Mr Ian Breeze

A Report by the Health and Disability Commissioner

(Case 03HDC18925)



Parties involved

Mr Ian Breeze Provider/General surgeon

Dr A Surgical registrar

Dr B Intensivist

Mr C
Dr D
General surgeon
General practitioner
Dr E
Surgical registrar
Dr F
Anaesthetist
Dr G
Anaesthetist
House surgeon

Ms I Nurse

Dr J Consultant Physician
Mrs K Consumer/Complainant

Mr K Complainant
Tauranga Hospital, Bay of Plenty District Health Board Public hospital

Complaint

On 12 December 2003 the Commissioner received a complaint from Mr K and Mrs K about the care and treatment Mrs K received from Mr Breeze in February and March 2000. An investigation was commenced on 18 December 2003, as part of a Commissioner initiated inquiry into the quality of care provided by Mr Breeze to a number of patients on whom he performed surgery. The issue the Commissioner investigated was:

• Whether Mr Breeze provided services of an appropriate standard to Mrs K, on whom he performed cholecystectomy surgery at Tauranga Hospital in February 2000, and who developed post-operative complications.

Information reviewed

- Letter of complaint from Mr and Mrs K, dated 10 December 2003
- Record of telephone interview with Mr K on 19 March 2004
- Transcript of interview with Mrs K on 22 March 2004
- Response to the complaint from Mr Breeze, dated 9 February 2004
- Further information from Mr Breeze, dated 11 March 2004
- Information from Mr C, dated 28 April 2004
- Transcript of interview with Mr C on 23 June 2004
- Information from Dr B, dated 10 March 2004 and 27 April 2004
- Transcript of interview with Dr B on 23 June 2004

- Information from Dr A, dated 19 May 2004 and 8 July 2004
- Information from Dr E, surgical registrar, dated 7 April 2003
- Information from Dr F, anaesthetist, dated 15 March 2004
- Information from Dr G, anaesthetist, dated 15 March 2004
- Information from Dr H, house surgeon, dated 11 March 2004
- Information from Ms I, nurse, dated 19 March 2004
- Information from Dr D, dated 17 February 2004
- Mrs K's general practitioner records
- Mrs K's clinical records from Tauranga Hospital

Independent expert advice was obtained from Mr Mischel Neill, colorectal and general surgeon.

Information gathered during investigation

Diagnosis of cholecystitis

Mrs K suffered from a troublesome gallbladder for a number of years. On 31 May 1999 she consulted Dr D, her general practitioner, with "upper gut upset". Dr D prescribed ranitidine, but noted that if her symptoms did not settle, she would require a gastroscopy.

Mrs K represented to Dr D on 4 June 1999 with "bile in urine" and nausea. Dr D referred Mrs K for an ultrasound because of her recurrent upper gastro-intestinal upset, and a urine test and liver function test. The liver function test indicated that Mrs K had mildly abnormal liver function.

The ultrasound was taken on 4 June 1999. The ultrasound report concluded:

"Obstructed biliary system due to an obstruction in the distal CBD [common bile duct]. This is probably proximal to the level of the pancreatic duct/ampulla since there is no pancreatic duct dilatation. The cause of obstruction is not seen and the differential includes a small neoplasm in the region of the pancreatic head or a gallstone. The gallbladder cannot be visualised and therefore is most likely assumed to be contracted and may be full of stones since there is a large amount of artefact due to bowel in the right upper quadrant. CT scan is recommended for further assessment or ERCP [endoscopic retrograde cholangio-pancreatography]."

Dr D referred Mrs K to Dr J, consultant physician and gastroenterologist, for an ERCP. The ERCP was performed on 21 June 1999 by Dr J. The report concluded that Mrs K

¹ Mr Breeze advised me that an ERCP involves the oro-gastric passage of a high-tech flexible instrument into the duodenum, enabling the injection of X-ray contrast into the bile duct to obtain an X-ray image.

had a mildly dilated extra and intrahepatic biliary system, the cause of which was uncertain, and queried whether she had an obstructed cystic duct from a cystic duct stone obstruction or stone in the neck of the gall bladder. Dr J noted in his report:

"Papillary stenosis or papillary dyskinesia could account for this presentation. However, with failure to delineate the gallbladder with contrast injection it is possible that there may be a problem here and therefore I have referred the patient on to the surgical service. Laparoscopy may need to be considered."

Dr J referred Mrs K to the surgical department at Tauranga Hospital, advising that she had gallstones and would need a laparoscopic cholecystectomy.

Appointment with Mr Breeze

Mrs K was seen by Mr Breeze on 27 July 1999. Mr Breeze noted that she had been referred because of complex biliary disease, suggested by:

- an ultrasound, which showed an extrahepatic biliary dilatation, and common bile duct measuring 12.6mm. The gallbladder was not visualised because of bowel gas;
- an ERCP, which showed a mildly dilated and elongated common bile duct and common hepatic duct with no contrast entering the gall bladder and no other abnormalities; and
- abnormal liver function tests.

Mr Breeze recalled that Dr J was uncertain of the cause of the biliary dilatation, but considered that the failure of the ERCP dye to enter the gallbladder may have been due to a stone impacted in the cystic duct or the neck of the gallbladder.

Mr Breeze found that Mrs K had experienced approximately ten attacks of biliary colic precipitated by fatty food over the preceding 30 months. He noted that she also suffered from ischaemic heart disease. On examination, she had no masses, organomegaly or hernias. Mr Breeze considered that Mrs K's deranged liver function test may have been due to either Mirizzi's syndrome (bile duct compression by the gallbladder) or transient choledocholithiasis (stone in the bile duct). He arranged a further ultrasound before contemplating cholecystectomy.

Pre-operative investigations and treatment – GP and surgical outpatient appointments On 28 July Mrs K consulted Dr D as she was experiencing reflux. Dr D noted that Mrs K was to have an ultrasound the following week.

The ultrasound was performed on 6 September 1999 (there is no explanation why the ultrasound was not performed earlier). The report noted:

"Clinical: Previous ultrasound demonstrated intra- and extrahepatic duct dilatation with no definite cause demonstrated. ERCP had not demonstrated definite cause. There is intra- and extrahepatic duct dilatation. No focal liver lesion is seen although

the liver has an increased echotexture throughout in keeping with fatty infiltration. The gall bladder is not identified. The common bile duct is seen to its distal aspect but no stones are seen within it. Distally in the region of the head of the pancreas it is not well visualised. There is no pancreatic duct dilatation. The kidneys, spleen and abdominal aorta are unremarkable.

Comment: Intra- and extrahepatic duct dilatation with no cause for this demonstrated."

Mr Breeze considered that the ultrasound revealed no new findings. In particular, it reaffirmed intra and extrahepatic bile duct dilatation, with no demonstrated cause.

Mrs K consulted Dr D about her abdominal pain again on 26 October. Dr D noted that she was uncomfortable in her abdomen, and the pressure was relieved by placing pressure on the lower right ribcage. Dr D noted that Mrs K had an appointment to see Mr Breeze on 16 November. He prescribed Buscopan for the pain, and advised her to take two tablets every six hours for abdominal spasm. He noted that she was already taking Nurofen.

On 16 November Mrs K was seen in the Surgical Outpatient Department by the registrar to Mr Breeze. The Registrar recorded his notes of the consultation in a letter to Dr D. He noted:

"This 70 year old lady has been seen by Mr Breeze in the clinic in the past. She has been seen with repeated attacks of right upper quadrant pain and also abnormal liver function tests with a raised bilirubin of around 40 which has normalised during the next few weeks.

She had an ultrasound scan which showed extrahepatic biliary dilatation with CBD measuring around 12.6mm. She went on to have an ERCP which confirmed once again dilatation of the biliary system but no clear cut obstruction was seen in the common bile duct. However there is one area in the lower common bile duct suggesting a filling defect.

The gallbladder was not visualised either on the ultrasound scan or on the ERCP clearly suggesting that there is a possibility of a stone in the cystic duct causing a complete blockage.

Now the liver function tests have more or less normalised but she is continuing to have repeated attacks of pain in the right upper quadrant area.

Given the history is going from the middle of the year, the possibility of neoplasia is lower down on the diagnostic possibilities however this possibility does exist.

I discussed her with Mr Breeze and we decided that we should perhaps do a laparoscopic cholecystectomy first and do an intra-operative cholangiogram at the same time. This will solve the problem of the gallbladder initially and also we can

have a look at the common bile duct much more clearly on the intra-operative cholangiogram. We can decide on any further investigations based on what we find at the time.

She has been explained about this but she is very keen to get on with the operation as soon as possible. In view of her continuing ongoing symptoms I have put her on the urgent waiting list. She has got some ischaemic heart disease. She says that she gets angina very occasionally ..."

The registrar gave Mrs K a sheet to explain the nature of gallstones and laparoscopic cholecystectomy and intra-operative cholangiogram. The information sheet recorded that there was a 0.05% chance of gut injury requiring re-operation. Mrs K was placed on the urgent waiting list because of her ongoing symptoms.

On 20 January Mrs K had a pre-operative check in Mr Breeze's outpatient clinic. It was noted that Mrs K was moderately obese (95kg); suffered from hypertension and gastro-oesophageal reflux disease, both of which were treated; and had angina, which was stable.

Mrs K consulted Dr D on 8 February 2000. Dr D noted that Mrs K had a pre-operative check three weeks earlier, but had not yet received a date for surgery.

Operation

Mrs K was admitted to Tauranga Hospital for a laparoscopic cholecystecomy and intraoperative cholangiogram on 22 February. The operation was performed by Mr Breeze on 22 February 2000, assisted by Dr A, registrar. The anaesthetist was Dr F. The operation note recorded:

"Indication: Complex history of classical biliary colic accompanied by abnormal liver function tests and U/S [ultrasound] showing a dilated common bile duct 12.6mms in diameter and the gallbladder was not visualised. ERCP has been carried out twice with sphincterotomy once and this revealed a large dilated bile duct with no stones and no filling of the gallbladder. Because of the possibility of further stones in the gallbladder with Mirrizzi's syndrome causing transient obstructive jaundice, laparoscopic cholecystectomy and operative cholangiography recommended. At present liver function tests are normal.

Procedure: ... A gallbladder mass was confirmed involving the duodenum that was adherent to the fundus of the gallbladder. The duodenum was dissected from the gallbladder using blunt and hook diathermy dissection. The anatomy could then be defined. It revealed a very large sigmoid shaped common bile duct which initially masqueraded as the gallbladder. The gallbladder was extremely small measuring about 2cms in length and the cystic duct and artery were dissected out. Operative cholangiography [X-ray of the bile duct outlined with X-ray opaque contrast solution] via the cystic duct confirmed a 12mms diameter, dilated common bile duct with no filling defects and free flow in to the duodenum once 10mls of

contrast had been injection. The hepatic radicals outlined normally. Poor views were obtained of the common hepatic duct. The cystic duct was doubly clipped proximally and the cystic artery trebly clipped and divided between the distal two clips. The gallbladder was then separated from the gallbladder bed [and removed]. Haemostasis was secured by diathermizing small vessels on the bile duct. The abdomen was lavaged and suctioned and the umbilical post site closed with 0 Dexon to the linea alba with subcuticular Monocril."

In another hand-written note of the operation, Dr Breeze recorded, "lap chole op cholongio. Very difficult op. Small inflamed gb [gallbladder]. Huge CBD [common bile duct]. Duodenum dissected off gb. Redivac. Post op. Routine but [indecipherable]." In his response to the complaint, Mr Breeze noted:

"[Mrs K's] operation was technically very difficult, as documented at the time, because of the very pathological state of not only her gallbladder but also her bile duct. The very disordered anatomy was correctly identified, and cholecystectomy was carried out with due care in a conventional manner. Operative cholangiography was also undertaken. One of the rationales for undertaking cholangiography is to detect any iatrogenic lesion at the earliest possible stage. At the conclusion of surgery, there was no evidence of a duodenal perforation, either from direct inspection, or operative cholangiography."

The anatomic pathology for the gallbladder specimen, received on 23 February 2000 and reported on 25 February 2000, noted that the specimen showed a chronically inflamed and fibrosed gallbladder wall, with no evidence of malignancy. The diagnosis was chronic cholecystitis.

Dr A recalled questioning Mr Breeze during the operation whether they should convert to an open procedure. Mr Breeze did not agree with Dr A's suggestion.

Post-operative deterioration

The progress notes record that at 5.40pm on 22 February, Mrs K's observations were stable and there was no wound ooze. She required intravenous morphine for her pain. At 9.15pm it was noted that she had difficulty breathing and was distressed. The house surgeon was asked to review Mrs K for pain relief and her morphine prescription was changed. Mr K visited Mrs K that evening and recalled that she was distressed and in a lot of pain. He also recalled that the nurses had difficulty registering and stabilising her blood pressure.

On 23 February Mrs K's redivac drain lost suction (after 500mls had drained). It was replaced at 6.30am.

Mr Breeze saw Mrs K at 7.45am during a ward round, accompanied by house surgeon Dr H. The progress notes record that Mr Breeze was happy with the result of the operation, and the plan was for nil by mouth, and a blood test. Dr H advised that no concerns were expressed or identified with Mrs K's condition at the time. In his response

to the complaint, Mr Breeze advised that when he reviewed Mrs K at 7.45am on 23 February, he was:

"[M]ildly concerned about her progress. Her redivac drainage had been copious but this is not uncommon in patients who have had the abdominal cavity lavaged, the drainage fluid consisting of lavage fluid not retrieved by suction. I recommended Mrs K be kept nil by mouth until further notice, and that her bloods be checked."

Mr K visited his wife at mid-morning. He recalled that there were screens around her bed and "nursing activity was high". As no one was available to speak to him, he left and returned at "about lunchtime".

At 12pm Mrs K was reviewed by the house surgeon on request from the nurses. The nurses asked for Mrs K to be seen because of continuing drainage from the redivac (since the operation it was noted that 1550mls had drained in 24 hours). Her temperature at this time was 37 degrees, blood pressure 120/60, and pulse 90. It was noted that she had a soft abdomen. The house surgeon noted "Impt? Intra abdominal bleeding post lap chole", and noted that she would discuss Mrs K with the registrar and Mr Breeze.

Between approximately 12-12.30pm Dr E, registrar, was paged by Dr A. Dr A had been contacted by the house surgeon in response to concerns about Mrs K's condition. Dr A was in the operating theatre and was unavailable to assess Mrs K, and requested that Dr E review her. Dr E assessed Mrs K immediately following the phone call from Dr A. Dr E recorded Mrs K's history of laparoscopic cholecystectomy, and noted that since the operation Mrs K had suffered from considerable abdominal pain. Dr E recalled that the symptom that was concerning Mrs K the most was increasing shortness of breath and "feeling tight" in her chest. On examination, Dr E recorded that Mrs K was visibly short of breath, with an elevated respiratory rate of 30/minute. Her pulse was 90 beats per minute, her blood pressure 130/80 and oxygen saturation 94% on 4 litres. She noted that Mrs K was not shocked, had warm hands, cool feet, and no cyanosis. Dr E recorded "small bowel sounds? 'sloshings' with respirations [suggestive of fluid around the bowel]. Not normal rumbles". She also noted that Mrs K had a tense abdomen that was very difficult to feel through, and her redivac drain contained a dark oily liquid. Dr E advised me that her impression was that Mrs K was very unwell, and whilst not shocked, her urine rate was declining, her blood pressure was unstable, and her increasing respiratory rate and hypoxia raised the possibility of acute respiratory distress syndrome. She considered that the underlying cause for Mrs K's condition was a small bowel perforation or bile leak in light of her abdominal signs and dark oily redivac drainage.

Blood cultures were taken, and she contacted Mr Breeze. Dr E distinctly recalled her telephone conversation with Mr Breeze, including describing the redivac fluid as "dark oily fluid that looks like balsamic vinaigrette". Mr Breeze instructed Dr E to book theatre for 5pm. She also noted that Mrs K needed pre-operative input from the Intensive Care Unit/High Dependency Unit because of her respiratory compromise. At the time Dr E was on the phone to Mr Breeze, Dr A arrived on the ward from theatre. She conveyed her assessment to Dr A.

When Mr K returned to the ward at lunchtime, he was advised that Mrs K required further surgery. He could not recall if he was told why further surgery was necessary, other than being given an indication that something may have gone wrong with the original surgery. Although he was aware that Mrs K was going to be placed in ICU following the operation, he assumed it was a precaution because she had two operations within 24 hours. He was not informed that she had developed major sepsis or that her condition was critical.

At 2.30pm Mrs K's condition was discussed with the haematology department and Mr Breeze. Mr Breeze recalled that because of continuing drainage, right upper quadrant pain, and toxic changes on her blood tests, he was concerned about gut perforation. Mr Breeze recommended an urgent abdominal scan, triple antibiotic treatment, and close monitoring with registrar review. It appears that the scan was not performed.

At 3.30pm a nurse wrote in the progress notes that Mrs K had been unwell all day, and "? Septic shock ... ? bile ? bowel leak". It was noted that Mrs K was very unstable.

Dr G, anaesthetist, advised me that he was contacted between 3 and 3.30pm on 23 February by surgical house staff, and asked to provide anaesthesia for Mrs K's laparotomy. He recalled that he was advised of her post-operative deterioration, sepsis, and multiple organ impairment. Dr G conducted a pre-operative assessment of Mrs K and noted that she was critically ill with intra-abdominal sepsis and multiple organ dysfunction syndrome. Specifically, he noted her obesity, hypertension (treated), stable angina, reflux, and a recent uneventful anaesthetic. He noted that she had post-operative intra-abdominal sepsis, was febrile, had an abnormal white blood cell count with left shift/toxic changes, and that her redivac had drained 1500mls in less than 24 hours. He noted her respiratory failure with tachypnoea, low oxygen saturations since her surgery, and that she was in septic shock with unstable blood pressure and severe peripheral shutdown, was drowsy, and had post-operative haemoconcentration confirming hypovolaemia. Dr G assessed Mrs K as ASA status IV-VE. "IV" refers to a patient with an incapacitating disease that is a constant threat to life, "V" refers to a moribund patient not expected to survive 24 hours with or without operation, and "E" refers to emergency.

There is a PACU record form regarding the operation, on which the anaesthetist, Dr G, noted "please note I was first contacted about this patient at approx 3-3.30pm. I was available but the surgeon was unavailable until after 5pm." The note is signed and dated. Dr G advised me that he made this note in retrospect from a medico-legal perspective, in light of the strong possibility of a poor outcome in Mrs K's case.

Further surgery on Mrs K

Mrs K was taken to the operating theatre at approximately 5pm on 23 February for laparotomy and oversew of perforated duodenum. Mr Breeze was the surgeon, assisted by Dr A. Dr G provided anaesthesia for the operation. Dr G advised me that Mrs K's clinical status on arrival in theatre meant that she required resuscitation in conjunction with anaesthesia.

There is no typed operation note for the operation, only a handwritten note, which is difficult to read. Mr Breeze advised that laparotomy revealed a 5mm perforation of the anterior wall of the first part of the duodenum. He stated, "I closed this with 3-0 Maxon sutures, I then thoroughly lavaged and suctioned her abdomen with six litres of warm saline and then closed her abdomen." A redivac drain was inserted under the liver to drain close to the duodenum.

Mr Breeze advised that there are a number of "possible mechanisms whereby the duodenal perforation developed", including:

- A small occult cholecysto-duodenal fistula (connecting passage) at the site of adhesion
 of gallbladder fundus to duodenum. "Separation of these two structures by dissection
 would uncover a duodenal defect. Such a fistula may have developed since the ERCP
 21 June 1999, or may have predated this, and not been detected."
- An instrumental iatrogenic duodenal perforation. Mr Breeze advised me that the bowel is most vulnerable to perforation during port insertion, or perforation may have occurred during a difficult phase of the operation when the duodenum was being dissected from the gallbladder. Mr Breeze advised that he attempted to minimise the risk of perforation during port insertion in Mrs K's case by "exercising what is accepted to be the safest technique of port insertion the Hassan cannula inserted using open method and secondary ports inserted under direct vision".
- Mrs K was on aspirin, and may have suffered a perforation of an asprin induced duodenal ulcer post-operatively.

Transfer to the Intensive Care Unit

Mrs K was transferred to ICU on 23 February 2000 following the operation. The transfer summary form for ICU noted that Mrs K was a "very ill patient" who was to be admitted because of "post-operative rupture duodenum, post choly. Abdo. Sepsis". Mrs K was ventilated.

Mr K recalled that while on his way to visit his wife in ICU after the operation, he "bumped into Mr Breeze coming down the corridor". He stated that Mr Breeze informed him that they had drained off septic fluid during the surgery. Mr K advised that it was the intensive care staff who communicated to him that his wife's condition was critical and she was deteriorating. Mr Breeze did not provide him with an explanation and overview of the situation.

Dr B, an anaesthetist and intensive care specialist, was involved in Mrs K's care and treatment when she was in the ICU. He advised me that at that time the ICU was a specialist unit, with no junior staff. The unit is "closed", which means that irrespective of who the original care team was, while in ICU the patient becomes the responsibility of the team of specialists running the ICU, who are all anaesthetists/intensivists. The specialists in the intensive care team meet regularly every morning to discuss ICU cases, to obtain multiple opinions. Although the ICU specialists assume responsibility for

patients in ICU, they work very closely with the original physician or surgeon in charge of the patient.

Mr Breeze reviewed Mrs K at 8am on 24 February. He recorded in the progress notes that despite the secure closure of duodenal perforation and thorough lavage on 23 February, she was unwell and deteriorating. He recorded, "in my opinion this is due to established bacterial peritonitis despite above measures. There is no benefit in return to OT [operating theatre]. Suggest Imepenin and supportive Rx [treatment]. Prognosis poor." Mr Breeze advised:

"She was afebrile, and had an acceptable urine output of approximately 50mls per hour. Her pulse and systolic blood pressure were each 90-100. Her blood tests showed her white cell count had improved dramatically, indicating improvement of her infection. Overall, I considered she was as well as could be expected, but as she was suffering the effects of bacterial peritonitis, I requested that she be started on the most potent antibiotic, Imepenin."

Mr Breeze also advised that blood tests taken on the morning of 24 February indicated that Mrs K's serum creatinine² levels had improved, which was not consistent with worsening infection, and meant that Mrs K's condition was improving. He did not think that she required further surgery.

Dr B reviewed Mrs K with Mr Breeze, and did not agree with Mr Breeze's assessment decision not to re-operate. He thought Mrs K should be taken to theatre for an urgent relaparotomy. He advised that Mrs K's condition was deteriorating despite extremely high levels of care, and she was in septic shock with progressive multiple organ failure. Her condition was evidenced by her low blood pressure "with very poor peripheral perfusion despite inotropic support", her requirement for 95% oxygen and high PEEP to maintain adequate oxygenation, her renal failure and a rising creatinine, leucopenia and falling platelets and haemoglobin, and falling albumin levels. Dr B advised me that he discussed the possible causes of Mrs K's deterioration with Mr Breeze, and what he considered to be the most likely scenario of residual intra-operative infection – that Mrs K's duodenal closure was unsuccessful, and that she was continuing to leak fluid into her abdomen. Mr Breeze opined that Mrs K had already received the necessary surgical intervention and suggested broadening the antibiotic therapy. Of Dr B's suggestion, Mr Breeze advised me, "I was surprised this would be so as the closure had been secure, at the time of operation. Moreover, her overall condition was improving."

Dr B advised me that he had spent 15 years working in Africa, where life-threatening abdominal sepsis is much more common than in New Zealand. Through his experience, he found that in the cases of major intra-abdominal sepsis, "... patients might require

² Mr Breeze advised me that serum creatinine is a direct measure of kidney function, and as such indirectly measures the vitality of the circulatory system.

relaparotomy on at least a daily basis for several days to clear the many possible sites of infection."

At 9.30am on 24 February Dr B made the following entry in the clinical notes: "I am not entirely in agreement with the foregoing opinion that relaparotomy is not indicated. I am therefore exercising my right to seek a second surgical opinion."

Dr B contacted Mr C, senior general surgeon, who left his outpatient clinic to review Mrs K. Mr C's impression of Mrs K on review was that she was rapidly moving into toxic shock. Dr C noted that Mrs K's white cell count was "coming down to dangerous levels", and that the redivac drain was draining "quite copiously and the nature of the drainage was rather foul smelling". Dr C agreed with Dr B's assessment that Mrs K required urgent re-laparotomy. Dr C communicated his assessment and recommendation to Mr Breeze, and it was agreed that Dr C would re-operate on Mrs K.

Dr C recorded in the clinical notes, "asked to see by Intensivists. Redi drain still lively and looks like gastric [?] ... deteriorating... I would recommend further lavage, inspection of duodenum and drainage. Mr Breeze informed. Will arrange."

The next entry in the progress notes records that Mrs K's condition remained critical, with no signs of improvement. Mr K advised that on the day of the third operation, the man in charge of ICU took him into a side room, sat him down, and provided him with information about his wife's condition.

Further surgery

At 12pm on 24 February Mrs K was taken back to the operating theatre for relaparotomy. The surgeon was Mr C, assistant surgeon Dr A, and an anaesthetist. Dr E (surgical registrar) was also present, according to the typed operation note. The operation note recorded:

"Indications: Asked to see with Mr Breeze's concord, in ICU as patient starting to get more toxic. Diaphragm was particularly high.

Operation: LAPAROTOMY, LAVAGE, SUCTIONING OF ABDOMINAL CAVITY AND DRAINAGE

Procedure: When we got in it was quite apparent that already there was a 500 to 600 mls collection in the subphrenic space. On the right side it was starting to loculate with fibrinous adhesions. This was broken down. This fluid, which was still murky looking, was suctioned. There was a smaller amount down in the pouch of Douglas and each left paracolic gutter. The duodenal closure and patch was sound and the gallbladder bed nicely settled. It was quite apparent how stuck this enormous gallbladder had been with the duodenum taking part in these adhesions. Three long Belfield drains were then fashioned. These are corrugated drains with a Penrose drain and multiple holes cut. The first drain comes out through the right iliac fossa. It passes up the right paracolic gutter and drains the subphrenic space. The second

through the left iliac fossa passes up the left paracolic gutter and drains the left subphrenic space. The third drain, coming up through the midline, making sure to push the bladder down, goes straight down in to the pouch of Douglas making sure that small bowel is not wrapped around it. This is to drain the pouch of Douglas. The abdomen was then closed with looped Nylon to the linea alba. Three 2/0 Nylons to subcutaneous fat and skin to loosely appose the dead space and staples to rest of skin.

Post op Instructions: Continue as before please. These drains will be lively, draining well into Gamgee. While it is possible to nurse the patient right through with Gamgee if it is desired to apply drainage bags when the patient is warm by all means do so if it will help nursing."

Dr C subsequently advised:

"Bearing in mind that this lady had sustained a small perforation of her duodenum at the time of the laparoscopic cholecystectomy, which was subsequently closed by means of an open operation done by Mr Breeze, the first thing I examined was, of course, the duodenum where the closure had been carried out.

This was sound. There were copious amounts of fluid within the peritoneal cavity and in particular in the sub-phrenic space that is above the liver where there was an estimated 600-700mls of fluid, that was quite consistent with it being contaminated by gastric content, such as occurs with a perforation of the duodenum ... it was quite apparent that while the abdominal cavity had been washed out with fluid, perhaps quite adequately, unfortunately this wash-out did not include the sub-phrenic space and instead a Redivac drain had been left in the sub-hepatic area."

Dr C further advised that as soon as Mrs K's fluid was drained, she took a turn for the better. He stated, "she would not have come right without intervention."

Mr Breeze made the following comment in his response to the complaint:

"I question the utility of the third operation, and consider [Mr C's] decision to undertake it was debatable, but readily accept that such decisions are easy to criticise with the benefit of hindsight. [Dr A], the registrar assisting at this operation, and a neutral observer, opined to me privately the following day, that he did not consider this operation beneficial."

Dr A advised me that he did not recall the conversation with Mr Breeze, although he thought it unlikely he made that comment. Dr A advised me that at the third operation with Dr C he recalled that the duodenal repair was intact, but there was "dirty" fluid in the abdomen. He advised that in his opinion the third operation was necessary, and he does not support Mr Breeze's comment.

Return to ICU

Mrs K was returned to ICU from the operating theatre at 1.45pm.

An X-ray report for 24 February 2000 states:

"Chest series: 24 February 2000

INDICATION: perforated duodenum. Laparotomy 23.2.2000, repeat 24.2.2000. Right subphrenic drain.

FINDINGS: In this series, chest appearances have progressively worsened with increasing size of right subphrenic pleural fluid collection and increasing left pleural effusion. The right sided collection now measures up to three litres, the left probably two to two and a half litres. Consolidation in both lung bases is not excluded."

It is unclear at what time on 24 February the X-ray was taken. It is unclear from the statement in the "indication" whether the X-ray was performed after the third operation (ie the operation on 24 February), or whether the radiologist reported the wrong dates for the laparotomy and the repeat laparatomy, and it was performed before the operation on 24 February.

At 10.30pm it was noted in her progress notes that Mrs K was relatively stable, but remained critically ill.

On 25 February it was noted that she had serous ooze from her drains and the site where her redivac drain was, although she was more settled. The intensivist noted during his review at 12pm that Mrs K was slowly improving.

On 27 February it was noted that her drain site looked purulent, and a swab was taken. She was unstable between 3 and 11pm, becoming febrile with her temperature peaking at 38.3 degrees. Mrs K had stabilised again by the morning of 28 February, although in the evening it was noted that her redivac site was red and inflamed, with purulent ooze.

On 29 February there was a slight improvement in her condition. The redivac drain site was still red and oozing, and her abdominal wound was red and inflamed. The abdominal wound was discussed with Mr Breeze, after which it was cleaned and redressed.

At 10.20am on 1 March Mrs K was assessed by the intensivist, who noted that her condition was unchanged, and she remained stable on the ventilator, with a temperature of 38.1 degrees. The redivac site was redressed, and it was noted that the previous swab grew candida albicans. A new swab was taken, as the site remained very red and inflamed, with pus oozing. Mrs K's abdominal wound was also red and oozing.

On 1 March Mr Breeze ordered a chest X-ray, which showed a collapse/consolidation at the right base and left base, and significant volume loss in both lungs.

On 2 March it was noted at 7am that Mrs K's condition was unstable overnight due to haemodynamic status, and that her blood pressure was unstable, and consistently high. A CT scan on Mrs K's abdomen was taken on 2 March to assess whether there was a further intra-abdominal collection. The scan showed a moderate sized right pleural

effusion and small left pleural effusion and minimal fluid surrounding the posterior and superior aspects of the spleen and liver, but no drainable intra-abdominal collection.

On 3 March Mrs K was seen by Mr Breeze. He noted that she was generally improving, and gave directions regarding her staples. Mr Breeze opened her lower abdominal wound and redivac insertion site, and packed them both. Mrs K also had an ICU review on 3 March. Moderately infected areas in the surgical wound on her abdomen were noted, as was a small abscess at her right flank drain site. A chest X-ray showed: "collapse/consolidation of the right lower lobe, with elevation of the right hemidiaphragm and focal consolidation medially on the right. There is also minor consolidation in the left lower zome medially. Elsewhere the lungs are clear. The tip of the CV line is projected over the distal SVC and the tracheotomy tube is positioned with its tip above the carina."

On 4 March it was noted that Mrs K's surgical wounds were less red, and she was improving. A chest X-ray showed residual consolidation in the right lower lobe medially with some minor clearing.

On 5 March it was noted that Mrs K was much more alert, metabolically stable, and had gradual improvement in lung function.

On 6 March Mrs K was reviewed by the intensivist. He noted that she was alert and communicating, and that her abdominal drains were out but her wounds were purulent and required surgical inspection. A surgical registrar reviewed the wounds later in the afternoon. He squeezed purulent drainage from the right side wound and redressed it, inserting a saline wick to ensure the wound stayed open and drained. He noted that all other wounds and incisions were clean looking. A chest X-ray showed that she had poorly inflated lungs with marked elevation of the right hemidiaphragm as compared with the left side. It was noted that there was "no frank consolidation and no large pleural effusion".

Transfer to the surgical ward

Mrs K was transferred to the surgical ward at 5pm on 8 March, and discharged from Tauranga Hospital on 17 March.

Ongoing care – wound infection

On 23 March Mrs K consulted Dr D about her wound. Dr D recorded that her wound was "mucky" on the right side, and that a swab had been taken by the district nurses, who were doing daily dressing changes. He recorded that a blood test taken on 22 March had shown that her platelets were normal and haemoglobin okay. Dr D prescribed Ciproxin and flucloxacillin. The skin swab of her left abdominal wall was unremarkable.

Mrs K consulted Dr D again on 29 March. The wound was improving and she continued to have daily dressing changes from the district nurses. Dr D prescribed a further course of Ciproxin.

On 12 April the district nurses took a swab of Mrs K abdominal wound, which cultured a heavy growth of Corynebacterium striatum. Dr D discussed the swab with the laboratory on 17 April and recorded that it was "[probably] just a coloniser, as wound getting better".

Mrs K had an outpatient appointment with Dr A on 18 April 2000. It was noted that her wounds were healing well apart from a small area in the midline laparotomy wound, and one of the drain sites on the right side of her abdomen was discharging pus. He noted that there was no evidence of abscess collection or cellulitis. Dr A advised Dr D in a letter dated 18 April that the best thing to do was to continue dressing the wounds. He advised Dr D that he had not arranged to see her again, but she should be re-referred if her wounds continued to be a problem.

On 28 April Mrs K consulted Dr D. He recorded in his notes, "wounds quite a lot better with antibiotic so continue".

On 9 May the district nurse's contacted Dr D and requested a further referral for dressings. A referral was faxed that day.

A further wound swab was taken by the district nurses on 25 May, which cultured Methicillin Resistant Staphylococcus Aureus (MRSA). Mrs K was reviewed by Dr D on 30 May. He noted that the laboratory had recommended "combotherapy" for the MRSA grown in her wound. He prescribed rifampicin and Ciproxin. On 2 June Ciproxin was replaced with Fucidin because of an allergy.

On 18 June Mrs K's abdominal wound broke down. On 19 June the district nurses took a wound swab, which was unremarkable. On 20 June Mrs K consulted Dr D, who redressed the wound "with great sterile care".

A further swab was taken by the district nurses on 26 June, which was also unremarkable. In particular, no MRSA was isolated.

Expressions of concern

During an appointment with Dr D on 3 November 2000 Mrs K advised that she "wonders about the information given to her when sick and feels that it could have been far more informative".

Mrs K advised me that nobody (from the surgical team) sat her down and explained to her what had happened and the nature of her condition. Mrs K recalled that it was her husband who told her what had happened, and she also had discussions with the staff in the ICU Department.

Mr K advised me that at the time, a senior member of the hospital staff encouraged Mr and Mrs K to make enquiries or a complaint about what had happened. Mr K advised me that he and his wife chose not to make a complaint at that time because of Mrs K's fragile state – she was not up to facing a complaints process. The reason for bringing the

complaint to my attention in December 2003 was because of escalating concerns about public safety.

Comment from Mr Breeze

Mr Breeze made the following comment in his response to the complaint:

"In conclusion, [Mrs K] presented a difficult surgical problem. The severity of her symptoms justified surgery, and she consented to this, fully aware of the potential risks, including bowel perforation. Although her surgery was carried [out] using optimal technique, a perforation developed. This became evident the following day, and was successfully repaired thence. [Mrs K] was subjected to a further laparotomy the subsequent day, at the discretion of my colleagues [Mr C and Dr B]. Following this her recovery was prolonged, but was ultimately a good recovery. The perception, expressed in the letter from [Mr K], that the third operation was life-saving, is not correct."

Comment from Mr C Dr C advised me:

"Perforation of the duodenum during laparoscopic cholecystectomy should and must be very rare. Nevertheless this is the very situation where it can be understood how it happened. Once it was recognised that it had happened, however, it was correct for Mr Breeze to go back, by means of a laparotomy, and close the duodenum. From that point on, however, I do not consider that the redivac drainage was adequate in a situation like this."

Dr C advised that his training occurred prior to the modern advent of antibiotics, when intra-abdominal collections were treated by aggressive draining of the fluid. He noted that the modern tendency is to insert a drain and rely on antibiotics to absorb any other fluid. However, the fluid is not always absorbed by the modern technique, and it is important that drainage techniques are also properly applied. Dr C stated:

"Clearly, the need for my intervention was because of inadequate drainage of the peritoneal cavity. Drainage in a situation like this must have, in my opinion, open drains that include the sub-phrenic area on both sides, as well as the sub-hepatic area and maybe the recto-vesicle pouch, by means of yet a further drain, coming out low in the linea alba of the abdomen ...

If Redivacs are to be relied on, together with of course modern antibiotics, there should at least be one Redivac above the liver in the sub-phrenic space, as well as below, and possibly in the right paracolic gutter as well.

[Mrs K] did not have a faeculent peritonitis, but she had a highly infected sub-phrenic collection. Once this was drained, her toxicity lessened over several days and it was pleasing to see the white cell count coming back to normal within the first 24 hours."

Independent advice to Commissioner

The following expert advice was obtained from Mr Mischel Neill, colorectal and general Surgeon.

"Background

[Mrs K] was referred to Tauranga Hospital by [Dr J] after attacks of biliary colic and investigations by ERCP for a dilated common bile duct and raised liver function tests. She was seen by Mr Breeze on 27 July 1999 in Surgical Outpatients. He noted multiple attacks of biliary colic over the last 30 months associated with raised liver function tests and dilated common bile duct. She was also noted to have had ischaemic heart disease. He sent her for an ultrasound of her abdomen, which was carried out on 6 September 1999 at Tauranga Hospital, showing a dilated common bile duct with no obvious cause. No stones were seen and the gallbladder was not visualised. She was then seen on 16 November 1999 by the registrar who discussed the ultrasound findings with Mr Breeze, and then placed on the urgent waiting list for laparoscopic cholecystectomy and intra-operative cholangingram. It was felt that this would better visualise the cause of the common bile duct dilation. On 22 February 2000 [Mrs K] underwent a laparoscopic cholecystectomy and intra-operative cholangiogram. The gallbladder was found to be involved in a mass. The fundus of the gallbladder was adherent to the duodenum and there was a very large common bile duct. The duodenum was dissected off the fundus of the gallbladder by hook diathermy and blunt dissection. A small gallbladder was identified and structures were identified. The cystic duct was cannulated and an operative cholangiogram showed dilated bile ducts, but no stones and there was free flow of dye into the The cystic duct and cystic arteries were ligated. The abdomen was washed out with saline and a Redi-vac inserted. There was no record of any free pus present during the dissection.

She was returned to [the ward] at 1740 hours and at 2115 hours was recorded as having pain and difficulty in breathing. Her oxygen saturations were stable at 91-92% on 2 litres of oxygen and repeated infusions of intravenous Morphine settled her. Overnight she was noted to have drained 500ml of fluid from the abdomen into the Redi-vac. She was seen at 7.45am on 23 February 2000 by Mr Breeze who reportedly was happy with the result. Her pulse was steady at 80 per minute, blood pressure of 140/70, and a temperature of 36.5. There was a good urinary output and he ordered blood tests. There was continuing drainage from the Redi-vac and the house surgeon was asked to see her at 12 o'clock where her impression was 'intra-abdominal bleeding' was occurring. However, the blood levels of haemoglobin did not support this, but showed a mildly raised white count with a raised neutrophil count of 9.2 thousand with a moderate left shift. The house surgeon discussed with the surgical registrar, who confirmed that he would discuss it with Mr Breeze. A chest x-ray was ordered and she was placed on half hourly blood pressure and oxygen saturation levels. Further bloods were carried out at 1430 hours which recorded a

worsening left shift and toxic changes. This was discussed with Mr Breeze who felt that probably she had had a duodenal perforation, and that a CT should be ordered. She was started on triple antibiotics and for the registrar to review the patient. At 1530 hours she was seen by the registrar and diagnosed as having septic shock. The Redi-vac drainage had increased by 700 ml from 0800 hours that day and a chest xray was reported as showing atelectasis in the right lower base and a raised diaphragm. Theatre was ordered for 1700 hours. At the time of assessment by the anaesthetist he described the patient as having intra-abdominal sepsis, febrile and abnormal white count with left shift and toxic changes. She showed signs of respiratory failure with tachypnoea and low oxygen saturations. There was septic shock with unstable blood pressure and peripheral shutdown. The pre-operative haemo-concentration confirmed hypovolaemia. He considered her a very serious risk for anaesthesia. Anaesthetic commenced around 5.30pm. She was commenced on Dopamine and Ephedrine to maintain a reasonable blood pressure and peripheral flow. At laparotomy, by Mr Breeze, a 5mm perforation of the wall of the duodenum in the first part was found. This was closed with 3/-0 Maxon sutures. The abdomen was thoroughly lavaged with 6 litres of warm saline and the wound closed. The Redivac drain was inserted into the right upper quadrant. She was then transferred to ICU for further management.

She was reviewed by the intensivist [Dr B] who recorded the patient's condition remained critical and there were no signs of improvement. The blood pressure sat around 90 systolic with a pulse of 100. Peripheral perfusion was poor. She required 90% oxygen to maintain the saturation of 96%. Her albumin had dropped to 20 g/l. Her creatinine was rising suggesting renal failure. Her haemoglobin had dropped to 96 g/l from 120 g/l the day before (this may represent better hydration and some blood loss during the procedure), white count was 6.7 with a moderate left shift. Mr Breeze was asked to see her and he wrote that her prognosis was poor and that conservative management was indicated with continuing antibiotic cover.

[Dr B] was unhappy with this decision as he felt that re-laparotomy was indicated and called in [Mr C] for a second opinion. [Mr C] felt that most parameters were deteriorating and that further lavage was indicated.

At laparotomy on 24 February 2000 [Dr C] found 500-600 ml of fluid in the subphrenic space. On the right side it was starting to loculate with fibrous adhesions. These were broken down. There was a small collection in the pouch of Douglas and each paracolic gutter. The duodenal closure was intact and the gallbladder bed was settling down nicely. Three Bellfield drains were inserted on through the right iliac fossa, the second through the left iliac fossa and up to the left paracolic gutter, the third drain drained the pouch of Douglas. Post-operatively she was returned to Intensive Care and on 25 February 2000 it was reported that the patient was improving slowly. Over the ensuring days she required a tracheostomy and her lungs slowly improved over the following two weeks from quite intensive consolidation from the day of surgery. A CT reported on 2 March 2000 that there were no

abdominal collections, but there was pleural effusions both in the right and left sides. [Mrs K] slowly recovered from her surgery and was returned to the ward on 8 March 2000. She was eventually discharged home on 17 March 2000 after a very stormy period in Intensive Care.

Complaint

The issue that the Commissioner is investigating is:

Whether Mr Breeze provided services of an appropriate standard to [Mrs K] on whom he performed a cholecystectomy surgery at Tauranga Hospital in February 2000, and who developed post-operative complications.

Supporting information

Please refer to the attached sheet Supporting Information 9 June 2004, page 2.

Expert Advice Required

The expert advice required was to provide the Commissioner with my professional opinion [whether] Mr Ian Breeze provide[d] services to [Mrs K] with reasonable care and skill in accordance with professional standards.

Operation on 22 February 2000

Whether it was appropriate to proceed with laparoscopic surgery in this case.

There were no contraindications from the notes. At the time of operation her liver function tests were normal and with the co-morbidities that this lady had I believe laparoscopic cholecystectomy was the procedure of choice. Laparoscopy revealed a severely inflamed scarred gallbladder with adherent duodenum, but with careful dissection the duodenum was freed from the gallbladder and once this occurred the remainder of the procedure was straightforward.

Whether the operation was performed with reasonable care and skill in accordance with professional standards.

The procedure was uneventful and clearly skilfully carried out, which included cannulation of the cystic duct and an operative cholangingram being performed. It was clearly a very difficult operation, which appeared to go well.

Any other matters

The perforation of the duodenum could have been either a tear while dissecting it off the gallbladder or a diathermy burn from diatherming the area of the duodenum or thirdly possibly a small fistula between the duodenum and the gallbladder, which was not noticed at the time of surgery. There was no obvious pus or acute inflammation encountered and so a Redi-vac drain was appropriate for drainage of the gallbladder bed.

Post-operative care and operation on 23 February 2000

Whether there was a delay in Mr Breeze's identification in response to [Mrs K's] post-operative deterioration.

- (a) At 0745 hours on 23 February when Mr Breeze saw the patient he reported he was happy with the result. The patient's pulse and blood pressure were normal as was her temperature. She was having some difficulty with breathing, required 2 litres of oxygen, and small doses of pain relief in the form of Morphine. The only abnormal finding at that time was a significant volume of fluid in the Redi-vac drain. This can arise from fluid collection within the abdomen from lavage, bleeding, bile leak, or serous ooze from the raw gallbladder bed. At that stage there was no real indication of deterioration. Aspiration of lavage fluid laparoscopically is always difficult as fluid can be trapped between loops of bowel or in the paracolic gutters or pelvis. This will then be aspirated out via Redi-vac over the 24 hours of so.
- (b) [Mrs K] was seen by the house officer, and a relieving surgical registrar on several occasions during the morning and afternoon of 23 February. Mr Breeze was kept informed of the deterioration and ideally should have seen [her]. However, this depends on what Mr Breeze's other commitments were during the day. Certainly the continuing large volume of aspirate through the Redi-vac was of concern, as was the white count with a left shift and toxic changes. Mr Breeze when told of this recommended a CT scan, and commencement of triple antibiotics. I believe this was appropriate at the time. The CT scan would have certainly given an answer to the problem, but did not appear to have been carried out.
- (c) The appropriateness of delaying surgery until Mr Breeze was available at 5pm. The signs of deterioration were seen in the early afternoon. These were mainly low oxygen saturations, and the house officer recorded atelectasis in the right base, which would account for that. The signs of a left shift and moderate toxic changes were reported around 2.30 in the afternoon and she was taken to theatre at 5.00pm. There was not an unreasonable delay in that time sequence, and so I do not think that immediate surgery was necessary. I am unaware of why Mr Breeze was unable to attend until 5.00pm and what his commitments were that day.

Whether the operation was performed with reasonable care and skill in accordance with professional standards.

The duodenum was recognised as the source of concern, and this was very adequately dealt with by interrupted Maxon sutures. The procedure was carried out via an open laparotomy, and [Mrs K's] abdomen appeared to be washed out adequately at the time of the laparotomy. A Redi-vac drain was used and placed below the liver to drain close to the duodenum where it was expected to cover any leakage. Mr Breeze was clearly happy with the lavage of the abdomen and considered the point of ongoing

concern would be the duodenal perforation, and covered this with a Redi-vac drain. He does not mention whether he lavaged the subphrenic area, and the findings of [Dr C] the following day would suggest that perhaps it was not lavaged in that area.

The use of various drains is always a talking point amongst surgeons. Recent literature would suggest that a closed drain is the best drain, that is one that drains into a bottle or bag, and is not left open as a passage way for bacteria into the abdomen. For this reason there has been a large swing from the open drain to the closed drain in surgery in general. Had this lady had a CT of her abdomen, and the collection in the subphrenic space drained via a CT guided drain this would have been a closed drain with a drainage bag on the end of it. In hindsight I think Mr Breeze should have perhaps chosen a larger bore Redi-vac type drain, but an open drain that [Dr C] described would work equally well.

What may have caused [Mrs K's] duodenal perforation? This has been covered above.

Any other matters

Mr Breeze clearly felt that he had adequately lavaged the abdomen, and that the drainage, if it occurred would be coming from the repaired duodenum. It would appear from the further laparotomy that the subphrenic space was inadequately lavaged.

[Mrs K's] weight was 95 kg. Height was not recorded, but she was most likely overweight, which can make upper abdominal surgery, and especially access to the subphrenic area difficult through a midline incision.

Post Operative care and operation on 24 February 2000

Whether there was a delay in Mr Breeze's recognition of and response to [Mrs K's] deteriorating condition on 24 February 2000 including:

- (a) The reasonableness of his advice that [Mrs K] did not require further surgery, and his appropriateness of his management plan on the basis of that advice; and
- (b) Whether the evidence supports a conclusion that [Mrs K's] condition was improving or deteriorating at the time she was reviewed by (i) [Dr C] and (ii) Mr Breeze.

[Mrs K] had undergone major surgery on 22 February 2000, and again on 23 February 2000. She was clearly a very sick woman surgically, but also with her comorbidities. The picture painted by the intensivist does not strictly correlate with the numbers available to Mr Breeze on his ward round in the early morning. She was known to have poor respiratory function from 23 February and that had improved from requiring 100% oxygen to 90% on 24 February. Her albumin had dropped from 21 to 20 over the 24 hours. This is not a significant change. Her creatinine had gone from 0.16 to 0.18 overnight, which is a slight increase and her haemoglobin had dropped from 120 to 96 overnight. Some of this could be accounted for by

rehydration and surgical loss. The pulse had remained steady, and urine output was adequate. She did have drainage into the Redi-vac, but all in all the figures do not support an urgent return to theatre. Clearly the end of the bed picture may well have been different, but from the laboratory figures and the nursing notes I believe it was quite reasonable for Mr Breeze's decision to wait and see, and continue with antibiotics. This decision was made in a woman who had undergone two major surgical attacks over two days, and had only been back from theatre 12-15 hours. I believe it was appropriate to manage her at that stage with antibiotics. But I do wonder why an acute CT was not arranged. This could have easily excluded the leaking duodenum, which was the concern of the intensivist and may have possibly prevented further surgery by CT guided drainage of the subphrenic collection. There was really very little change from the night before, either an improvement or in deterioration. This judgement is based on the figures in the notes, and is clearly lacking the clinical picture of the patient in bed. [Mrs K] did not recover dramatically post operation on 24 February, and took a long time to recover from the surgery. suggesting that her general state was the overall picture, rather than due entirely to any collection within the abdomen.

Any other matters

Re-operation on a patient who is already very sick and has significant co-morbidities is frequently a difficult decision. Clearly if there is marked deterioration and abdominal signs, then that decision can be helped by CT scanning or even a plain abdominal x-ray. In this case there does not appear from the notes to be a dramatic change within the abdomen from 23 February to 24 February. There is some deterioration in the overall picture of [Mrs K], but much of this would be expected after two bouts of surgery. I believe the view to cover her with triple antibiotics was reasonable, and further re-evaluation of the patient later in the day would have been as acceptable as taking her back to theatre and re-exploring her abdomen.

Other Matters

The appropriateness of Mr Breeze's record keeping between 22 February and 24 February

There is very little recorded by Mr Breeze over this time. However, his junior staff, that is the registrars and house officers recorded good clinical notes, and was obviously in contact with Mr Breeze throughout the day. Once [Mrs K] was admitted to the Intensive Care ward the overall management and control of the patient is taken over by the intensivists. Mr Breeze over this time would have only been asked for an opinion regarding any surgical necessity. [Mrs K] was not operated on until 5.30pm on 23 February and I assume from the notes that Mr Breeze was obviously busy operating himself during that afternoon, and hence the later time for surgery, but he was kept well informed by his junior staff. This would account for the minimal notes written by Mr Breeze.

It is my opinion that Mr Breeze acted with reasonable care and skill in his treatment of [Mrs K]. The perforated duodenum is a recognised complication of

laparoscopic and open cholecystectomy, and the decision to operate or not to operate was an opinion, which was justified."

Code of Health and Disability Services Consumers' Rights

The following right in the Code of Health and Disability Services Consumers' Rights is applicable to this complaint:

Right 4 Right to Services of An Appropriate Standard

(1) Every consumer has the right to have services provided with reasonable care and skill.

Opinion: No breach - Mr Ian Breeze

Mrs K had a stormy post-operative period following her cholecystectomy by Mr Breeze on 22 February 2000, complicated by a perforated duodenum and an infected subphrenic collection. Mrs K's post-operative condition was clearly very serious and life-threatening. However, I am satisfied that Mr Breeze acted with reasonable care and skill in his treatment of Mrs K, and did not breach the Code of Health and Disability Services Consumers' Rights (the Code), for the reasons set out below.

Decision to operate on Mrs K – cholecystectomy

Mrs K presented to Mr Breeze on 27 July 1999 with complex biliary disease. She had experienced approximately ten attacks of biliary colic precipitated by fatty food over the preceding 30 months, and her condition was confirmed by a previous ultrasound, ERCP procedure, and abnormal liver function tests. Both the ultrasound and the ERCP had identified biliary dilatation, although the cause of the dilatation was unclear. On examination, Mrs K had no masses, organomegaly, or hernias. She suffered from ischaemic heart disease.

Mr Breeze considered that the underlying cause of Mrs K's deranged liver function test may have been either Mirizzi's syndrome (bile duct compression by the gallbladder) or transient choledocholithiasis (a stone in the bile duct). He arranged a further ultrasound to investigate, but the ultrasound revealed no new findings. Mr Breeze placed Mrs K on the urgent waiting list for a laparoscopic cholecystectomy and an intra-operative cholangiogram. By the time of surgery on 22 February, Mrs K's liver function tests had normalised.

My advisor informed me that it was appropriate for Mr Breeze to perform a laparoscopic cholecystectomy on Mrs K. At the time of operation, there were no contraindications to surgery, her liver function tests were normal and, in his opinion, laparoscopic cholecystectomy was the procedure of choice.

I accept my expert advice that it was appropriate for Mr Breeze to proceed with laparoscopic surgery in Mrs K's case. Accordingly, in my opinion Mr Breeze did not breach Right 4(1) of the Code in proceeding with laparoscopic surgery on Mrs K on 22 February 2000.

The cholecystectomy operation

The operation – a laparoscopic cholecystectomy – was performed on 22 February 2000 by Mr Breeze, assisted by Dr A, registrar. Mr Breeze recorded that the operation was very difficult because of the pathological state of the gallbladder and bile duct. The duodenum (which was adherent to the fundus of the gallbladder) was dissected from the gallbladder, and the gallbladder was separated from the gallbladder bed and removed. Operative cholangiography was carried out to examine Mrs K's large common bile duct. The abdomen was lavaged and suctioned, a redivac drain inserted, and the wounds closed.

My advisor informed me that Mrs K's surgery was very difficult, but appeared to go well. Laparoscopy revealed a severely inflamed and scarred gallbladder with adherent duodenum, but with careful dissection the duodenum was freed from the gallbladder and the remainder of the procedure was straightforward. There was no obvious pus or acute inflammation encountered, and accordingly a redivac drain was appropriate to drain the gallbladder bed. The operation was uneventful, and my advisor informed me that it was skilfully carried out.

It is clearly accepted that Mrs K suffered from a perforation of her duodenum, and it is probable that this occurred during her cholecystectomy operation on 22 February as a result of one of the following mechanisms:

- (a) a tear while dissecting the gallbladder off the duodenum;
- (b) perforation during port insertion;
- (c) a diathermy burn from diatherming the area; or
- (d) a small fistula between the duodenum and the gallbladder, possibly at the site of adhesion of the gallbladder fundus to the duodenum, which was not noticed at the time of surgery.

Mr Breeze advised me that, following the cholecystectomy, the cholangiography did not reveal a duodenal perforation, and there was no evidence of a perforation on direct inspection. For this reason, the perforation was not detected at the time of the procedure.

A perforated duodenum is a recognised complication of laparoscopic and open cholecystectomy. Although it is not clear how the perforation occurred, Mrs K's operation was very difficult and, as noted by Mr C, was the "very situation where it can be understood how it happened". In these circumstances, while it is unfortunate that Mrs K suffered the complication of a perforated duodenum, there is no evidence that the perforation was the result of any lack of reasonable care and skill on the part of Mr Breeze during surgery.

I accept my expert advice that Mr Breeze performed the surgery on 22 February with reasonable care and skill, and that the insertion of a redivac drain was appropriate. Accordingly, Mr Breeze did not breach Right 4(1) of the Code in relation to the cholecystectomy operation on Mrs K.

Post-cholecystecomy care and treatment

The evening following surgery Mrs K was noted to be distressed with difficultly breathing. Mr Breeze reviewed her at 7.45am on 23 February. No concerns about her condition were documented at that time, although in response to the complaint Mr Breeze advised me that he was mildly concerned about her progress, as her redivac drainage had been copious. Mr Breeze advised that it is not uncommon for patients who have had their abdominal cavity lavaged to have copious drainage – the drainage fluid consisting of lavage fluid not retrieved by suction.

My expert advisor informed me that when Mr Breeze reviewed Mrs K there was no real indication that she was deteriorating. Her pulse, blood pressure and temperature were normal, although she was having some difficulty breathing (requiring two litres of oxygen). The only abnormal finding at the time was the significant volume of fluid in the redivac drain. My advisor confirmed that a significant volume of fluid can arise from fluid collection within the abdomen from lavage. He stated that the aspiration of lavage fluid laparoscopically is always difficult, as fluid can be trapped between loops of bowel or in the paracolic gutters or pelvis, which will then be aspirated out via the redivac over the following 24 hours. Although a significant volume of fluid can also arise from bleeding, bile leak, or serious ooze from the raw gallbladder bed, Mr Breeze reasonably attributed the significant drainage as lavage fluid.

In the late morning the nurses caring for Mrs K became concerned about the continuing drainage from her redivac (at that time 1550mls had drained in 24 hours). Mrs K was reviewed by the house surgeon at 12pm, who noted that her abdomen was soft, her temperature 37 degrees, blood pressure 120/60, and pulse 90. The house surgeon was concerned that Mrs K had intra-abdominal bleeding, and contacted the registrar for a review. Mrs K was reviewed by Dr E, registrar, between 12pm and 12.30pm. Dr E noted that Mrs K was visibly short of breath, had an elevated respiratory rate, a pulse of 90 beats per minute, blood pressure of 130/80, and oxygen saturation of 94% on four litres. She also noted that Mrs K had a tense abdomen, "sloshing" bowel sounds, and dark oily fluid was draining from the redivac.

Because Mrs K's urine rate was declining, her blood pressure was unstable, and her respiratory rate was increasing, Dr E considered that Mrs K might be suffering the effects of a small bowel perforation or bile leak, and contacted Mr Breeze. Mr Breeze instructed Dr E to book the operating theatre for 5pm, and to contact the intensive care unit for input because of Mrs K's respiratory compromise.

At 2.30pm Mr Breeze was updated on Mrs K's condition. He recalled that he was concerned that she had a gut perforation because of the continuing drainage from her redivac drain, her right upper quadrant pain and toxic changes. He recommended an urgent abdominal scan, triple antibiotic treatment, and close monitoring. Surgery commenced at approximately 5pm.

I asked my advisor whether Mrs K's deteriorating condition was detected and responded to in a timely manner. My advisor noted that the signs that Mrs K was deteriorating were evident in the early afternoon. While ideally Mr Breeze should have personally reviewed Mrs K at that time, Mrs K was being closely monitored by the nurses, house surgeon and registrar, and Mr Breeze was being kept informed of her condition. My advisor stated that the large volume of aspirate through Mrs K's redivac drain, and the white count with a left shift and toxic changes, was concerning. That change in Mrs K's condition was reported to Mr Breeze at approximately 2.30pm, and he appropriately recommended a CT scan and triple antibiotics. Surgery was already scheduled for 5pm. Mrs K was taken to theatre at 5pm, two and a half hours after Mr Breeze received notification of her left shift and toxic changes. My advisor stated that there was not an unreasonable time delay between notification of Mrs K's deterioration and surgery – immediate surgery was not necessary. I accept this advice. Accordingly, in my opinion Mr Breeze did not breach Right 4(1) of the Code in his immediate post-operative care and treatment of Mrs K on 23 February.

Operation on 23 February – laparotomy and oversew of perforated duodenum I was not provided with a typed operation note for the laparotomy and oversew of the perforated duodenum operation on Mrs K on 23 February. However, Mr Breeze advised me that the laparotomy revealed a 5mm perforation of the anterior wall of the first part of the duodenum, which he closed with 3-0 Maxon sutures. Mr Breeze then lavaged and suctioned Mrs K's abdomen with six litres of warm saline, and closed her abdomen with a redivac drain below the liver to drain close to the duodenum.

My advisor considered that the perforated duodenum was adequately dealt with by interrupted Maxon sutures. However, Mr C, who operated on Mrs K on 24 February, raised concern that Mr Breeze had not lavaged the subphernic space during the operation on 23 February, and did not ensure adequate drainage of the peritoneal cavity.

Mr Breeze was clearly satisfied with the lavage of Mrs K's abdomen. However, as identified by Mr C during surgery on 24 February, Mr Breeze inadequately lavaged Mrs K's abdomen, in that he did not lavage the subphrenic area. His failure to lavage the subphrenic area may have contributed to her need for further surgery on 24 February. This is evidenced by the later finding by Mr C that a collection had developed in the area.

The finding that the area was not adequately lavaged is made, to some extent, with the benefit of hindsight. My role is to assess whether Mr Breeze acted reasonably in the circumstances that he faced at the time. Mr Breeze clearly thought he had adequately lavaged Mrs K's abdomen, and I am unable to conclude that his assessment was not reasonable at the time. However, clearly this is a matter that Mr Breeze needs to carefully consider, and he should review his practice in light of Mr C's and my advisor's comments.

My advisor noted that Mrs K was likely overweight, which can make upper abdominal surgery, and especially access to the subphrenic area, difficult through a midline incision. I do not accept that Mrs K's weight is a mitigating factor in relation to Mr Breeze's failure to lavage the subphrenic space, because the subphrenic area was lavaged by Mr C the following day.

Mr C advised me that in his opinion, the further operation on 24 February was the result of inadequate drainage of the peritoneal cavity during and following Mrs K's laparotomy on 23 February. Mr C did not consider that redivac drainage was adequate in Mrs K's case. In his opinion, Mr Breeze should have allowed open drainage of Mrs K's abdomen, inserting open drains on both sides of the subphrenic area, as well as the subhepatic area, rectro-vesicle pouch, and in the linea alba of the abdomen. Mr C acknowledged, however, that the modern technique is to insert a (closed) drain and rely on antibiotics to absorb other fluids. Nevertheless, his view was that a single redivac drain was insufficient and, as well as the redivac drain below the liver, Mr Breeze should have inserted a redivac drain above the liver in the subphrenic space, and possibly a further redivac drain in the right paracolic gutter.

My advisor informed me that the use of various drains is "always a talking point amongst surgeons". Recent literature suggests that a closed drain is the best drain, as it drains into a bottle or bag and is not left open as a passage way for bacteria into the abdomen. For that reason, there has been a "large swing" from a preference for open drainage to the closed drain in surgery in general. My advisor considered that, in hindsight, Mr Breeze should have chosen a larger bore redivac drain to drain Mrs K's abdomen, but open drainage, as described by Mr C, would work equally well.

I acknowledge Mr C's comments about the benefit of open drainage in situations such as Mrs K's. Mr C is a highly experienced senior surgeon. However, I also note that the issue of appropriate drainage is a matter of some contention amongst surgeons, especially senior surgeons such as Mr C who trained prior to the advent of modern antibiotics, and their junior colleagues. In determining the reasonableness of action taken by a practitioner, I must be guided by advice on what an acceptable standard of practice was at the time the matter under investigation actually occurred. My advisor confirmed that in current practice there is a preference for closed drainage. Accordingly, I accept that it was reasonable for Mr Breeze to rely on closed drainage to drain Mrs K's abdomen following surgery on 23 February, rather than the open drainage technique described by Mr C.

The question is whether a single closed drain was adequate to drain Mrs K's abdomen or whether, as noted by Mr C, further drains should also have been inserted, including in the subphrenic space and the right paracolic gutter. Mr Breeze operated on Mrs K to repair a perforated duodenum. Mr Breeze considered that the point of ongoing concern would be the duodenal perforation, and if any drainage occurred, it would be in the area of the repaired duodenum. Accordingly, he inserted a redivac drain below the liver, close to the duodenum. My advisor stated that, in hindsight, Mr Breeze should have used a larger bore redivac type drain.

I accept that, in hindsight, the redivac drain inserted by Mr Breeze was inadequate for Mrs K, and the adequacy of the drainage was likely a factor that significantly contributed to the need for Mr C to re-operate on Mrs K on 24 February. However, the comment that Mr Breeze's choice of drainage was inadequate in this case is made with the benefit of hindsight. I am unable to conclude that at the time Mr Breeze acted unreasonably in inserting a single redivac drain close to the duodenum, or that he breached Right 4(1) of the Code. However, I recommend that Mr Breeze review his practice in light of Mr C's comments about drainage and his findings at surgery on 24 February, and my advisor's comment about the choice of drainage in this case.

Post-laparotomy care and treatment

Following the laparotomy and oversew of perforated duodenum operation on 23 February, Mrs K was admitted to the Intensive Care Unit. She was ventilated and recorded as being "very ill".

Mr Breeze reviewed Mrs K at 8am on 24 February. He noted in the progress notes that despite surgery on 23 February, she was unwell and deteriorating. Despite his record in the progress notes that she was deteriorating, in his response to the complaint Mr Breeze advised me that Mrs K was afebrile, had an acceptable urine output, her pulse and systolic blood pressure were acceptable, and blood tests indicated that her white cell count had improved dramatically, indicating improvement of infection. Mr Breeze considered that Mrs K's condition was due to established bacterial peritonitis. He opined that there was no benefit in returning her to theatre for further surgery, and recommended antibiotic (Imepenin) and supportive treatment. He noted that her prognosis was poor. Mr Breeze advised me that a blood test on the morning of 24 February (following his review of her at 8am) indicated that her serum creatine levels had improved, and was not consistent with worsening infection. He considered that the serum creatine finding supported his opinion that Mrs K's condition was improving and that surgery was not indicated at that time.

Neither Dr B, the intensivist responsible for Mrs K's care on the morning of 24 February, nor Mr C, who provided Dr B with a second opinion, agreed with Mr Breeze's assessment of Mrs K's condition. Both clinicians considered that Mrs K was deteriorating and in septic shock, and required further surgery. The assessment of her condition was based on her low blood pressure, poor respiratory function, renal failure, rising creatine, falling haemoglobin and albumin levels, and the drainage from her redivac drain. In addition, both clinicians appear to have held the opinion (from experience) that life-

threatening abdominal sepsis is best treated by laparotomy and open drainage. Mr C recommended further surgery to lavage and drain the abdomen and inspect the duodenum. Mr C advised Mr Breeze of his recommendation, and took Mrs K to theatre at 12pm. At surgery, Mr C found "copious amounts of fluid within the peritoneal cavity and in particular in the subphrenic space". Mr C drained the collection, lavaged the abdomen, and inserted a number of drains.

I asked my advisor about the reasonableness of Mr Breeze's assessment of Mrs K at 8am on 24 February, and the appropriateness of his management plan – to manage Mrs K conservatively without further surgery. My advisor noted that Mrs K was clearly a very sick woman, both surgically and because of her co-morbidities. On my advisor's review of the clinical records, he noted that the intensivist's assessment of Mrs K's condition did not strictly correlate with the numbers available to Mr Breeze on his ward round at 8am on 24 February. In particular:

- Mrs K was known to have poor respiratory function on 23 February, and her respiratory function had improved from requiring 100% oxygen on 23 February to 90% on 24 February;
- her albumin had dropped from 21 to 20 over the previous 24 hours, which was not a significant change;
- her creatine had increased slightly from 0.16 to 0.18 overnight;
- her haemoglobin had dropped from 120 to 96 overnight, which could in part be attributed to rehydration and surgical loss; and
- her pulse remained steady, and her urine output was adequate.

My advisor noted that on his assessment of the records, there was very little change in Mrs K's condition between 23 and 24 February, either in improvement or deterioration. Although she did have drainage into her redivac drain, "all in all" the laboratory results and the nursing notes did not support an urgent return to theatre, and it was reasonable for Mr Breeze to take a "wait and see" approach and continue with antibiotics. Mr Breeze's decision appeared to take into account that Mrs K had undergone two major operations over two days, and had only been back from theatre 12-15 hours.

My advisor explained that re-operation on a patient who is already very sick and has significant co-morbidities, such as Mrs K, is frequently a difficult decision. CT scanning or a plain abdominal X-ray can assist in the decision if there is marked deterioration and abdominal signs. In Mrs K's case the notes suggest that there was some deterioration in her overall picture, but do not indicate a dramatic change in her condition or within the abdomen between 23 and 24 February. The deterioration in her overall picture can reasonably be attributed to the effects of having undergone two major operations over two days. My advisor's opinion is supported by the fact that Mrs K did not recover dramatically following the operation on 24 February, and took a long time to recover

from operations – suggesting that her general state was the key factor, rather than a particular collection within the abdomen.

I accept my expert advice that Mr Breeze's decision to cover Mrs K with triple antibiotics was reasonable, and that further evaluation later in the day was an acceptable alternative to taking her back to theatre and re-exploring the abdomen. Accordingly, in my opinion Mr Breeze did not breach Right 4(1) of the Code in his management of Mrs K following the laparotomy on 23 February.

In concluding that Mr Breeze's decision to continue with antibiotics at that time was reasonable, I do not suggest that the concerns of Mr Breeze's colleagues (and their decision to re-operate on Mrs K) were inappropriate or unjustified. Mr Breeze's colleagues (Mr C and Dr B) had genuine concerns about Mrs K's condition, and acted responsibly in following up their concerns. It is highly appropriate for practitioners to seek second opinions from their colleagues in such situations, and is to be encouraged. As noted by my advisor, my retrospective review of Mr Breeze's actions in this case relies heavily on an assessment of the written information available. I am satisfied from the written information that Mr Breeze's assessment of Mrs K's condition was reasonable at the time. However, I accept my advisor's comment about the limitations of a retrospective review, and not having the "end of bed picture". Clearly, the decision whether to re-operate or "wait and see" in Mrs K's case was a judgement call. While Mr Breeze's decision not to re-operate at that time was reasonable, so too was the decision by his colleagues to re-operate.

Other comment

Communication about Mrs K's condition

I am concerned that Mrs K did not feel adequately informed about the nature and cause of her condition by Mr Breeze. Mr Breeze was Mrs K's responsible clinician, and in my view he should have explained to her that her duodenum had perforated, the possible causes of the perforation, and the implications of the perforation on her condition, care and treatment. Open disclosure of harm contributes to an effective therapeutic relationship, by fostering an open and honest professional relationship between the health professional and patient. Several rights in the Code support a surgeon's responsibility to inform a patient when that patient has been inadvertently harmed as a direct result of medical treatment (in this case, the perforated duodenum).³ The Code as a whole supports honesty and candour in the aftermath of an adverse event.

³ For example: Right 1 of the Code provides that patients have the right to be treated with respect. Failure to disclose inadvertent harm involves tacit deception – respect for patient autonomy supports a truthful and sensitive discussion about what went wrong and why; under Right 5(2) of the Code every patient has the right to an environment that enables both patient and doctor to communicate openly,

I note that the timing of disclosure is important. Clearly it would have been undesirable and inappropriate for Mr Breeze to discuss this matter in detail with Mrs K at the time the perforation was suspected. Mrs K was critically unwell when Mr Breeze performed surgery on her at 5pm. It is well known that a patient who is acutely unwell may be unable to retain information. However, Mr Breeze should have arranged follow-up discussions to ensure that Mrs K understood what had happened to her, and what the implications were for her care and treatment, at a time when she was able to fully comprehend the information.

Mr Breeze has advised me that he has recently attended an advanced clinical communication programme and identified some helpful strategies which he is adopting.

I do not have jurisdiction under the Health and Disability Commissioner Act 1994 or the Code of Health and Disability Services Consumers' Rights to consider whether Mr Breeze adequately communicated with Mrs K's husband about the nature of her condition, because the Code does not bestow rights on the family members of patients (unless those family members are legal representatives of the patient). However, clearly in situations such as this practitioners need to be sensitive to the needs of family members, and effectively and honestly communicate with them about their loved one's condition.

Recommendations

Although it is my opinion that Mr Breeze did not breach Right 4(1) of the Code in respect of his care and treatment of Mrs K, my advisor has noted some areas of concern about her management by Mr Breeze. I therefore recommend that Mr Breeze review the adequacy of his lavage of the subphrenic space and of the drains placed following surgery on 23 February, and his failure to arrange a CT scan on 24 February.

honestly, and effectively. Open and honest communication requires candour about inadvertent harm on the part of the doctor; and Right 6 of the Code affirms that a patient has the right to information that a reasonable patient, in that patient's circumstances, would expect to receive. Several studies support the proposition that a reasonable patient would expect to be told if the care that was intended to heal has in fact caused harm (Witman A, Park D, and Hardin S., "How do patients want physicians to handle mistakes? A survey of internal medicine patients in an academic setting" (1996) 156 *Archives of Internal Medicine* 2565; Higorai M, Wong T, and Vafidis G., "Patients' and doctors' attitudes to amount of information given after unintended injury during treatment: cross-sectional, questionnaire survey" (1994) 318 *BMJ* 640).

⁴ This includes legal guardians under the Guardianship Act 1968 and an enduring power of attorney for personal care and welfare or a welfare guardian appointed under the Protection of Personal and Property Rights Act 1988.

I also have concerns about the adequacy of Mr Breeze's communication with Mrs K about her condition. In this regard I am pleased to note that Mr Breeze has recently attended an advanced clinical communication programme and identified some helpful strategies which he is adopting. I nevertheless recommend that Mr Breeze carefully consider the comments made in my report in relation to the need for clear, open and honest communication with patients at all times but particularly where a patient has been inadvertently harmed as a direct result of medical treatment.

Follow-up actions

- A copy of my final report will be sent to the Medical Council of New Zealand and the Royal Australasian College of Surgeons.
- In light of the significant public interest in my inquiry into Mr Breeze's practice, a copy of my final report, with details removed identifying parties other than Mr Breeze, my expert advisor and the hospital, will be released to the media and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes upon completion of all aspects of my inquiry into Mr Breeze's practice.