*Privy Council Appeal No. 25 of 1990*

**George Hugh Kevin Brown** *Appellant*

*v.*

**The General Dental Council** *Respondent*

FROM

# THE PROFESSIONAL CONDUCT COMMITTEE OF THE GENERAL DENTAL COUNCIL

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## REASONS FOR REPORT OF THE LORDS OF THE JUDICIAL COMMITTEE OF THE PRIVY COUNCIL, OF THE 15TH OCTOBER 1990, DELIVERED THE 30TH OCTOBER 1990

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*Present at the hearing:-*

LORD BRIDGE OF HARWICH
LORD OLIVER OF AYLMERTON
LORD JAUNCEY OF TULLICHETTLE

*[Delivered by **Lord Oliver of Aylmerton**]*

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This is an appeal by Mr. George Brown, a dental practitioner, against the determination of the Professional Conduct Committee of the General Dental Council dated 21st May 1990 that he had been guilty of serious professional misconduct. The Committee directed that the name of the appellant be removed from the Register of Dentists. At the conclusion of the hearing their Lordships announced that they would humbly advise Her Majesty that the appeal ought to be allowed and that they would give their reasons later. This they now do.

The charge laid against the appellant was as follows:-

"That being a registered dentist:

On 16th June 1989 you administered a general anaesthetic to Darren Bamford, now deceased, in the course of which you:

(a) administered to the patient an overdose of the drug Methohexitone Sodium;

(b) failed to monitor the patient's condition adequately;

(c) failed to ensure that adequate resuscitation equipment was immediately to hand;

(d) failed to employ a proper degree of skill and attention in undertaking the anaesthetic procedure

And that in relation to the facts alleged you have been guilty of serious professional misconduct."

As regards (c), the Committee found the appellant not guilty and it is unnecessary further to consider that paragraph of the charge. Moreover, although the appellant was found by the Committee to have been guilty of serious professional misconduct under paragraph (d) as well as under paragraphs (a) and (b), it was conceded at the hearing before the Committee by counsel on behalf of the General Council, which prosecuted the charge, that there was nothing in that paragraph which was not already covered by paragraphs (a) and (b).

For present purposes, therefore, it is necessary to consider only these two heads of the charge. It is the appellant's contention that there was no evidence before the Committee upon which they could properly have convicted him of serious professional misconduct in relation to either of these paragraphs.

The charge against the appellant was laid as a result of a tragic accident which occurred on 16th June 1989 in the course of what should have been a short and simple dental operation on a boy aged 9 years and 8 months at the surgery in Cheshunt of a Mr. Kotecha, an experienced dental practitioner. The appellant is a general dental practitioner who, since 1975, has tended to confine his practice to the administration of dental anaesthesia. From 1976 onwards he had been an anaesthetist in regular attendance at the practice carried on at the surgery in Cheshunt which had been taken over by Mr. Kotecha in 1984. Darren Bamford was a patient of an associate of that practice, Mr. Bruce Stephen, and was advised by a consultant orthodontist that a number of teeth needed to be extracted, an operation which required to be carried out under general anaesthetic. Within the practice all such operations were carried out by Mr. Kotecha himself and arrangements were made for Darren to attend the surgery on the morning of 16th June 1989 with the appellant in attendance as an anaesthetist. On that morning the appellant attended, checked the equipment and carried out the normal pre-anaesthetic checks on the patient. There were present, in addition to the appellant and Mr. Kotecha, two dental surgery assistants, Mrs. Moira Barry and Miss Nicola Salmon.

It was Mr. Kotecha's estimate that the operation would take about ten minutes to complete and the

appellant decided to employ Methohexitone Sodium, a barbiturate drug marketed under the trade-name "Brietal", which he administered intravenously. Brietal was in frequent use at the time for operations of short duration and the appellant was fully experienced in its use. No complaint is made of the selection by him of Brietal as an appropriate anaesthetic for the operation contemplated. Initially a test dose of 5mg was administered before the needle was taped into place followed by an induction dose of 50mg injected slowly while the patient's reaction was observed. Because the eyelids and fingers were still moving (indicating less than full anaesthesia) a further induction dose was administered, bringing the total induction dose up to 70mg, before Mr. Kotecha commenced the actual operation of extraction. Thereafter, in order to maintain a state of anaesthesia during the course of the operation, incremental doses between 10 and 15mg were given at intervals of two to three minutes as the patient showed signs of returning to consciousness.

In fact the operation took longer than the estimated time because a root on the patient's left hand side had broken at the top and Mr. Kotecha returned to it after removing the other teeth. In all some seven or eight incremental doses were given making a total of 165mg including the induction dose.

Some eighteen minutes after the initial anaesthesia, Mrs. Barry, who was standing on the patient's left, observed that the patient's lower lip appeared to be discolouring. This was seen by the appellant at the same time and he immediately moved to the head of the patient to check whether the airway was obstructed. There was no visible obstruction but the patient's breathing appeared to have ceased and immediate resuscitation procedures were commenced. Nothing now turns on the resuscitation methods employed. An ambulance was sent for and by the time it arrived the patient was breathing unaided, the heart appeared to be beating normally and colour was normal. He was, however, deeply unconscious. He was admitted to hospital, was placed in intensive care, and was subsequently transferred to the children's hospital in Great Ormond Street and put on a ventilator. An EEG ten days later showed irreversible brain damage and on 29th June 1989 he died. A post mortem established the cause of death as cerebral anoxia.

That the accident would not have occurred had Darren not been anaesthetised by the injection of this drug can scarcely be open to doubt, but the questions which had to be answered by the Committee in relation to the first paragraph of the charge were (i) whether the appellant had administered an "overdose" of the drug and (ii) whether, if he did, that constituted serious professional misconduct. The fact that the patient sustained brain damage, of course, was itself a

demonstration that he received an "overdose" in the subjective sense that he received a dosage which was greater than he was able to tolerate, but it was and is the appellant's contention that the evidence before the Committee established no more than that he administered a perfectly normal dosage in accordance with accepted practice in the dental profession and that, inasmuch as he did nothing that, viewed objectively, could be criticised as being wrong or abnormal, he could not properly be held to be guilty of serious professional misconduct.

There was certainly before the Committee no evidence that the dosage administered by the appellant was excessive in the sense that it was such as could not reasonably have been administered by a reasonably skilled dental practitioner situated as the appellant was situated. The manufacturer's instructions for Brietal Sodium were before the Committee. They referred to the drug being administered intravenously "usually in a 1% solution (10mg per ml)". In fact the appellant used a higher concentration but nothing turns upon this. The dosage instructions continued:-

> "Adults: As an initial guide, a rate of 1ml of a 1% solution (10mg) in five seconds may be used- although a faster rate than this is preferred by some anaesthetists. The dose usually ranges between 5 and 12ml (50-120mg), but it must be adjusted to the needs of the individual patient. The induction dose maintains unconsciousness for about five to seven minutes.
> Children: The dose should be adjusted for age and/or weight.
> Maintenance: BRIETAL Sodium is best used simply as an induction agent. If further injection for maintenance is needed the dose must be individualised; but, as a guide, 2-4ml of a 1% solution every four to seven minutes may be used."

It was, however, common ground between all of the expert witnesses called before the Committee that the instructions were no more than a guide, and a standard textbook on the practice of anaesthesia published in 1984 described the normal induction doses of Methohexitone as 1.5mg per kilogram of weight for adults and 2mg per kilogram for children. There was no evidence of the precise weight of Darren Bamford but he was described as a well-built healthy child and the appellant's estimate of his probable weight was 40 kilograms.

Indeed, so far as the induction dose of 70mg was concerned there was virtual unanimity among the experts that this could not be regarded as excessive. The expert witness called by the Council was Dr. Donald Braid, a Consultant Anaesthetist at the Western Infirmary, Glasgow and the Glasgow Dental Hospital. He agreed that dosage needed to be adjusted according

to age and weight and he was asked by counsel for the General Council to assume a weight of 30 kilograms rather than the 40 kilograms estimated by the appellant. Even making that assumption, however, he was not prepared to go further than to say that a total induction dose of 70mg "does seem to err on the side of generosity" and to be "perhaps overly generous". He added, however, that "there again it is a professional anaesthetist who should give the dose that is appropriate to the child and to the surgery that is contemplated". And in cross-examination he went further and said, in terms, that he was not in disagreement with the induction dose. Dr. Cole, the Senior Consultant Anaesthetist at St. Bartholomew's Hospital, thought that there was nothing unusual about a $9\frac{1}{2}$ year old boy requiring 50mg followed shortly by another 20mg to induce anaesthesia and he gave it as his opinion that a total dosage over the period of 165mg was not excessive bearing in mind that no other agent was being used. Mr. Peter Sykes, the President Elect of the Society for the Advancement of Anaesthesia in Dentistry, gave it has his opinion that there was nothing unusual in giving an induction dose of 50mg to a child of Darren's age nor in finding it necessary to top up with a further 20mg. The evidence of Lord Colwyn, a practising dentist, was to the same effect. An initial dose of 50mg was not, he said, excessive and was the sort of dosage that he himself had chosen in the past in anaesthetising a child. Nor was there anything unusual in the top-up dose of 20mg if the child showed signs of discomfort.

Thus, up to this point, the evidence before the Committee was all one way and negatived the suggestions that an overdose had been administered. In the course of his evidence, Dr. Braid explained that the problems of anaesthetising a patient through the administration of a barbiturate arise from the exposure of the patient to falls in blood pressure (hypotension) and respiratory depression. Cardiac depression, where the heart becomes affected by lack of oxygen in the blood, is believed to be secondary to respiratory depression or hypotension. The observation of a degree of cyanosis in the lower lip of the patient in this case suggested to him that the problem which had arisen was a respiratory one which might have been caused either by obstruction of the airway or by direct depression of the respiratory centre in the brain. Because the surgeon was working on the upper jaw so that the head would be extended - a posture normally advantageous to maintaining an airway - he felt that depression of the respiratory centre in the brain was the more likely explanation, although he was not prepared totally to exclude airway obstruction. It was, in his view, a possibility that both respiratory depression and hypotension existed here and combined to produce cerebral damage, but because of the ease with which spontaneous respiration was restored he did not think that the heart had stopped.

Thus, as regards paragraph (a) of the charge, the Council's own expert having accepted that the appellant was not at fault in the administration of the induction dose, the inquiry concentrated on the incremental doses. Dr. Braid gave it as his opinion that the appellant had administered an overdose and that it was the incremental doses which fundamentally caused the problem. He agreed, however, in cross-examination, that once the effects of the induction dose showed signs of wearing off, the anaesthetist had to make a judgment as to how great an incremental dose would be needed to maintain anaesthesia. He did not regard the incremental doses of 10-15mg as unusual or excessive, although he was disposed to criticise the frequency with which they were administered, describing it as "a slightly higher frequency than one would have anticipated". When pressed, however, he accepted that children can metabolise drugs more quickly than adults and that the frequency of administration was not a matter of scientific calculation but of experience and observation of the individual patient. His answer on this point was:-

> "If the patient is breathing well, has a good pulse and is reacting to stimulus, then another dose is acceptable. If the patient is not breathing well and has a poor pulse, then that is surely a warning to desist."

That incremental doses of 10-15mg were not abnormal or excessive was borne out also by the testimony of three witnesses called on behalf of the appellant. As regards the frequency of administration, Dr. Cole regarded it as not unreasonable, although he himself would not have administered this dosage since his practice was always to use Methohexitone in conjunction with nitrous oxide and oxygen. Mr. Sykes' view was that intervals of two to three minutes in the case of a small child were not too short because it was much better to try to maintain an even level of anaesthesia. Lord Colwyn also regarded an increment of 50mg as entirely normal and considered that a top-up dose of 10-15mg every two minutes over a period of twenty minutes was not excessive.

Dr. Cole's evidence was that he did not regard a total dosage of 165mg over the period of the procedure as excessive. Mr. Sykes' evidence was that he would not have continued the operation after about fifteen minutes but he could not see that the cumulative effects of the drug given incrementally in response to need could constitute a serious overdose requiring the operation to be abandoned. In the end Dr. Braid was driven to admit that, given that the patient's condition was properly monitored, his opinion that the appellant had administered an overdose rested upon the fact that the accident had occurred. He could not think of any other reason why a fit child of 9 years of age would become bluish and have to be treated for respiratory arrest.

In approaching this appeal, their Lordships are, of course, very conscious of the many authorities (conveniently summarised in the judgment of the Board in *Valente v. The General Dental Council* (Privy Council Appeal No. 53 of 1989) delivered on 23rd May 1990) in which it has been stressed that a professional disciplinary body consisting primarily of members of the profession is the best and proper authority for determining whether there has been such a falling short of professional standards as to constitute serious professional misconduct, and in which it has been said that the Board will interfere with the findings of fact of such a body only if the determination was not supported by credible evidence or if the evidence was overwhelmingly against the view taken by the Committee. Nevertheless, after a full and anxious consideration of the evidence before the Committee in the instant case, their Lordships are unable to sée how it could be said that the Council had made out its case under paragraph (a) of the charge. This was a quasi-criminal proceeding in which Mr. Preston Q.C., who appeared for the Council, very properly accepted that the standard of proof required was that applicable to a criminal case. It was not and could not be seriously disputed that the brain damage which the patient sustained would not have occurred if he had not been anaesthetised, so that, in that sense, he received an overdose - that is to say a greater dosage than, in the event, he was able to tolerate. But the charge was one of professional misconduct and the evidence established that the dosage administered was not, on any normally accepted objective standard, excessive. The prosecution was unable, even on its own evidence, to point to any conduct of the appellant in relation to the selection of this anaesthetic agent or the dosage administered that did not accord with the normal and reasonable practice in the profession. It could not be suggested and was not suggested to the appellant that in adopting the procedures which he did adopt or administering the dosages in fact administered he was acting as no reasonably skilful and experienced dental practitioner would have acted.

The high-water mark of the prosecution's case - and it was one which was closely bound up with the charge under paragraph (b) - was that he had made an error of clinical judgment in continuing with the operation at the time when Mr. Kotecha returned to the fractured root in the patient's upper jaw. The underlying basis for this attack on the appellant's conduct was that Brietal Sodium is recommended as suitable "for short surgical procedures". Dr. Braid, in the course of his evidence, outlined the options which were open to the appellant when it became clear that the operation was going to last longer than the ten minutes which had originally been contemplated. Asked whether, in his view, the appellant was right to continue with Methohexitone, he replied:-

"It comes back to the point that you were making earlier, that is, how short is short and whether one should persist with the sole intravenous technique in a child of nine for a surgical procedure which was started about twenty minutes into the operation and which was perhaps going to take another ten or fifteen minutes to complete. I am doubtful that it was the wisest course to follow."

In cross-examination he stated that he would not have argued with the estimated ten minutes for the procedure and agreed that a period of fifteen minutes would fit with the manufacturer's suggested frequency of maintenance doses.

Dr. Cole's evidence was to the effect that the incremental doses administered over a period of twenty minutes were not excessive. Mr. Sykes, asked about the dilemma facing an anaesthetist in a situation where an operation takes longer than anticipated, replied:-

"This can only be judged in the light of what is happening in the surgery at the time and the appearance of the patient. This is a matter of clinical judgment."

In cross-examination he said that he would not, in fact, have continued with incremental doses after about fifteen minutes, but his reason was not the risk of an overdose but the consequent increased length of the recovery period and the need for post-operative care. The other factor influencing the decision would be the condition of the patient. "If he is looking fit and well and carrying on then you would stretch it". Asked by the President of the Committee whether he would have used inhalation rather than persisted with incremental doses of Methohexitone he replied:-

"Yes - given the choice, yes, but it is a difficult situation as you appreciate, if the dentist is working there and he is saying, 'hang on a little while longer'. It is a perpetual dilemma of every dental anaesthetist."

Similarly, the Committee had the evidence of Lord Colwyn who, although regarding ten minutes as the optimum length for a "short surgical procedure", nevertheless did not regard top-up doses of 10-15mg every two minutes over twenty minutes as excessive.

It was never clearly established in the evidence at precisely what moment Dr. Kotecha completed the extraction and returned to extract the fractured root. Mrs. Barry's estimate that the emergency arose about five minutes after the first injection was clearly too short. The appellant's own evidence was that he decided to carry on after ten minutes, that the emergency arose after some twenty minutes and about three minutes after the last incremental injection and

that at that stage he was beginning to think that he ought to abort the procedure. But there was really no evidence before the Committee which could justify a determination that his initial decision to carry on at a time when the patient's condition gave no cause for concern - a decision the wisdom of which was categorised by the Council's own expert as no more than "doubtful" - fell so far short of reasonable professional standards as to amount to serious professional misconduct.

It would not be putting it too high, in their Lordships' judgment, to say that the Council's case on paragraph (a) of the charge really fell to pieces in the course of Dr. Braid's evidence. The real nub of the case lay in paragraph (b), for it was Dr. Braid's evidence that, although he was not prepared to fault the dosage administered as objectively too high and was prepared only to "doubt" the wisdom of continuing with the procedure when it became apparent that the operation would take longer than originally expected, the brain damage must, in his opinion, have occurred before the appearance of the cyanosis which alerted the appellant to an emergency and that a proper monitoring procedure would have detected this at a stage at which the damage could have been averted.

The case originally opened for the Council was that hypoxic insult to the brain existed for something like two to three minutes before an emergency was recognised and that this would have been recognised earlier had the appellant used either a pulse oximeter or an ECG. That case likewise fell to pieces in the course of the evidence, which established beyond doubt that such monitoring equipment, although Dr. Braid considered it a matter for regret, was not normally used in or available in dental surgeries in 1989. It was Dr. Braid's opinion that there had been a failure of clinical monitoring, but his evidence as to this was extremely scanty and, apart from the use of a pulse oximeter or ECG, there was never any clear suggestion of what it was that he thought the appellant should have done and that he did not do. On the basis of Mrs. Barry's observation of a degree of cyanosis, Dr. Braid deduced that there had been a period of respiratory depression prior to that time which might have been compounded by a degree of low blood pressure. What he did not say was how that was to be detected or what steps by way of clinical monitoring the appellant ought to have taken to detect it. As regards monitoring of colour, he observed:-

> "There is no doubt that colour is not easy to monitor. There have been several experiments with it in the detection of cyanosis and I noticed particularly that this patient's face was away from the window and not in the full natural light. The patient was facing into the room, which may have made it more difficult for the colour values to be judged."

Thus the supposition - and it was only a supposition- was that because no change of condition was observed prior to the observation of cyanosis, it followed that the appellant was not properly carrying out the function of clinical monitoring.

All other considerations apart, the difficulty about this is that it directly conflicts with the testimony of Mrs. Barry, who was the Council's own witness and whose evidence was quite clear that the appellant had his right hand on the patient's chest, was feeling the pulse from time to time and was looking at his colour and at his nails. Her evidence was that the appellant was at the same time pointing out to her the things that she should be looking out for. She was quite clear that, prior to the observation that the patient's lip looked pinky-mauve, there had been no audible alteration in his breathing nor difference about any other aspect of his condition. In cross-examination she said that she and the appellant were very close to the patient and reasserted that there had been no change of any sort in his breathing. In answer to a question by a member of the Committee, she testified that the appellant was looking at the patient's general colour, feeling his radial pulse and looking at his nails.

The evidence in support of the charge under paragraph (b) therefore consisted in essence simply of the fact that no change in the patient's condition was observed before the discolouration of the lip, for in the event nothing turned on the failure to employ ECG or pulse oximeter equipment. In a rider to the Committee's decision issued on 22nd May 1990 it was stated that the finding that he had been guilty of serious professional misconduct in failing to monitor the patient's condition adequately was in regard to clinical monitoring only. It is difficult, however, to see upon what this could have been based. Dr. Braid had told the Committee that irreversible damage to the brain would occur if it was starved of oxygenated blood for a period beyond two or three minutes and the appellant was cross-examined on the footing that the brain damage must have occurred as long as two or three minutes before cyanosis was observed. This, however, was never established by the evidence and the appellant's evidence was that he would find that very surprising because he was sure that monitoring would have picked up something. Yet his evidence was to the effect that there was a powerful pulse, there was breathing going on and colour was normal. There was in fact no evidence of how quickly cerebral anoxia can be induced or of how long it must necessarily have existed before it manifested itself in the form of cyanosis. Apart from the employment of the specialist equipment already referred to, which was, in the event, irrelevant, it was never suggested to the appellant that there was anything that he should have done that he was not doing. Indeed Dr. Braid's evidence was that

the appellant was handicapped in effective monitoring by the very absence of such equipment.

There was no dispute that the appellant took prompt and effective action as soon as the emergency was detected and the Comittee having rejected, as is apparent from the rider to their determination, that the appellant was at fault in not using the electronic aids suggested in counsel's opening, it was at least necessary, in order to convict him of serious professional misconduct, to point to an omission to do something that ought to have alerted him earlier. The case against him, however, rested upon a series of assumptions, which could scarcely be said to be supported by any evidence sufficient to satisfy a criminal burden of proof. It was assumed that the patient must have been showing some unusual reactions prior to the observation of the lip discolouration. That assumption in turn was based on Dr. Braid's evidence that he was "inclined to believe" that the cerebral damage had occurred before the emergency was detected and that the likely (although not certain) cause was either severe respiratory depression or hypotension or a combination of the two. If there was severe respiratory depression the appellant accepted that it should have been picked up in the ordinary course of clinical monitoring. But as already mentioned, Mrs. Barry was the prosecution's own witness and her unchallenged evidence was that the appellant was carrying out normal monitoring procedures and that the patient showed no unusual reactions prior to the observation of his lower lip. In particular, there was no change in the patient's breathing.

There was an oblique suggestion in cross-examination that in talking to Mrs. Barry about the process of anaesthesia the appellant was distracted to the extent of failing to observe a change in the patient's condition, but that did not accord with Mrs. Barry's evidence. It was no more than a suggestion and could not legitimately play any part in supporting a finding of serious professional misconduct. That there may be circumstances in which a failure to pick up signs of a change in condition would amount to a failure to exercise proper professional care is beyond doubt. In the instant case, however, there was a total absence of evidence as to the way in which, given the absence of electronic equipment, such signs should have been sought by the appellant sufficient to support the suggestion that he was guilty of such a clear failure to exercise due care and attention as to amount to serious professional misconduct.

The Committee had, no doubt, very much in mind the need to observe the highest standards of care in the practice of dentistry and, in particular, in the administration of anaesthetic drugs. This is a

consideration of which their Lordships too are very sensible and nothing that has been said should be thought to detract from that duty. In a quasi-criminal context, however, something more than deduction from the application of the maxim "res ipsa loquitur" is required for the establishment of guilt.

For these reasons their Lordships are of the opinion that the appeal ought to be allowed and the appellant's name restored to the Register. The respondent must pay the appellant's costs before the Board.