SECOND DIVISION, INNER HOUSE, COURT OF SESSION

[2021] CSIH 21
A502/14

Lord Justice Clerk
Lord Menzies
Lord Pentland

OPINION OF THE COURT

delivered by LADY DORRIAN, the LORD JUSTICE CLERK

in the Reclaiming Motion

by

JENNIFER McCULLOCH and OTHERS

Pursuers

against

FORTH VALLEY HEALTH BOARD

Defenders

Pursuers: Sutherland QC, Waugh; Drummond Miller LLP
Defenders: Doherty QC, E Campbell; National Services Scotland – NHS Scotland Central Legal Office

1 April 2021

Introduction

[1] The pursuers are the widow and other relatives of Mr Neil McCulloch, who died on 7 April 2012 following a cardiac arrest. The pursuers' case proceeded on the basis of the alleged negligence of Dr Catherine Labinjoh, an employee of the defenders, for whose acts and omissions the defenders are responsible. Dr Labinjoh is (and was at the time of

Mr McCulloch's death) a consultant cardiologist at Forth Valley Royal Hospital ['FVRH'] and clinical lead for cardiology NHS Forth Valley.

[2] Quantum was largely agreed, so the proof primarily focused on liability and causation. The key areas of dispute at the proof which are relevant for the purposes of this reclaiming motion were:

(i) whether Dr Labinjoh ought to have prescribed non-steroidal anti-inflammatory drugs [NSAIDs];

(ii) whether she should have instructed that a repeat echocardiogram be carried out prior to Mr McCulloch's discharge from FVRH, which took place on 6 April 2012; and

(iii) whether her failure to prescribe those drugs or to instruct that echocardiogram was negligent.

[3] Linked to these questions was the issue of whether Dr Labinjoh fulfilled her duty to advise Mr McCulloch of any material risks associated with the treatment recommended to him in line with *Montgomery* v *Lanarkshire Health Board* 2015 SC (UKSC) 63. Whether any negligence on the part of Dr Labinjoh was causative of Mr McCulloch's death was also in dispute.

[4] The Lord Ordinary found that negligence had been established in respect of the failure to order a further echocardiogram prior to Mr McCulloch's discharge. However, the pursuers had not proven, on the balance of probabilities that but for that breach of duty Mr McCulloch's death would not have occurred. Accordingly, the pursuers' case failed on causation.

[5] Although this is a reclaiming motion, for convenience, given the cross-appeal, reference is made throughout to the "pursuers" and "defenders". The submissions of

counsel are attributed to the parties themselves. The glossary of medical terms helpfully produced by the Lord Ordinary is reproduced as an appendix to this opinion.

Background

[6] The background to the events giving rise to the death of Mr McCulloch is set out at length within the opinion of the Lord Ordinary and is not repeated in detail. The key events are as follows.

First admission

[7] Mr McCulloch was admitted to FVRH on 23 March 2012. He was acutely unwell, with severe chest pains, worse with inspiration, and worsening nausea and vomiting, against a background of weight loss and lethargy. An initial electrocardiogram ["ECG"] showed abnormalities compatible with the diagnosis of pericarditis. A CT scan reported changes compatible with an atypical pneumonia. Also noted was the presence of a pericardial effusion, fluid in the abdomen, and around the hepatic portal. The diagnosis was uncertain. A consultant anaesthetist, Dr Howie, who reviewed Mr McCulloch noted her impression as "? atypical pneumonia +/- pericarditis +/- intra-abdominal issue +/- vasculitis +/- immuno-compromised". Her plan was for assessment by the ITU team, intubation, ventilation, with additional antibiotics. She noted "echo would be useful". Examination in the ITU led to an initial working diagnosis of Adult/Acute Respiratory Distress syndrome (ARDS) due to infection. His condition continued to worsen, and Dr Howie's notes indicated "we are not 100% sure why". Mr McCulloch was reviewed in the ITU by Dr Longmate, who noted "uncertain diagnosis", and "working diagnosis: sepsis; pneumonia; could pericardial constriction be cause?". Dr Fraser Wood, the consultant physician on call reviewed the radiological examinations with the consultant radiologist. It

was felt that changes in the lung field that appeared and then resolved may have been due to pulmonary oedema. Dr Wood instructed an echocardiogram, from which the sonographer concluded that there was a moderate pericardial effusion.

[8] Consideration was given to transfer of the patient to Glasgow should a cardiocentesis become necessary. Overnight "diagnostic uncertainty" was noted by a consultant in intensive care, Dr Hawkins, who also noted a marked pulse pressure variation "in keeping with some tamponade". However in view of improvement noted on chest X ray, and the small size of the effusion the patient was not transferred to Glasgow. Mr McCulloch's condition thereafter started to improve, and by 25 March the working diagnosis was "pericarditis with chronic ill-defined ill health", with a "huge improvement" being noted. Mr McCulloch was first seen by Dr Labinjoh on 26 March 2012. She recorded that his presentation did not fit with a diagnosis of pericarditis. Her note stated:

> "This man's presentation does not fit with a diagnosis of pericarditis. He has been unwell with weight loss for months and presents with vomiting, abdo pain, fever and hypotension, pleuritic chest pain. Anaemic on admission at 97. CRP 40. His JVP [ie jugular venous pulse] was not elevated making significant pericardial constriction very unlikely.
>
> I will discuss with Dr Woods [sic] who was exploring immunocompromise, malignancy. Care to continue under general medicine. I'll review echocardiogram."

[9] A second echocardiogram on 26 March 2012 showed that the effusion had reduced in size. Mr McCulloch continued to show signs of improvement and was discharged home on 30 March 2012. The management plan was to continue with antibiotics, and to be seen by Dr Wood in four weeks' time, with a repeat echocardiogram and chest x-ray to be arranged in advance of that consultation.

Second admission

[10] On 2 April 2012, Mr McCulloch was again admitted to FVRH. Again, he presented

with pleuritic chest pain. He was pale, hypotensive with a tachycardia. His jugular pressure was not elevated. He was given IV fluids and antibiotics and admitted under care of the medical team. The presentation was noted to be similar to the previous week, and there was concern that fluid (ie the effusion) was again building up. The impression recorded in A&E was of ongoing lower respiratory tract infection with pleuritic chest pain, but medical staff wished to exclude a worsening pericardial effusion. Mr McCulloch was transferred to the acute admission unit (AAU) where he was noted to be pyrexial. The liver enzymes were raised. The impression noted was "somewhat atypical Hx; presumed recent episode of; ? viral myo pericarditis; ? other eg atypical pneumonia". A repeat echocardiogram, described as being a "focused study on assessment of pericardial effusion", showed a pericardial effusion approximately 1.5 cm in size. On 3 April all blood and urine cultures were negative. Virological tests, HIV test and legionella and mycoplasma antibodies were also negative. The treating physician noted the cardiologist was to "review images and get back to me today/tomorrow".

[11] Dr Labinjoh reviewed the echocardiogram on 3 April. Having carried out her review, she saw Mr McCulloch in the AAU, to assess whether his clinical presentation was consistent with her interpretation of the echocardiogram. After seeing Mr McCulloch she made the following note:

> *"I note echocardiogram, essentially unchanged. No convincing features of tamponade or pericardial constriction.*
>
> *On examination*
>
> *tachycardia BP ~ 80 systolic*
>
> *no palpable paradox*
>
> *no oedema*

JVP low RR = 20

- all of which go against pericardial constriction. The effusion is rather small to justify the risk of aspiration v possible diagnostic utility.

I am not certain where to go for a diagnosis from here. Happy to liaise. Please keep us informed."

[12] No further ECG or echocardiogram recordings were made. It should be noted that at the time, and on 6 April, Dr Labinjoh was not aware that Mr McCulloch had been discharged and readmitted. On 5 April a CT scan showed a persisting small pericardial effusion. The C reactive protein was recorded as raised, indicating ongoing inflammation. On 6 April, Mr McCulloch was seen by a junior doctor, Dr Fuller, who noted previous reviews and observed "we will clarify with cardiology if they want to follow patient up". The plan, subject to that clarification, was for discharge. The first pursuer was not happy with the discharge of her husband from the care of FVRH. Dr Fuller advised that the CT scan showed that the pleural effusion had resolved. The note continued:

"*Reassured improving signs. Has follow-up with Dr Wood. Discussed with cardiology – happy for Dr Wood to follow up and be informed of any issues. Needs nutrition – likely to get this at home better than here. Extensively lx. We are not adding anything to management in hospital*."

[13] The "discussion with cardiology" referred to by Dr Fuller took the form of a brief telephone call on 6 April to Dr Labinjoh who, at the time of the call, was scrubbed up and about to commence heart surgery in a different hospital. She was unable to review the patient or give advice. When asked whether she agreed with the proposed discharge, she stated that that decision should be made by the responsible consultant with whom she was happy to liaise. She was informed of the plan for follow up with Dr Wood and indicated that she saw no need for a separate appointment with cardiology to be arranged at that time.

She did not recall being informed either of any ongoing symptoms or that discharge was to take place the same day.

Third admission

[14] Mr McCulloch was discharged on 6 April 2012. The Lord Ordinary accepted as credible and reliable the first pursuer's description of her husband's condition at discharge as very unwell, with a description which included his having to lean on her to walk, struggling to climb the steps to his house, and complaining of chest pain and a severe sore throat. She heard him retching and being sick during the night. The next day 7 April he suffered a cardiac arrest at home. Despite the resuscitation efforts of staff at FVRH he could not be revived. It was a matter of agreement between the parties that Mr McCulloch died as a result of a cardiac arrest caused by cardiac tamponade related to pericarditis and pericardial effusion.

The proof

[15] The first pursuer (the wife of the deceased), Dr Fraser Wood and Dr Labinjoh were factual witnesses. Expert evidence was provided to the court by Dr Andrew Flapan, consultant cardiologist, and Dr Robin Weir, consultant physician, cardiology and general medicine, led on behalf of the pursuers, and Dr Peter Bloomfield, retired consultant cardiologist, led by the defenders. Parties agreed the evidence of Dr John Reid, a consultant radiologist, prior to Proof.

The Lord Ordinary's Decision

The legal test

[16] The Lord Ordinary noted the well-known test for negligence set out by Lord President Clyde in *Hunter* v *Hanley* 1955 SC 200. The Lord Ordinary noted that it was not

his function to decide what was the correct diagnosis of Mr McCulloch's illness at the time of either his first or second admission: that would be to stray into the realm of medical expertise. His task was to determine whether any of the acts or omissions of Dr Labinjoh arising out of her examination of Mr McCulloch on 3 April 2012 were negligent as averred, according to the *Hunter* v *Hanley* test. That involved, in a case such as this where there were competing schools of thought arising on the expert evidence, applying the test as formulated by Lord Browne-Wilkinson in *Bolitho* v *City and Hackney Health Authority* [1998] AC 232 at pages 241-243; that is, to decide whether any of the bodies of expert opinion presented to him were not reasonable and could not logically be supported. It was not simply open to him to prefer one or other body of expert evidence.

Independence of Dr Bloomfield, expert witness led by the defenders

[17] At proof, senior counsel for the pursuers submitted that the expert witness led by the defenders, Dr Bloomfield, could not be accepted as an independent expert and that no weight should be attached to his evidence. The Lord Ordinary rejected that submission, giving reasons for doing so at paras [84] and [85] of his opinion.

Failure to prescribe NSAIDs

[18] On the alleged negligent failure to prescribe NSAIDs, this was an area where the court was faced with two opposing schools of thought amongst experts in the field, to which the Lord Ordinary required to apply the *Bolitho* test. Applying that test to the evidence, he concluded that adherence to either school of thought could not be said to be unreasonable or illogical and that thus the *Bolitho* test, and by extension the *Hunter* v *Hanley* test had not been met in respect of this aspect of the case.

Repeat echocardiogram

[19] Turning to the case based on alleged negligence arising from a failure to instruct a

repeat echocardiogram prior to Mr McCulloch's discharge from hospital on 6 April, the Lord Ordinary reached a different conclusion, holding that the *Bolitho* test had been met on this aspect of the case and that Dr Bloomfield's evidence on the issue required to be rejected. This decision is the subject of the cross-appeal.

Causation

[20] On the question whether failure to instruct a third echocardiogram had been causative of death, the Lord Ordinary stated that the evidence did not allow him to hold that but for this single negligent omission the death would not, on balance of probabilities, have occurred.

The reclaiming motion

[21] Detailed written submissions were provided by both parties. We do not repeat these or attempt to summarise them. The general content of the submissions should be apparent from the discussion which follows in respect of individual grounds of appeal.

The grounds of appeal

[22] The pursuers reclaim on the grounds that the Lord Ordinary:

(i) erred in his assessment of the expert evidence relative to the prescription of NSAIDs. Had the Lord Ordinary made a finding in fact that the deceased presented with pericarditis and worsening pericardial effusion a practice of not prescribing NSAIDs could not be supported as logical or reasonable and was a failure in care;

(ii) erred in law in his application of the principles in *Montgomery* to Dr Labinjoh's decision not to prescribe NSAIDs;

(iii) erred in his approach to causation; and

(iv) erred in law in his assessment of the evidence presented by Dr Bloomfield, as to the latter's role as an independent expert.

[23] The grounds of appeal do not assert that the Lord Ordinary erred in his understanding or application of the *Bolitho* test, although that came to be the submission. They do not assert that *Kennedy* v *Cordia* 2016 SC (UKSC) 59 had any bearing on the issues at proof, yet it was also submitted that the Lord Ordinary had erred in his understanding and application of the principles derived from that case.

[24] It is important to note that, save to the extent suggested by the second part of ground one, the grounds of appeal do not assert that the Lord Ordinary erred in making any particular findings of fact; nor do they assert that he should have made alternative findings of fact, despite asserting in grounds (i) and (iv) that he erred in his assessment of the evidence. This court was not asked to make any findings of fact. In common with this approach, the submissions in support of these grounds contain a great deal of discussion of the evidence, and what it is said to have shown, and an exposition of certain principles which it is said can be drawn from a list of cases, but feature little in the way of specification of errors on the part of the Lord Ordinary. The nub of the reasoning might without unfairness be said essentially to be (i) that the Lord Ordinary erred in failing to reject the evidence of Dr Bloomfield, either on the basis of lack of independence or on application of the *Bolitho* test; (ii) that had he done so he would have had to find in the pursuers' favour on the issue of alleged negligence in failing to prescribe NSAIDs; (iii) that there was evidence, which the Lord Ordinary accepted, that NSAIDs can be used successfully to treat pericarditis; (iv) Mr McCulloch had pericarditis; and (v) had he been prescribed NSAIDs his death is likely to have been avoided. In respect of the echocardiogram, the reasoning was that had a third echocardiogram been carried out Mr McCulloch would not have been

discharged when he was; would have remained in hospital for monitoring and further treatment; and as a consequence his death could have been avoided.

The role of the appellate court

[25] The role of an appellate court examining a decision made after proof at first instance is well-understood, based on a line of authority coming through *Thomas* v *Thomas* 1947 SC (HL) 45 via *McGraddie* v *McGraddie* 2014 SC (UKSC) 12 and *Henderson* v *Foxworth Investments Ltd* 2014 SC (UKSC) 203 to *AW* v *Greater Glasgow Health Board* [2017] CSIH 58. The latter, following a detailed analysis of the authorities, concluded that they confirmed the flexible and undogmatic approach long adopted by the courts in Scotland, based firmly on the advantage enjoyed by the trial judge of having seen and heard the witnesses. Those advantages were particularly acute in relation to issues of credibility and reliability, which may be affected by demeanour and attitude, and in the determination of primary facts. In such cases, as the court noted in *S* v *S* 2015 SC 513, para 23, a demanding test is applied:

> "In an appeal which seeks to challenge findings in fact, an appellate court must have due regard to the limitations of an appeal process, with its '[narrow focus] on particular issues as opposed to viewing the case as a whole' ... When considering reversing a first instance judge's findings in fact, therefore the appellate court should confine itself to situations where it can categorise the findings as incapable of being reasonably explained or justified in terms of the dicta quoted in *Henderson* v *Foxworth Investments Ltd* (paras 63-65)."

[26] When it comes to inferences drawn from primary fact the appellate court has more freedom to act. It may reassess the inferences drawn by the trial judge from proven facts. Care must of course be taken in reversing evaluative decisions made by first instance judges, in respect of which the court will apply the ordinary standards of logic and common sense. In cases based on expert evidence an appeal court may be as well placed as the judge at first instance to assess the logic and sustainability of the approaches adopted by the expert witnesses. The court should not shrink from that task, although it ought to give appropriate

weight to the trial judge's opinion. An appeal court may interfere where the trial judge has erred on questions of law, including the application of legal principles to the facts of the case, or where the reasons given are plainly insufficient to justify the decision reached.

Dr Bloomfield as an independent witness

[27] The issue regarding the approach of Dr Bloomfield arose during his evidence, when it became apparent that there were two slightly different versions of his initial report in circulation. It transpired that when he submitted his report to the defenders' solicitors he was asked – and agreed- to exclude references to witness statements which had been provided to him and relied upon in his opinion. This had two consequences. First, that the report provided to the pursuers' agents contained an incomplete and inaccurate statement of the information relied upon by him in forming his professional expert opinion; and second, that confusion arose when he quoted a passage from one of the statements, which at first sight appeared to be a quotation from the medical records.

[28] The Lord Ordinary considered very carefully whether this matter was such as to impugn Dr Bloomfield's impartiality as an expert witness; however, having heard his oral evidence the Lord Ordinary was ultimately satisfied that it did not do so, and that the opinions expressed were entirely honestly held and impartially arrived at.

[29] In support of this ground of appeal it was submitted that in assessing whether the *Hunter* v *Hanley* test was met, the court required to consider the application of the principles found in *Kennedy* v *Cordia* and *Bolitho* relating to expert evidence. Before any question of complying with accepted practice could arise under *Hunter* v *Hanley*, the court had to be satisfied on the evidence presented to it that there was a responsible body of professional opinion supporting the practice. Otherwise it must be rejected. The principles outlined by the Supreme Court in *Kennedy* were now the starting point for the court in the assessment of

expert evidence. The *Bolitho* assessment was simply a reflection of what is expected of a court when analysing expert witness opinion evidence. The expert opinion must be the independent product of the expert uninfluenced as to form and content by the exigencies of litigation and referring to all material facts which would detract from his concluded opinion. The Lord Ordinary failed to take account of the fact that reports founded on by Dr Bloomfield had been prepared without access to the full medical notes, and failed to record other relevant aspects of the notes. Had the Lord Ordinary properly applied the legal tests in *Kennedy* and *Bolitho* he should have concluded that these factors, when combined with the deficiencies in Dr Bloomfield's expert opinion evidence on NSAIDs and the repeat echocardiogram meant that his evidence should be rejected. The Lord Ordinary was also criticised for stating that Dr Bloomfield's opinions were honestly held. The issue was not whether he was honest but whether he was independent.

[30] In our view the criticisms of the Lord Ordinary are misplaced, and conflate three different issues. The test in *Hunter* v *Hanley* is concerned with negligence. In addressing whether the three elements of that test have been satisfied, the Lord Ordinary will require to consider whether there was a usual and normal practice, whether or not it was followed, and whether the course in fact adopted was one which no professional person of ordinary skill would have taken if acting with ordinary care. In reaching a conclusion on these matters the Lord Ordinary will require to have regard to the skilled evidence which has been led on these matters. *Kennedy* v *Cordia* and *Bolitho* both relate to the way in which that evidence may be considered by the Lord Ordinary, but in quite different ways.

[31] *Kennedy* is largely concerned with the admissibility of the evidence, and the qualifications of the witness as an independent person of skill eligible to opine on the issues in hand, hence the observations made therein about independence, lack of bias, fulfilling the

duties expected of an expert and so on. The Lord Ordinary understood this, and correctly considered whether the issue which had arisen with Dr Bloomfield's report was such as to impugn the evidence which had been given. In that assessment, reached at the stage at which the evidence has been given, the Lord Ordinary should quite properly consider all the evidence which the witness has given, not just the terms of any reports which he has made during the course of the litigation. The point made by the pursuers about the nature of Dr Bloomfield's first report is a little difficult to follow. During evidence, at the point where the issue was discovered, the Lord Ordinary noted that it did not seem that the pursuers had been deprived of anything to which they should have been entitled. The relevance of the first report to the issues at proof was marginal at best. Part of the criticism seems to be that in the report Dr Bloomfield was only addressing the case which was then being made against the defenders, but as long as he did so properly we can see no basis for criticism in this. A further complaint is that he adopted his first report in giving his evidence yet at the time of writing it he had not seen all the medical records. It is clear however that when stating his opinion in court he had reviewed all the medical records. In any event, the issue of "adoption" of a report has to be looked at in the context of what the witness says in evidence, and Dr Bloomfield made clear in his evidence that he had changed his mind on one issue since his original report, on receipt of additional material.

[32] One of the issues relevant to the admissibility of an expert report as described in *Kennedy* is whether the opinion given is the independent product of the expert uninfluenced as to form or content by the exigencies of litigation. That necessarily touches on the credibility, and the honesty of the witness. The criticism that the Lord Ordinary addressed whether the opinions stated were honestly held is misplaced; it is an illustration of the confusion in the submissions between *Kennedy* and *Bolitho*. In the assessment with which

the former is primarily concerned, the honesty of the witness is an essential element. If the opinions are not honestly held, and if the court does not consider them to be unbiased, the assessment under *Bolitho* where the honesty is assumed, will not take place because the evidence will have been determined to be inadmissible as skilled testimony. Relevant to the honesty of a witness will be whether he has been open to changing his mind on receipt of additional information. Dr Bloomfield in his report of 9 December 2019 explained that on viewing additional material he had changed his opinion from that which he had previously expressed. Although submissions were made to the Lord Ordinary to the effect that this undermined Dr Bloomfield's impartiality, it was not suggested to Dr Bloomfield that it did so or that he was other than honest and independent.

[33] The submission that Dr Bloomfield had not worked as a cardiologist since 2012 is not borne out by the evidence. His CV was placed before the court and it noted that although retired from full time practice he had maintained his full licence to practice and continued some part time clinical practice within Borders General Hospital. He continued to teach medical students at Edinburgh University and to participate in postgraduate teaching examinations. The Lord Ordinary (para 4) considered him to be "eminently well-qualified" to express opinions on the matters in respect of which he gave evidence, as were Drs Flapan and Weir.

[34] Having concluded that the issues raised on behalf of the pursuers did not cast serious imputations over the evidence of Dr Bloomfield the Lord Ordinary proceeded to consider that evidence and the evidence of other expert witnesses. It is abundantly clear that in doing so he understood the implications of the *Bolitho* test and sought to apply that test. We say more about this when we deal with the substantive points in relation to prescription of NSAIDs and a repeat echocardiogram. In the meantime we need only

observe that we are quite satisfied from paras 62-66 of his opinion that the Lord Ordinary properly identified, and understood, the applicable law.

Montgomery v Lanarkshire Health Board

[35] Whilst addressing matters of law it is convenient to deal with ground of appeal 3, which asserts that the Lord Ordinary erred in his application of the test in *Montgomery* on the issue of information disclosure. The pursuers had averred that Dr Labinjoh had been under a duty to discuss with Mr McCulloch the options of pericardiocentesis and the use of NSAIDs, colchicine and aspirin to reduce the size of the pericardial effusion. Of these, only the use of NSAIDs remained a live issue in the reclaiming motion. As an aside, we should mention that the rider to that averment, namely that the obligation was to discuss the use of NSAIDs "to reduce the size of the pericardial effusion" raises other issues which we touch on in our assessment of the Lord Ordinary's approach to that issue, but for the sake of brevity it should be noted that it should not be assumed that the rider was established by the evidence.

[36] As to the application of *Montgomery*, the Lord Ordinary stated that it had:

> "effected a significant development of the law, but care must be taken not to apply it to circumstances that lie beyond the scope envisaged by the Supreme Court. It is concerned with the discussion of, and obtaining of consent to, material risks identified by the doctor in connection with a recommended course of treatment. …there is an important distinction between the doctor's role when considering treatment options and his or her role when discussing with the patient the risks of injury in the course of the recommended treatment. The question of whether or not there are risks of injury inherent in a particular course of treatment remains a matter for the professional judgement of the doctor."

[37] The Lord Ordinary indicated that he agreed with the observations made by Lord Boyd in *AH* v *Greater Glasgow Health Board* 2018 SLT 535. The argument being advanced is essentially that which was advanced to Lord Boyd in *AH* v G*reater Glasgow Health Board*:

> "[42] The pursuers argue that what is a reasonable alternative is to be defined by the patient. What the patient considered to be reasonable would emerge from the discussion that the doctor would be expected to have with the patient. The doctors on the other hand say that the range of alternatives are those that the doctor considers reasonable exercising his or her skill and expertise as a reasonably competent doctor (the *Hunter* v *Hanley*/*Bolam* test) and are available."

[38] Rejecting the pursuer's argument, Lord Boyd said:

> "[43] In my opinion the submissions for the doctors are to be preferred. If the pursuers are right the doctor may well be obliged to advise the patient of alternative treatments which he or she as a doctor would not consider as clinically suitable for the patient. Take, for example, the case of a patient with a pre-existing condition who is being treated for another illness. There is common and available treatment which is usually available to a patient with this illness. However it is dangerous for those with the pre-existing condition. That may arise where, for example, the combination of drugs used by the patient to treat the pre-existing condition with those used to treat the illness gives rise to complications imposing unacceptable risks to the patient. According to counsel for the pursuers the duty on the doctor is to advise the patient of the existence of the alternative remedy even if, in the particular case it is not considered to be a reasonable alternative by the doctors. The explanation for this approach is that the patient may wish to get a second opinion."

[39] Lord Boyd went on to explain that in his view this was not consistent with the approach in *Montgomery*. The submissions in that case had been premised on a basis that decisions about diagnosis and treatment remained within the professional skill of the doctor, but that the patient was entitled to decide whether to submit to the proposed treatment. That approach served to emphasise that the ratio of *Montgomery* was a limited, albeit important, innovation on the rule in *Bolam*/*Hunter* v *Hanley*. Lord Boyd went on to say:

> "[45] What the treating doctor cannot do is to withhold information about a reasonable alternative treatment and the risks associated with it on the basis of their own preferences. If a treatment is reasonable and available it should be discussed with the patient."

[40] In our opinion Lord Boyd's analysis is correct. *Montgomery* was about advising of the risks associated with a proposed course of action, which would of course include the risks if that course of action were not adopted. It does not follow that where a doctor concludes that a course of treatment is not a reasonable option in the circumstances of the

patient the duty under *Montgomery* nevertheless arises. The patient's right is to decide whether or not to accept a proposed course of treatment. That right can only be exercised on an informed basis, which means that the patient must in such a situation be advised of the risks involved in opting for that course of treatment, or rejecting it. If alternative treatments are options reasonably available in the circumstances the patient is entitled to be informed of the risks of these accordingly. But where the doctor has rejected a particular treatment, not by taking on him or herself a decision more properly left to the patient, but upon the basis that it is not a treatment which is indicated in the circumstances of the case, then the duty does not arise. The doctor may of course, have made an error, but if so the consequences of that error, and an assessment of whether there was negligence, would be assessed on the standard *Hunter* v *Hanley* basis, as the Lord Ordinary in the present case correctly observed (para 111):

> "Montgomery imposes an obligation on the doctor to discuss the risks associated with a recommended course of treatment and to disclose and discuss reasonable alternatives. It does not go so far as to impose upon the doctor an obligation to disclose and discuss alternatives that he or she does not, in the exercise of professional judgement, regard as reasonable. If the doctor is wrong either about the risks of the recommended course or about the reasonableness of any alternative, then he or she might be liable for any consequent loss or injury, but that would be decided by application of the *Hunter v Hanley* test."

The simple fact is that *Montgomery* has no application in the circumstances of the present case.

Application of the Bolitho test and assessment of the evidence of Dr Bloomfield

[41] The Lord Ordinary noted (para 62) that "this is a case in which the court is faced with two opposing schools of thought among experts in the field. The legal principles applicable in that situation are not in doubt…". Where, as in the present case, the court heard conflicting evidence as to whether or not the course adopted by a doctor was in accordance

with a usual and normal practice, it was necessary to heed the warning by Lord Scarman in *Maynard* v *West Midlands Regional Health Authority* [1984] 1 WLR 634 at 639 that in the realm of diagnosis and treatment negligence is not established by preferring one respectable body of professional opinion to another. That did not mean that in such circumstances a pursuer could not establish negligence: rather it meant that in his assessment of the evidence the judge required to address the test in *Bolitho,* which he quoted at length. It was not open to him simply to prefer one or other body of expert evidence. If the opinion of Dr Bloomfield that Dr Labinjoh adhered to a usual and normal practice was to be rejected, the Lord Ordinary required to be satisfied that that opinion was not reasonable and could not logically be supported.

[42] At para 6.5 of the pursuers' submissions it is stated that:

> "The Lord Ordinary rightly acknowledged that he required to subject the expert opinion evidence of Dr Bloomfield to judicial scrutiny … and provide reasons for doing so that were properly supported by evidence. He correctly understood that he not only required to consider the evidence but he had to consider the logic of the opinion evidence advanced".

The submission then proceeds to arguments suggesting that the error lay in the application of the test, not in its identification. It seems therefore that it was not being disputed that the Lord Ordinary identified the correct test. Elsewhere however, it is suggested that the fact that he had concluded that Dr Bloomfield's opinions were honestly held erroneously intruded into the Lord Ordinary's *Bolitho* assessment. For the reasons noted above, we are satisfied that this is incorrect, and that the honesty of the witness was examined only in its proper context. For the avoidance of doubt we are quite clear that the Lord Ordinary identified the correct test to be applied in the situation which faced him. We turn therefore to his application of that test.

[43] First of all, the Lord Ordinary identified what he considered to be the extent of the dispute between the experts, which was a narrow one. The Lord Ordinary noted a measure of common ground in relation to prescription of NSAIDs to treat pericarditis. The experts agreed that it was standard practice to do so, and that clinical experience showed that the patient usually got better, often quite quickly. Their use was advocated in leading text books. Although their effectiveness was not proved by any randomised control tests, their use was supported by European Society of Cardiology (ESC) Guidelines and by clinical practice. They were effective in relieving pain by reducing inflammation.

[44] There was, however, disagreement among the expert witnesses regarding prescription of NSAIDs to a patient who was not in pain. Dr Flapan regarded it as usual practice to prescribe NSAIDs even in the absence of pain, asserting that treatment of inflammation would result in reduction in size of a pericardial effusion. Dr Bloomfield did not consider that there was any benefit from NSAIDs if they were not required for pain relief; there was no evidence from clinical trials that NSAIDs altered the natural history of pericardial effusions even if they successfully treated pain and inflammation. Patients often simply got better on their own. Dr Weir accepted that there could be variations in practice in the use of NSAIDs where no pain was reported and where there were other issues suspected, such as respiratory infection.

[45] At this stage it is worth noting a number factual matters which had been established in evidence, and which thus formed the backdrop against which the Lord Ordinary made his assessment and which illustrate the context in which his reasoning must be assessed.

i. The evidence that NSAIDs were commonly used, with success, in the treatment of pericarditis requires to be seen in the context of the typical presentation and symptoms of pericarditis. A classic sign of pericarditis, probably the one most commonly seen, is chest

pain, typically sharp and pleuritic, which is alleviated by leaning forward. The condition for which NSAIDs are commonly used is therefore one characterised by complaints of chest pain. Dr Flapan relied heavily on the European Society of Cardiology (ESC) Guidelines in giving his evidence that NSAIDs had a benefit beyond pain relief. However, although the guidelines confirm NSAIDs as a standard treatment for acute pericarditis, it is less clear that they offer support for the remainder of Dr Flapan's hypothesis. Whilst the guidelines do not expressly say that NSAIDs are just used for the pain, the table reproduced at p 1221 of the Joint Appendix suggests that the purpose of prescribing NSAIDs is to treat the chest pain, or pericardial rubbing which causes the pain. In addition, the submissions of the pursuers to the Lord Ordinary and to this court referred to the literature which had been placed before the court as supporting the pursuers' case. However, even a brief examination of that literature shows that the picture is not all one way. For example in production 7/44, an extract from a text on the "Diagnosis and Management of Pericardial Disease" by Khandaher *et a*l, it is stated:

> "The 2004 ESC guidelines recommended the use of an NSAID for the treatment of idiopathic or viral acute pericarditis, with the goal of therapy being the relief of pain and the resolution of inflammation. Ibuprofen or aspirin has been most commonly used and provides prompt relief of pain in most patients, but does not alter the natural history of the disease."

A further text, Braunwald's Heart Disease (2008), in the chapter on pericardial disease, 7/5 of process, states, in respect of the use of NSAIDs:

> "Because of its excellent safety profile we prefer ibuprofen (600-800mg po three times daily) with discontinuation if pain no longer present after 2 weeks."

Braunwald also states, in relation to the ESC 2004 Guidelines, that:

> "Although these are useful, there have been virtually no randomized clinical trials devoted to the diagnosis or management of pericardial disease. Therefore it is important to keep in mind that controlled data to support the following

> recommendations for management of acute pericarditis, as well as other pericardial diseases, is limited."

In Current Diagnosis and Treatment by Michael Crawford, 4th Ed, in the Chapter on Pericardial Diseases by Massimo Imazio, it is suggested that treatment with NSAIDs is to supress the clinical manifestations ie. pain. It goes on to mention 'symptom control', recommending that the dose can be tapered when the patient is asymptomatic and markers of inflammation are normalised. Essentially the literature does not seem to support the assertion that NSAIDs have a benefit beyond pain relief.

ii. Mr McCulloch's presentation during the first admission included severe chest pain. He was not treated with NSAIDs at all during that period of hospitalisation, even when a working diagnosis of pericarditis was made on 25 March. He was treated with antibiotics and steroids.

iii. At his second admission the presentation included pleuritic chest pain. Again he was not treated with NSAIDs. On each occasion those treating him would be expected to be familiar with standard treatments for pericarditis, which is commonly treated in acute admissions departments. As Dr Labinjoh explained in her unchallenged evidence on this aspect, all clinical physicians regularly look after cardiac patients, including those with pericarditis. In general, it is not cardiologists who manage patients with pericarditis.

iv. At all stages the presentation was not typical of idiopathic acute pericarditis, which on all the evidence was identified as a self limiting disease without significant complications in the vast majority of patients. Instead of a standard presentation indicative of acute idiopathic pericarditis, Mr McCulloch presented a complex picture. The Lord Ordinary noted (para 87) that it was a recurrent theme of the medical records that Mr McCulloch presented as a complex case, whose diagnosis proved to be very challenging. He noted that

the expert witnesses were in agreement that this was not a straightforward presentation of acute pericarditis. This was a factor which figured in the Lord Ordinary's reasoning.

v. When Dr Labinjoh saw Mr McCulloch on 3 April, he was not complaining of pain. Dr Labinjoh assessed him as having been much improved from when she last saw him (she was unaware that he had been discharged and re-admitted). It was submitted to the Lord Ordinary that the first pursuer's evidence that her husband was "poorly" on 3 April should lead him to conclude that Dr Labinjoh had not been entitled to conclude that he was "much improved". The Lord Ordinary rejected that, on the basis of the medical records, including the Early Warning System (EWS) chart. This refers to a standardised observation chart used to record measurements and observations of certain clinical parameters, which are marked on a scale from 0 (well) to 4 and above (requiring hourly observation and urgent further assessment). The Lord Ordinary noted that the EWS chart recorded a complaint of mild pain only on admission on 2 April, and no pain thereafter. A nursing note at 1205 on 2 April recorded "no further chest pain" and an EWS of 1 (having been 4 on his admission on 1 April). The EWS on 3 April was still 1, with a note of "no pain". The patient objected to a decision to transfer him to another ward as he was feeling much better. When Dr Labinjoh saw him, he was up and about the ward, and had just been for a shower. On direct questioning by her he denied being in any pain. The Lord Ordinary thus accepted that when seen by Dr Labinjoh on 3 April Mr McCulloch was not complaining of any pain and that his condition seemed much improved. The Lord Ordinary also found that, given the history just narrated, even if Dr Labinjoh had asked Mr McCulloch about pain over a longer period of time it is unlikely that she would have received an answer which would have caused her to prescribe NSAIDs. It is clear that the Lord Ordinary accepted that on 3 April

Mr McCulloch was not complaining of pain and Dr Labinjoh was entitled to consider his condition "much improved".

vi. Another issue (related to i above) is whether there was any evidence that NSAIDs were effective not only in treating pain but in reducing the size of an effusion. Dr Flapan gave evidence that clinical experience suggested that NSAIDs were effective in reducing an effusion because they reduced the inflammation that was causing it. Dr Weir however seemed surprised by the suggestion that NSAIDs might be effective in reducing the size of an effusion. When asked if the treatment of pericarditis with NSAIDs would have an effect on the effusion he answered as follows:

> "I don't necessarily think that anti-inflammatories would reduce the size of the effusion that's there."

It was not something which he had thought of prior to being questioned about it. He did not necessarily think that anti-inflammatories would reduce the size of the effusion, but he supposed it was theoretically possible. Dr Bloomfield's clinical experience did not suggest that NSAIDs would assist in resolving a pericardial effusion. Asked whether prescription of NSAIDs would prevent an effusion, he answered in the negative, noting that he did not think there was evidence to support that. Trials on this issue had never been done. As noted above, according to Braunwald, the use of ibuprofen does not alter the natural history of the disease. The Lord Ordinary noted as part of his reasoning that there is no study-based evidence in medical literature that NSAIDs prevent the development or progression of pericardial effusions, or that the effect of reduction of inflammation is reduction of the size of an effusion.

vii. The final part of the context which is relevant also relates to the evidence of Dr Flapan. He had referred in his evidence to certain studies which he principally relied

upon for his opinion on the failure to prescribe colchicine (which had been another ground of fault), but they were also relevant to his evidence on NSAIDs. The Lord Ordinary accepted that his evidence in these respects could be criticised on two grounds. First, the sample sizes of the trial were small and the confidence intervals correspondingly wide, so that no reliable conclusions could be drawn from them. In his evidence Dr Flapan had persisted in relying on these in the face of the statistical difficulties, and the Lord Ordinary clearly thought his evidence on this was not impressive, something we can understand having read the cross-examination in particular. Secondly, Dr Flapan sought to use the results of the trials to support propositions that had not been their object: for example to assess the value of using colchicine to treat an initial attack of acute pericarditis, or to demonstrate that NSAIDs were effective in resolving pericardial effusions. The sample sizes in the studies were small, they related to recurrent pericarditis not to first presentation thereof, and patients with herpatic symptoms, such as Mr McCulloch would have been excluded from them. In so far as Dr Flapan sought to derive conclusions from the figures regarding the effectiveness of colchicine in resolving acute pericarditis, or regarding the effectiveness of prescription of NSAIDs, the Lord Ordinary did not consider that these conclusions had a solid statistical foundation in any of the test results, and he could not attach weight to them. In this respect it is worth noting comments in *AW* v *Greater Glasgow Health Board* (para 69) regarding statistical evidence that

> "Weight can be given to it, according to how compelling the statistics appear to be, but a court should normally look for other corroborating evidence to justify the statistical inference. Furthermore, the basis for the statistics must in all cases be subjected to critical examination; if it appears to be based on defective epidemiological studies, it should be disregarded."

[46] This then is the background against which the Lord Ordinary came to assess the issue regarding NSAIDs, which was a very narrow one: namely whether Dr Labinjoh's

decision on 3 April not to prescribe NSAIDs was negligent. Dr Labinjoh's position was quite clear. The patient appeared to be much improved, and significantly, was not complaining of pain. Dr Flapan's evidence was that NSAIDs were not prescribed only for pain, but this view was expressed in the context of an opinion, not shared by the other experts, that his clinical experience suggested that NSAIDs served to interfere with the inflammatory process and thereby reduce an effusion and change the course of the illness. Dr Weir said that he personally would have prescribed NSAIDs but he accepted that usually the reason they might be given is a complaint of pain; that pain is usually caused by the two layers of the pericardium rubbing together so NSAIDs are given for their anti-inflammatory effect, which usually settles the chest pain very quickly. Dr Weir agreed that if no pain was being reported by the patient, and if there were other suspected issues, for example a suspected respiratory infection, there would be a variation in practice whether to prescribe NSAIDs. He stated that the clinical assessment of the doctor will dictate the approach to management. If, for example, the working diagnosis was that this was not pericarditis but part of a multi-system disorder, or respiratory ailment, or other condition, several of which can cause pericardial effusion, then the doctor could not be criticised for not giving NSAIDs.
Dr Bloomfield said that in practice NSAIDs were given because they relieve pain. It was reasonable not to prescribe NSAIDs in the absence of pain: they were not indicated and could have caused gastrointestinal side effects, in a patient who already had gastrointestinal symptoms. Mr McCulloch had a long history of recurrent vomiting, weight loss and gastro-intestinal problems. Such problems are a known side effect of NSAIDs, and although the effects can be reduced by drugs such as omeprazole, they would not be eliminated. Given the mantra "do no harm" there was no pressing need to give him NSAIDs in the absence of pain. Whilst in his own practice when he prescribed NSAIDs for patients with acute

pericarditis they often got better, equally there were many instances of undiagnosed pericarditis which resolved without any form of treatment at all.

[47] In our view, having regard to all this evidence, the Lord Ordinary was entitled to reach the conclusion that he could not say that Dr Bloomfield's evidence about Dr Labinjoh's decision not to prescribe NSAIDs was unreasonable or illogical.

Cross appeal: repeat echocardiogram

Repeat echocardiogram

[48] It is noticeable that despite reference to the first pursuer's evidence about the condition of the deceased at the time of discharge, no case has been presented that the decision of the doctor who discharged him was erroneous or negligent; the allegation is that Dr Labinjoh was at fault in not instructing a further echocardiogram prior to discharge. There is a degree of confusion over what is meant by this assertion. Is it meant to suggest that she should have instructed the echocardiogram on 3 April? Or that she should have instructed one to be carried out when informed on 6 April that there was a plan for his discharge? At para 42 the Lord Ordinary notes the case as being that she should have instructed a repeat echocardiogram "prior to discharge". However, he also notes at para 32, that "No criticism is now directed by the pursuers against Dr Labinjoh in relation to anything said or done by her on 6 April", recording elsewhere that "it is the acts or omissions of Dr Labinjoh on 3 April which form the basis of the pursuers' case against the defenders". In his assessment of negligence he states that he accepted that "in failing on 3 April to make provision for this" Dr Labinjoh was negligent. The pursuers maintain that he was entitled to make this finding. We therefore proceed on the basis that this reflects the

way in which the case was presented and that the focus should be on the actions of Dr Labinjoh on 3 April.

[49] The Lord Ordinary noted that this was another area where there was divergence among the experts. He concluded that Dr Bloomfield's evidence on this point was incapable of being logically supported, and that the *Bolitho* test was met. His reasons for so concluding were (i) that Dr Bloomfield, in emphasising that Dr Labinjoh was not in charge of Mr McCulloch's treatment, failed to take account of the fact that the consultants in the AAU were relying upon the cardiology specialists for directions in relation to cardiology investigations, at a time when pericarditis was still in the frame as a possible diagnosis, yet her note gave no guidance as to what measures, if any, were required, from the point of view of cardiology, prior to discharge; (ii) that this "created the risk which eventuated, that Mr McCulloch's discharge had to be determined by a relatively junior doctor at a time when Dr Labinjoh was occupied with other matters and unable to provide direct assistance"; and (iii) Dr Bloomfield's opinion proceeded upon a factual assumption that at the time of Dr Labinjoh's visit Mr McCulloch was well; this was not consistent with the third echocardiogram results. The Lord Ordinary considered that where the trend in relation to pericardial effusion appeared to be moving in the wrong direction, Dr Bloomfield's view that it was unnecessary to take any action to confirm prior to discharge that that trend had reversed lacked logical support. The existing plan for review could not be relied upon, as it had been formulated before the first discharge and second admission, when the echocardiogram showed a positive trend. Further, there was no reason <u>not</u> to carry out a repeat echocardiogram.

[50] In relation to the Lord Ordinary's comment that although Dr Labinjoh was not in charge of Mr McCulloch's care, the AAU consultants were relying on her for directions in

relation to cardiological investigations we consider that the Lord Ordinary has placed erroneous and undue emphasis on the latter and insufficient emphasis on the former, having regard to the clear evidence on this issue, and the evidence which he himself accepted. In the course of this second admission Dr Labinjoh had had no input into the care and treatment of Mr McCulloch, who was under the care of consultants in the AAU. The request on 3 April was not for a review of the patient but for a review of the third echocardiogram, the treating physician having considered that the interpretation of a cardiologist was to be preferred over his own. Dr Labinjoh went to see Mr McCulloch not to conduct a general review of his care but to ascertain whether his presentation accorded with her interpretation of the echocardiogram. As far as Dr Labinjoh was concerned, as at 3 April Mr McCulloch was, and continued to be, an inpatient under the care of AAU physicians who could be relied upon to determine any appropriate investigations or treatment which might be required should his clinical condition demand it, or change in any way. Both the first and second echocardiograms had been instructed by such physicians, not by Dr Labinjoh or any other cardiologist. There was unchallenged evidence that pericarditis is not routinely managed by cardiologists. The Lord Ordinary's conclusions as to the reliance on Dr Labinjoh by those treating Mr McCulloch appear therefore to be significantly over-stated, having regard to the evidence. It is difficult to square the Lord Ordinary's reasoning in this section of his opinion with the findings he made at para 90, that

> "Dr Labinjoh's visit to Mr McCulloch is not properly characterised as a review which included a need to take a full history. As Dr Labinjoh emphasised, she had responded to a request to review the results of the echocardiogram taken on 2 April. The purpose of her visit was not to carry out a review but to confirm that her interpretation of the echocardiogram was consistent with his clinical presentation."

[51] At the time Dr Labinjoh saw Mr McCulloch on 3 April no decision regarding his discharge had been made. There was a working diagnosis of lower respiratory tract

infection associated with pericardial effusion. It was reasonable for her to understand that the infection was being treated, especially since she was unaware that he had already been discharged and readmitted, which had not been mentioned to her when she was asked to review the echocardiogram.

[52] It is difficult to understand what is meant by the Lord Ordinary's reason (ii). There is absolutely no doubt that Dr Labinjoh did not have charge of Mr McCulloch's care. As the Lord Ordinary noted, no case was being presented against Dr Labinjoh in respect of her input on 6 April. The decision whether to discharge him would not have been a decision for her, but for those in charge of his care, who would be expected to make that decision based on all the known facts at the time the decision was made. This would no doubt include Dr Labinjoh's interpretation of the third echocardiogram, but it would also include the discharging physician's assessment of Mr McCulloch's clinical condition at the time the decision was made, which seems to have been discussed during the day and confirmed at 1840hrs on the 6 April. It is difficult to see how the alleged negligence of Dr Labinjoh on 3 April could have resulted in the circumstance referred to in the Lord Ordinary's second reason.

[53] In any event, it would not be reasonable, on the evidence to expect a decision on discharge to be made solely on the interpretation of the third echocardiogram. Dr Weir explained that the most important part of any assessment is the clinical assessment, which "almost trumps everything" and that you would not make a management decision based purely on an echocardiogram. There seems to be no basis in the evidence to conclude that any action or inaction on the part of Dr Labinjoh resulted in a decision on discharge being left inappropriately in the hands of a junior doctor.

[54] On 6 April Dr Labinjoh was told that the plan for discharge which had previously been formulated, involving subsequent review by Dr Wood, with a repeat echocardiogram around 19 April, remained in place. Given that she was not aware of his discharge/readmission the Lord Ordinary's implication that the plan required to be reviewed is not knowledge which can be attributed to her. Moreover, this again does not seem to be linked to her alleged negligence on 3 April.

[55] It is also difficult to identify the basis of the Lord Ordinary's reasoning that Dr Bloomfield proceeded on the basis that at the time of Dr Labinjoh's visit, Mr McCulloch "was well", and that this was not borne out by the third echocardiogram, even with the application of hindsight. As has been noted above, the echocardiogram is only one aspect of assessment, which depends significantly on the clinical assessment also. In his findings as to Mr McCulloch's presentation on 3 April the Lord Ordinary seems to have accepted the evidence of Dr Labinjoh of Mr McCulloch being much improved from when she had seen him previously, and making no complaint of chest pain. There was evidence that his EWS was 1, having been 4 on 1 April, and he is recorded in the notes as indicating he was feeling much better. There seems to be nothing in the evidence of Dr Bloomfield to suggest that he proceeded on an assessment of Mr McCulloch's condition on 3 April that was anything other than that which the Lord Ordinary himself seems to have accepted in evidence. The only issue was in relation to the interpretation of the echocardiogram, the differences in which Dr Labinjoh, supported by Dr Bloomfield, considered to be of little significance.

[56] In the case of the echocardiogram in question there was a clear difference of opinion between the evidence of Drs Flapan and Weir on the one hand, and Drs Bloomfield and Labinjoh on the other. The former considered the second and third echocardiograms to show a downward trend, the latter, whilst recognising that there were changes, did not

think that the trend was concerning. Dr Weir said that the picture between the first and second echo was a bit better; between the second and third a bit worse. He would himself, like Dr Flapan, have wished to obtain a further echo to ensure that the effusion was not increasing in size, and felt that the majority of cardiologists would have felt the same. There was some room for variation in practice and in any event a period of weeks could pass before the repeat echocardiogram, if the patient was thought to be clinically stable. However, the experts on each side of this debate, Drs Flapan and Weir on the one hand, and Dr Bloomfield on the other, gave clear and defensible reasons for their opinions. Looking at the factors we have just outlined in respect of this aspect of the case, it is very difficult to see a sound basis for the Lord Ordinary's view that Dr Bloomfield's justification for his opinions failed to meet the *Bolitho* Test.

[57] As to the observation by the Lord Ordinary that "there was no reason not to" repeat the echocardiogram, we fail to see this as a relevant factor. No doubt in any given medical situation there may be "no reason not to" pursue a particular course of action: that is not the test to be applied however. The test is whether the treatment is indicated in the circumstances and whether failing to take it is a step which would not be taken by any competent doctor in the exercise of ordinary care.

Causation

[58] The Lord Ordinary did not address the issue of causation in respect of NSAIDs, other than on the issue of material contribution, which is not now the way the matter is presented for the pursuers. The argument is that had NSAIDs been prescribed, this would have stopped the leakage from blood vessels, thus limiting the effusion. The averment was that had Mr McCulloch been given NSAIDs he would have been monitored for response in

hospital and any deterioration would have been picked up before it progressed to a fatal situation. This line of argument is heavily dependent on the evidence of Dr Flapan, discussed above, that the effects, and purposes, of prescribing NSAIDs was to reduce or limit the effusion. We have noted the extent to which that evidence was not in accordance with other evidence in the case. Dr Flapan stated that had the deceased been treated with NSAIDs the echocardiogram would have been repeated within 48 hours, the effusion would have been smaller, and the early signs of tamponade would have been resolved. Unless one assumes Dr Flapan to be correct about the effect of NSAIDs the assertion that the effusion would have been smaller on an echocardiogram carried out 48 hours later is nothing but speculation. Again, it should be noted that there was no evidence of tamponade, not even early signs thereof on 3 April. There was no evidence of tamponade on the third echo or on 3 April when Dr Labinjoh examined the deceased. Dr Reid did not see evidence of tamponade on a CT scan dated 5th April. There is nothing to suggest that there was evidence of tamponade on 6 April. What Dr Flapan was actually meaning, when his evidence is examined carefully, was simply that there is a risk of tamponade developing from an effusion which increases in size. The Lord Ordinary was correct therefore in summarising the evidence of Dr Flapan as being that NSAIDs would have reduced the inflammation of the pericardium, leading to a smaller effusion and a resolution of Mr McCulloch's condition, and in not concluding that there were any signs of tamponade.

[59] It is trite to state that causation in cases of medical negligence remains a matter of proof, to the standard of a balance of probabilities. The pursuer must show that the negligence was the cause of the loss averred. Where one is dealing, as the Lord Ordinary noted, with a hypothetical scenario, when it cannot be known what an investigation would have disclosed, or what treatment would have followed, the issue must be assessed on the

general basis of likelihood, having regard to the whole evidence on the matter. The pursuer must show on the evidence that had the predicated action been taken it is more likely than not that the harm complained of would have been avoided. On this question the evidence must be looked at in the round, and although the pursuer need not prove in detail every link in the possible chain of events, it is nevertheless necessary to lead evidence which can satisfy the court that on balance, the loss would have been avoided had the predicated step been followed. The Lord Ordinary understood this and approached assessment of the evidence on causation on this basis.

[60] In respect of NSAIDs, the issue of causation does not arise for discussion, given the conclusions we have reached, in agreement with the conclusions of the Lord Ordinary. However, on this aspect of the case, we can see no basis upon which the pursuers could have succeeded. The list of issues affecting this aspect of the case, summarised at para [46] above are mostly also relevant to the issue under consideration here, most significantly the evidence which suggests that the primary reason for prescribing NSAIDs is pain relief, rather than for any anticipated effect on the progression of the condition.

[61] In respect of the echocardiogram, the pursuers' case was that had a further echocardiogram been carried out, Mr McCulloch would have required to remain in hospital and discussion of options for treatment and further serial echocardiograms to assess the size of the effusion and its effect on the heart would have followed. In these circumstances he would not have died. The Lord Ordinary, correctly in our view, considered that to a large extent consideration of this issue involved speculation. He considered that there was no evidence to support a finding that it was more likely than not that an echocardiogram would have been performed on or before Friday 6 April. Working back from the death from cardiac tamponade on 7 April, he was willing to infer, with hindsight, that Mr McCulloch

must have been very ill on 6 April. He was also willing to infer that a repeat echocardiogram carried out on 6 April would probably have disclosed "a marked deterioration" in Mr McCulloch's condition, leading to a need for urgent treatment to be put in place. Beyond that, he considered that any findings would be entirely speculative. There was no basis in the evidence for an assessment of whether, at whatever time it was commenced, and whatever it may have consisted of, such treatment would have been likely to be successful in preventing Mr McCulloch's death. The Lord Ordinary repeated that this was not a straightforward case of pericarditis, but a complex situation. We note that treatment in cases of severe effusion may include pericardiocentesis, about which the Lord Ordinary heard evidence. This is a procedure which in itself carries significant risks, including death, and which may even have required transfer to another hospital. Dr Weir would only carry out pericardiocentesis in a near life-threatening emergency, and Dr Flapan accepted that in the case of the deceased it would carry significant risk. We agree with the Lord Ordinary that *esto* negligence on this aspect of the case were established the case would still fail on causation. The result is that the reclaiming motion must fail, and the cross appeal for the defenders must succeed.

APPENDIX

Glossary of terms

Pericardial sac: The heart is a muscular pump which sits within the pericardial sac. The outer surface of the heart is the visceral pericardium and the sac is the parietal pericardium. There is normally a small amount of fluid within the pericardial sac to allow free movement of the heart during contraction.

Pericardial effusion: Fluid can accumulate in the pericardial sac, due to inflammation, infection or secondary deposits of malignant cancerous cells. If the two layers of pericardium become separated by the accumulating fluid, this is a pericardial effusion. Pericardial effusions which accumulate gradually may become very large before compromising cardiac function, in contrast to rapidly accumulating effusions which may begin to cause cardiac compromise after only 300-400 ml.

Pericarditis: In most cases, inflammation of the pericardial sac is called pericarditis. As the pericardium becomes inflamed, more fluid is produced. In health the pericardium is elastic, but an inflamed pericardium loses its elasticity very quickly and cannot stretch to accommodate an effusion. Viral infections are one of the main causes of the inflammation which produces the effusion. Other conditions that can cause pericarditis and effusions include cancer; injury to the sac or heart from a medical procedure; heart attack; severe kidney failure; autoimmune disease; and bacterial infections. In many cases no cause can be found for the pericarditis and it is referred to as idiopathic pericarditis.

Pericardial tamponade: Tamponade occurs when a large pericardial effusion compresses the heart and does not allow adequate filling. Restriction in filling increases the pressure in the two main veins draining into the right side of the heart: the superior and inferior venae

cavae. As filling is reduced, blood pressure falls, and there is normally a compensatory increase in heart rate to help maintain cardiac output. Clinical features of tamponade are elevation of the jugular venous pressure, marked pulsus paradoxus, low blood pressure, and a compensatory increase in heart rate. Echocardiographic features of tamponade are imaging a large pericardial effusion, collapse of the right atrium, compression and collapse of the right ventricle, fixed distension of the inferior vena cava with a failure of this to collapse with respiration. Since the right atrium is thin walled and at low pressure, it is usually the first cardiac chamber to show signs of collapse when intra-pericardial pressure rises.

There are degrees of tamponade. Tamponade may be mild causing a reduction in cardiac output that may be compensated for by an increase in heart rate. Cardiac tamponade may be more severe causing a reduction in cardiac output such that despite an increase in heart rate there is inadequate cardiac output to perfuse vital organs such as kidney and brain. Cardiac tamponade may be complete such that there is no cardiac output.

Jugular venous pulse: The jugular venous pulse is a physical sign that is observed in the neck. In health the blood returns to the heart from the head through the jugular vein. Normally it is just visible at the clavicle. If there is an increase in the pressures in the heart (particularly the right atrium), this increase in pressure is transmitted to the jugular vein and the column of blood becomes visible as the vein distends and fills with blood.

Pericardial constriction: In constrictive pericarditis, the heart cannot expand or relax because it is held in a constricted tight pericardium with no elasticity. Pericardial constriction usually develops over a longer time course in comparison with cardiac tamponade resulting from a pericardial effusion. The two conditions both lead to a reduction in cardiac output but there are differences between them.

Pericardiocentesis: Also known as pericardial aspiration, this is a process whereby pericardial fluid is removed by aspiration through a needle. It is normally done under ultrasound guidance. This enables the size and location of the pericardial effusion to be precisely identified and the needle inserted along a safe track directly into the effusion. The risks are laceration of the liver if an inferior approach is used and laceration of one of the coronary arteries or puncture of the right ventricle if the needle is advanced too close to the heart itself.

Pulsus paradoxus: This term refers to the variation in strength of the pulse as measured in the blood pressure with the cycles of respiration. There is normally a small rise and fall in the strength of the pulse when breathing in or out. The term is a misnomer as it is not paradoxical but an accentuation of the normal respiratory variation in the strength of the pulse. A large pericardial effusion results in pulsus paradoxus as the chambers of the heart are constricted and cannot vary their volume in response to the changes of filling associated with respiration.