

Adult Circumcision Complicated by Treatment for an Erection Causing Death

According to the records, the patient was 23 years of age and wanted a circumcision due to a tight foreskin (prepuce) causing difficulty with sex. According to the records, the past medical history was normal. Other than the tight foreskin, the physical examination was basically normal. Three days before surgery, on November 18, the patient underwent various blood tests. The blood count for anemia, the hemoglobin and hematocrit, were perfectly normal at 15.6 hemoglobin and 45.1 hematocrit. There was no evidence of any anemia. The studies for coagulation (clotting) of the blood, the prothrombin time and partial thromboplastin time also were normal. There was no request for the test for sickle cells. Since the patient had no history of sickle cell disease and was not anemic, that test would not be required.

According to the anesthesia record, the patient arrived in the operating room at 9:50 a.m. An intravenous line was started in the right hand. There was a smooth induction of general anesthesia. The operation started at 10:15 a.m. The Surgeon noted in his operative report that the patient developed an erection that persisted in spite of time. However, in my opinion, the Urologist did not allow sufficient time for the spontaneous erection to pass on its own. As noted by the anesthesia record and in the operative report, the Urologist injected 1 cc of epinephrine (adrenaline) in the dilution of 1:100,000. I assume he injected this directly into the penis. In my opinion, that is a departure from the accepted standards of care for a few reasons.

First of all, only five minutes initially passed, according to what would be relevant in the records, and that is not a sufficient amount of time to allow the spontaneous erection to dissipate. This was not an urgent operation. Furthermore, the injection into the penis of epinephrine is not indicated. It would cause a spasm of blood vessels rather than a relaxation of blood vessels, and thus impede the release of the erection. The injection of nor-epinephrine would be more appropriate if an injection was going to take place, but more time should have elapsed.

Following that injection, only five minutes of time passed and there was no effect, and therefore he injected the same medication again. This time, the erection dissipated (detumescence), but the patient immediately developed a cardiac arrest. According to the anesthesia record, the cardiac arrest appears to have occurred at approximately 10:15 or possibly 10:20. Thereafter, cardiopulmonary resuscitation, including the use of a transvenous heart pacemaker, was attempted but was unsuccessful. The patient was pronounced dead at 12:15 p.m.

From these records, I cannot tell if the M.D. Anesthesiologist was in the operating room during the clinical part of the induction, or if the care was given only by the Nurse Anesthetist. This needs to be evaluated. When a patient has an erection in the operating room, normally an additional amount of time is allowed to pass to see if, in fact, it would spontaneously diminish. Then, if that did not happen, the Anesthesiologist can be asked to change the anesthesia medication. If this does not work, then the operation could be canceled, or a small "butterfly" needle can be inserted into the penis to relieve the blood congestion. But in my opinion, the use of epinephrine under these circumstances is contraindicated. It is a departure from the accepted standards of care.

Unfortunately, this patient had sickle cell trait. That is, part of the hemoglobin (the red blood cell pigment), instead of forming spherical, donut-shaped red blood cells, under certain circumstances, which can include low oxygen, acid build up and stress (which is a physiologic side effect of the injection of epinephrine into the body) can cause these cells to form a sickle, or

banana shape. Those cells do not pass through the fine capillary blood vessels in the body and get stuck. This blocks up the circulation throughout the body, including the heart.

If a patient has sickle cell disease, then they have usually had sickle cell crises in the past, and often are significantly anemic. This patient did not have pure sickle cell disease. He had a sickle cell trait with part of the hemoglobin that was of the normal type A, but part was of the type S (sickle cell hemoglobin).

The autopsy shows that the patient had congestion in most of the organs secondary to the sickling of blood cells. The pathologist tested the hemoglobin and found out it was 78% hemoglobin A and 24.44% hemoglobin S. Furthermore, the sickle quick test was also positive, confirming that this patient had the sickle cell trait.

In my opinion, the primary person responsible for the death of the patient was the Urologist. His name is not completely legible, but it looks like #1. The Anesthesiologist's name appears to be #2, and the Nurse Anesthetist appears to be Nurse #1. I am not sure of the spelling of these names.

I want to point out that on the perioperative nursing records from Hospital, the anesthesia started at 9:50 a.m., the surgery started at 10:05 a.m. and concluded at 10:20 a.m. Thus, within 15 minutes, the patient had two injections of the epinephrine within his penis. In my opinion, that is too short a period of time before doing anything definitive, as I noted above. And the use of epinephrine, in my opinion, is contraindicated in any patient, and unfortunately in this patient with his unknown sickle cell trait, it created a sickle cell crisis that caused the death of the patient.

If the patient had a sickle cell crisis secondary to the effects of being put under anesthesia, and that caused the erection (priapism), which it can do, the use of epinephrine still would be contraindicated. If with reasonable passage of time the erection persisted, then the use of a needle to remove blood from the erect penis would be the appropriate standard of care.

The admitting record notes that the Physician is Dr. #3, but his name does not appear as the surgeon in the hospital record. I do not know what role he played in the care of this patient.

During the cardiopulmonary resuscitation, at 11:25 a.m., a sample of arterial blood was drawn from his body for analysis. Carbon dioxide was only slightly high at 52, and the oxygen content, the pressure of oxygen (pO₂) was 81, just below the normal range of 81, and the oxygen saturation was borderline-normal at 94%. Thus, the cardiopulmonary resuscitation, even an hour after it began, appears to have been done effectively. However, because of the massive amount of sickling that occurred in this patient's body and heart, he was unable to be resuscitated.

Whether or not the stress of undergoing anesthesia caused a sickle cell crisis, or the two negligent injections into the penis of epinephrine caused the crisis, in my opinion, the epinephrine markedly worsened the crisis, causing the death of this patient.

Is the treating Urologist Board-certified? Has he ever failed his Board examinations? If he was not properly trained in Urology, then in my opinion, the hospital would have some liability.