

IN THE CORONERS COURT)
AT CANBERRA IN) CD 52/88
AUSTRALIAN CAPITAL TERRITORY)

INQUEST INTO THE CIRCUMSTANCES SURROUNDING
THE DEATH OF ALEX NICHOLAS MERSEADES

Alex Mersiades was born on 12th November 1984. He died at about 8.30 a.m. on 25th April 1988. Death was caused by cerebral oedema which caused coning at the base of the brain. That is to say, the brain had swollen into the lower portion of the cranial cavity. The swelling was caused by excessive fluid. The probable cause of the cerebral oedema was post-operative hyponatremia. Hyponatremia is a low level of sodium in the blood. Hyponatremia is a complication which can follow surgery of many kinds, on different people. There is, by now, a considerable volume of literature on the subject. Some of the titles include:

- Hyponatremia ... after elective surgery in healthy women (Exhibit 5).
- Hyponatremia ... in outpatients.
- Hyponatremia in acute polyneuropathy.
- Severe hyponatremia in hospital patients.
- The outcome of hyponatremia in a general hospital population.
- Inappropriate secretion of anti-diuretic hormone after open heart surgery.
- Inappropriate secretion of anti-diuretic hormone in post surgical pediatric population (Exhibit 6).

- ... Severe hyponatremia in the elderly.
- Inappropriate anti-diuretic hormone secretion in post operative adolescent spinal fusion patients (from Scoliosis Research Society 17th Annual Meeting).
- ... Anti diuretic hormone secretion in cardiac surgical patients.
- Inappropriate anti diuretic hormone secretion in the orthopedic patient.

These, and many, many other articles highlight the dangers of hyponatremia in the following cases, amongst others:

- after surgery
- after surgery on children
- after surgery correcting scoliosis on children.

Finally, and after Alex's death, the paper:

- ... Hyponatremia following correction of scoliosis in children.

Alex was aged a little over 3¹/₂ at the time. He was admitted to the John James Hospital for surgery to correct a scoliosis i.e. a curvature of the spine. He underwent the operation on 22nd April 1988. The operation itself was uneventful and successful. However, in the early hours of the morning of 24th April 1988, Alex suffered the cerebral oedema. Subsequent testing showed he had a serum sodium level below the critical level. The autopsy showed clearly enough that he died from cerebral oedema. It is an almost inescapable conclusion that Alex died because his serum sodium level fell too far after the operation.

The surgeon and the anaesthetist say, and I accept this, that they were unaware of the possibility of any such a complication. In view of the considerable volume of

literature on the subject, I have some difficulty accepting this. However, the co-author of the most specific article ("Hyponatremia following correction of scoliosis in children", Dr Carroll) says that this was so. Few surgeons, and anaesthetists and hospitals in Australia, he said, are aware of the danger of hyponatremia following operations to correct scoliosis in children. Whether this evidence be true or not, or whether the fact be that the dangers of hyponatremia are well known and documented, not only as set out in the above literature, but also in the cases documented under the heading "Water Intoxication" in Mann's "Medical Negligence Litigation", is a matter I am unable to determine. That will have to be left to the judgement of Dr McNicholl and Dr Flynn's peers.

It is to be hoped that similar operations in future will be followed by simple daily monitoring of serum sodium levels, with corrections if appropriate.

I find that the lack of a resident medical officer at the hospital had no bearing on the death. The death was caused by a failure to monitor the serum sodium levels. Once Alex suffered the fit in the early hours of the morning of 25th April 1988, the brain damage was irreversible. The nursing care was quite adequate. In any event, the doctors arrived at the scene quite quickly after the event.



Michael Ward
Coroner

INQUISITION BEFORE A CORONER SITTING ALONE

AUSTRALIAN CAPITAL TERRITORY
CANBERRA
TO WIT

INQUISITION held at the Law Courts of the Australian Capital Territory, City, Canberra in the Australian Capital Territory on the Twenty-second day of December in the year One Thousand Nine Hundred and Eighty-nine

before me, MICHAEL WARD Esquire,
one of the Coroners of our Sovereign Lady the Queen for the Territory as to the manner and cause of death of ALEX NICHOLAS MERSIADES

AND I such Coroner being charged to inquire (on the part of our said Lady the Queen) when, where, how and by what means the said ALEX NICHOLAS MERSIADES came to death declare and find that

ALEX NICHOLAS MERSIADES died on the Twenty-fifth day of March in the year One Thousand Nine Hundred and Eighty-eight at Royal Canberra Hospital, Acton in the Australian Capital Territory from cerebral oedema which caused coning at the base of the brain.

IN WITNESS whereof, I the said Coroner,
have to this INQUISITION set my hand
this day and year aforesaid.


CORONER