contracted by the applicant, ultimately seeded to his right knee?

35. Prof. Fitzgerald advised the court that in his opinion the bacterial infection once it entered the applicant's body then seeded to his right knee probably because of the combined effects of the surgical trauma to the right knee occasioned in the course of the arthroscopic procedure of the 16th November, 1999, and the subsequent physical assault to the same knee some four days later. These two assaults when coupled together produced a knee joint that was damaged and this damage rendered it vulnerable to an attack from any subsequent staph aureus infection. The same events carried major but short lived risks in terms of providing a route whereby staph aureus might be permitted to enter the applicant's body. Whilst infection did not occur in this manner those two events nonetheless when taken together generated a long term risk for the development of septic arthritis given that staph aureus is known to colonise in areas of vulnerability.

36. Prof. Fitzgerald placed a great deal of weight on a survey of a cohort of 253 patients from Iceland who were diagnosed with septic arthritis during the period 1990 – 2002. Taking guidance from the statistics in that survey, he concluded that the trauma to the knee generated by the arthroscopy and subsequent assault represented a much greater risk for the development of septic arthritis than any of the other risk factors relevant to the applicant such as gout, excessive alcohol consumption, obesity or arthritis.

37. In minimising gout as a risk factor, Prof. Fitzgerald also relied upon a paper which considered 30 cases of patients who had

concomitant septic and gouty arthritis. He stressed that the applicant did not have tophaceous gout, a condition in which the patient develops nodules as a result of the deposit of crystals and which nodules may break through the skin around the joints thus compromising the skin membrane and leaving it prone to infection. As the applicant only suffered from regular gout, he should not be considered to enjoy the same risk of developing septic arthritis as might be expected of an individual suffering from tophaceous gout.

38. Prof. Fitzgerald, whilst acknowledging the applicant's sustained and significant consumption of alcohol, was of the opinion that it did not constitute anything other than the most insignificant risk factor for the development of staph aureus. He stated that he was satisfied from the medical records that the applicant's liver was still producing anti-infection proteins at the time he contracted staph aureus and that this risk factor should therefore be discounted. Further, whilst obesity was also a risk factor for staph aureus, once again this was a risk factor which was insignificant in the light of the more serious risk factors generated by surgical intervention and trauma.

39. Whilst I entirely accept Prof. Fitzgerald's analysis of the risk factors for the development of septic arthritis, it is clear that the statistical information in the Icelandic study was destined to establish why there had been such an increase in the prevalence of septic arthritis in the Icelandic population. The survey accordingly focused on seeking to identify why each patient had contracted the infection. The authors seems to have concluded that the increase was due to an escalation in the number of surgical and other investigative procedures being performed and in the course of which infection was permitted to take hold. In almost 42% of the adult cases investigated, infection was contracted in the course of open joint surgery. Likewise less invasive procedures such as arthroscopic examinations or injections into the joint were also implicated in providing a route for transmission of bacteria into the relevant joint. In 24% of cases recent trauma was considered to be a risk factor.

40. Having considered the Icelandic study very carefully and having heard Prof. McConkey and Prof. Fitzgerald give their respective interpretations on the reported findings, I am not satisfied that the percentages which are ascribed to the various risk factors for the development of staph aureus in that study are of significant guidance to the court in its efforts to establish why, in the case of Mr. Roche, staph aureus ended up colonising his right knee joint.

41. In the Icelandic study, the majority of the patients were infected at the time of joint surgery or some other invasive procedure or at the time of, or at least proximate to, the infliction of some trauma. Clearly, patients are at their most vulnerable when the skin is open to infection whether by reason of deliberate incision, injection or trauma. However, as the evidence clearly established, once the skin opening is closed the patient's vulnerability to infection from those risk factors recedes to a fraction of the original risk with almost immediate effect. In the present case, it was agreed that infection did not enter the body at the time either of the arthroscopic procedure or proximate to the assault in 1999. The bacteria entered the applicant's body for some unknown reason at least two years after those events.

42. Recent trauma, which was reported in the Icelandic study as a significant risk factor for the development of septic arthritis, must also be considered against the backdrop of the facts of any individual case. Prof. McConkey explained that trauma itself may compromise the skin membrane thus providing a route for infection to take hold. Further, an area of the body which has been traumatised may also provide fertile ground for staph aureus to take hold if it enters the skin or the bloodstream at a time proximate to the trauma. Apparently, staph aureus likes to colonise a blood rich environment such as the locus of a recent bleed or haemorrhage. However, it is clear once again that recent trauma, which in another case might constitute a significant risk factor for the development of staph aureus infection for the reasons just referred to cannot apply in the present case as the applicant did not contract his infection at a time proximate to any trauma to his knee.

43. For the aforementioned reasons I believe it would be fundamentally wrong to rank the applicant's risk factors for contracting staph aureus in his right knee in accordance with the percentages set out in the Icelandic study.

44. Prof. Fitzgerald and Prof. McConkey were however in agreement in advising that staph aureus may often target a vulnerable joint within the body. Accordingly, what has to be considered in the present case is the extent to which any damage caused to the knee in the assault of the 20th November 1999, might have made it more vulnerable to staph aureus infection two and a half years later. Prof. Fitzgerald was of the view that the combined effect upon the knee structures of the arthroscopic intervention on the 16th November, 1999, and the assault immediately thereafter on the 20th November, 1999, when taken together in all probability were the reason why the staph aureus ultimately colonised in the right knee joint. He did not accept that the right knee was arthritic as of the date of the assault in 1999 and he relied upon the radiological report of Dr. Woods reporting the right knee as normal on the 22nd June, 1999, in support of his opinion. He also relied upon the medical report of Mr. Babu, Consultant Orthopaedic Surgeon dated the 5th May, 2000, which stated that radiological examination of the knee was normal.

45. In response to Prof. Fitzgerald's evidence, Prof. McConkey advised the court that regardless of the existence of any risk factors at all, one of the most favoured locations for staph aureus to colonise was the knee joint. He also stressed that where staph aureus colonises is often just due to the "throw of the dice" when infection enters the bloodstream regardless of the existence of any risk factors. The bacteria may well colonise an organ or joint merely because the heart pumped the blood containing the infected bacteria to that location. These were all factors that had to be considered in this case given that the applicant did not contract infection in the course of any surgical procedure or at the time of any known recent trauma.

46. Prof. McConkey, whilst recognising the importance of the Icelandic study, emphasised that the most prevalent risk factors referred to in that study had been eliminated as the cause of infection in the present case. He accepted that the condition of the applicant's right knee made it more vulnerable to infection than any other joint. However, he stated that that vulnerability had to be ascribed to a multitude factors. The only residual vulnerability in the applicant's right knee referable to the assault as of the date of infection was the likely presence of some additional scar tissue in the joint.

47. Prof. McConkey stressed that the applicant's right knee was vulnerable for a range of reasons entirely independent of his assault. He stated that the applicant had gout in that joint for at least ten years prior contracting staph aureus. Whilst he agreed with Prof. Fitzgerald that tophaceous gout was a risk factor in terms of providing a route for infection and that the applicant did not have this type of gout, he nonetheless advised that ordinary gout also rendered the knee vulnerable to colonisation. He stated that apart from causing inflammation, gout causes crystals develop in the joint and this makes it very difficult for the immune system to eradicate infection in the event of an attack.

48. Prof. McConkey relied upon the fact that prior to the assault the applicant had been out of work for several months in 1999 and had spent almost two weeks in hospital due to the condition of his right knee which his doctors ascribed to the co-existing features of gout and arthritis. He also relied upon the damage to the applicant's meniscus, which had required arthroscopic repair in November, 1999, as generating an additional vulnerability in the right knee. This was a very symptomatic vulnerable right knee regardless of the assault of 1999.

49. Prof. McConkey also relied upon the fact that at the time that infection occurred, the applicant had some early arthritis in the right knee as was evident from the X-ray findings report dated the 27th April, 2002. This was another reason for the knee potentially becoming vulnerable to colonisation. He also stated that he was not satisfied, notwithstanding the X-ray report of the 22nd June, 1999, and the report of Mr. Babu dated May, 2000 that the applicant did not have early degenerative changes in his right knee prior to the assault the subject matter of this claim. He stated that radiological reports very much depend upon the query raised for the radiologist and that if the indication for an X-ray was, for example, a potential fracture that the report would be unlikely to address any alternative issues such as the presence of degenerative changes.

50. Finally, Prof. McConkey advised that if one looked at the trauma to the applicant's right knee generated by the assault as an isolated risk factor for the colonisation of staph aureus, one had to look to other areas of the applicant's body which had been subjected to significant trauma in the years prior to his developing staph aureus and question why the staph aureus did not colonise those areas following upon infection. In particular he relied upon a very significant assault perpetrated upon the applicant in September, 2001. That assault would have caused scar tissue to develop at a number of locations in the applicant's body as would have developed in the knee as a result of the assault of November, 1999. These areas of the body were accordingly equally vulnerable to colonisation by staph aureus. If therefore one were to decide that the infection settled in the applicant's knee because of its vulnerability to infection rather than by chance one should conclude that the reason the infection favoured the knee joint was not because of the scar tissue from the assault but was by reason of the other unrelated vulnerabilities in that joint.

Conclusion

51. To conclude, having carefully assessed all of the evidence on the present application, I am not satisfied that the applicant has proved that the substantial cause of the staph aureus infection which he contracted in his right knee was the assault perpetrated upon him on the 20th November, 1999. Firstly, the applicant contracted that infection entirely independent of the assault of the 20th November, 1999. Secondly, having contracted the infection, by reason of the existence of a significant number of alternative reasons as to why the infection ultimately colonised to the right knee it cannot be stated that the applicant has established that the assault was the substantial reason why the infection ultimately colonised in his right knee. These include:-

> (i) The random chance that infected particles were deposited at the right knee joint because they were pumped there from the heart regardless of any other risk factors.
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> (ii) The fact that regardless of any risk factors, the knee joint, along with the spine and hip, is in any event the most favoured location for infection.
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> (iii)That complications such as gout, cellulitus, possible arthritis and meniscal damage followed by surgical repair rendered the joint vulnerable to infection regardless of the assault of the 20th November, 1999.
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> (iv)That the applicant's immune system, whether by reason of alcohol consumption, obesity or for some other reason simply failed to eradicate an infection that took hold entirely independent of the assault.

52. For all of the aforementioned reasons, the applicant's claim for compensation for pain and suffering arising from his staph aureus infection must fail.