Alcor News Bulletin

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The Cryopreservation of Alcor Member A-1034

I'm very sad to report that on the afternoon of Thursday, December 19th, Alcor member A-1034 experienced totally unexpected cardiac arrest while he was in a routine session of rehabitation therapy following a hip operation that he underwent earlier this year.

Nurses at the rehabilitation center had been told about the patient's desire for cryopreservation, and they telephoned Alcor. Dr. Jerry Lemler passed the emergency call to me, and I asked the nurses to inject heparin, perform chest compressions, and pack the head in ice. They willingly agreed to do this.

I called Southern California team leader Russell Cheney and asked him to take his meds kit to the rehabilitation center where the death had occurred. A-1034's daughter, and team members Peter Voss and Keith Dugue, also went to the center. Meanwhile I alerted our Southern California mortician, who dispatched some personnel from his collection service. Since Southern California does not have a purpose-built transport vehicle yet, we were unable to collect the patient ourselves or provide Thumper support, but Russell Cheney did manage to take a portable ice bath to the site.

Russell directed team member Bobby June to go to the mortuary, where Bobby unpacked blood washout equipment and washout solution which had been stored there in anticipation of this kind of emergency. Bobby was joined by three medical researchers who are friendly to Alcor. Two of them have surgical experience and were willing to attempt a blood washout and cephalic isolation at the mortuary. (I am not mentioning their names, since I am not sure, yet, whether they wish to remain anonymous.) The blood washout equipment was primed successfully while the patient was being collected from the rehabilitation center, where nurses had been doing chest compressions, in shifts, for more than three hours (!) and Russell had been pushing some of the Alcor meds via an IV which was already in the patient. The doctor who had been present in the rehabitation center when arrest occurred was located, and she signed a death certificate which I had faxed to the center.

At Alcor, Hugh Hixon, Mathew Sullivan, and James Sikes prepared the operating room with assistance from Jerry Searcy, Jessica Sikes, and Mike Read. (Subsequently we were joined by Paula Lemler, who has established herself as our primary data scribe.) I stayed by the phone with Dr. Jerry Lemler and tried to keep track of events in California.

Our California mortician suggested that the patient could be transported as a whole-body case for subsequent neuroseparation in our Arizona facility. We consulted our Phoenix mortician who adamantly disagreed, since California law normally requires

that a permit must be obtained from state officials before a human body can be moved out-of-state. I would have preferred to perform neuroseparation at Alcor after perfusion via median sternotomy, but we decided it was wise to follow the advice of our local mortician. Consequently neuroseparation would be done in California, since the isolated cephalon can be transported as an organ donation that does not require a permit.

The patient reached the mortuary after delays imposed by Los Angeles rush-hour traffic. The team at the mortuary performed a femoral cutdown, which was complicated by the patient's age and condition. After blood washout, neuroseparation was done very quickly and the cephalon was taken to an airport where a chartered jet was waiting at the request of the patient's daughter. We had been concerned that a winter storm might prevent the plane from taking off and would force transport by car, which would have taken approximately six hours. Fortunately the patient reached the plane before the storm became severe.

The patient arrived at Alcor at approximately 2:40 am Mountain Standard Time. Our usual surgeon was assisted by Jeff Kelling, a professional scrub nurse / surgical technician who was helping us for the first time. He greatly increased the speed and efficiency of our procedures.

Our team in California had installed two temperature probes attached to a DuaLogR, a handheld device which records temperatures at preset intervals. When the patient arrived, the nasopharyngeal probe showed a temperature of 3.1 Celsius on the DuaLogR. After we switched the output from the probe to our LabView system, it showed a temperature of 5 Celsius. We have no explanation yet for this disparity.

I surrounded the cephalon with bags of ice while our surgeon made burr holes. After crackphone sensors and a temperature sensor were stitched into position, the patient was moved to our cephalon enclosure. Since the people in California had already isolated and clamped the major vessels, they were easy to access, but our surgeon experienced some difficulty cannulating the smallest vertebral, and we noticed plaque in at least one of the vessels. We have no way of knowing, for sure, whether plaque may have blocked some small vessels in the brain. However, perfusion proceeded normally with a good flow rate.

During preparation for perfusion, the patient's temperature rose only by about 1 degree. This was an exceptionally good performance. Other patients have picked up much more heat while waiting for perfusion to begin.

Currently, as I write this at 9 am, perfusion has just been successfully completed at our target concentration. We have seen no sign of significant edema, and perfusion generally went well. The patient has the appearance that we associate with probable successful vitrification.

Although A-1034 was active in cryonics for many years and was well known to many people in the field, his paperwork requested confidentiality under all circumstances, and we are respecting his wishes. Personally I had known him since the early 1990s and feel extremely sad about the loss of a man who helped me personally many times and had a wonderful

spirit. Still, I'm pleased that his total transport time, from cardiac arrest to arrival at our facility, was only 10 hours, even though his death was totally unexpected. All of our team members were immediately available and responsive, and I'm very pleased with the way that this case worked out.

Of course there were some problems.

--Lack of a dedicated vehicle. Since Southern California contains the largest regional group of Alcor members and maintains a good state of readiness, it should have its own converted van for transport. This would have enabled Thumper support and would have reduced transport time. The Alcor board has allocated funds for a California vehicle, but we have not had an opportunity to establish a detailed specification before work can begin on the conversion.

--Inability to transport a whole body out of state. California morticians tell us that we cannot transport a whole patient out of the state without a permit, which can only be obtained during normal business hours. Consequently, on several occasions, including the one last night, we have felt compelled to do neuroseparation in the field. This situation is unacceptable (especially to our whole-body California patients) and must be investigated further.

--We are still short of trained personnel. Our Suspension Readiness Director, Mathew Sullivan, was scheduled to go on vacation at 11 am this morning (and still hopes to catch his flight). If our patient had experienced cardiac arrest just one day later, we might have been unable to prepare the operating room in time. We have already taken steps to address this problem. For the past two days we have been interviewing job applicants with medical backgrounds.

--Shortage of field personnel. If the case had occurred five or six days later, during the holiday season, we would have been unable to assemble our team rapidly in California. We were extremely lucky that four California members, and the people who performed our surgery, were immediately available.

--A relentless case load. Our rapid sequence of patients has left us scrambling to restock meds kits and prepare sterile tubing packs for washout equipment. So long as a lot of our time is spent on this kind of maintenance, we have insufficient time to make improvements that we need.

--Poor communication. Our advisor on medications assumed that we had distributed two recommended medications which in fact were still at the Alcor facility, because we assumed he knew that we were waiting for a comprehensive list including dosages and drug sequence. I want to establish a uniform meds inventory as soon as possible.

Under the circumstances, everyone contributed an excellent performance, and apart from the miscommunication, I think no significant errors occurred. This is the third Alcor case in three months, and I believe the patient received the best possible treatment. Morale in the operating room has improved, errors have diminished in number, and there is a genuinely cooperative spirit.

My thanks to everyone who participated. Since this text has not been checked with the people involved, it may contain inaccuracies or omissions. A full report will appear in Cryonics magazine.