Death Of A Princess, Did Princess Diana Have To Die?: A Case Study In French Emergency Medicine

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Citation

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Abstract

Did Princess Diana have to die? That is one of the central questions posed in our book “Death of a Princess”. It is a questioned that stirred up strong emotions and bitter polemics in France, where the state-run emergency medical service, the SAMU, threatened to sue me and my co-author, Scott MacLeod for having dared advance the hypothesis that possibly, just possibly, a different method might have saved the life of the Princess of Wales. In France, it seems, that great repository of human rights and freedoms, there are still some questions that must not be raised.

It was not our intention to launch these polemics, much less to embark on some nationalistic crusade with the aim of proving the superiority of American emergency medicine over the France system. Our only aim, as journalists and not as medical specialists, was to examine the available facts and come to some objective conclusions.

Let’s start with the facts. On August 31, 1997, at 12:25 a.m., a Mercedes bearing Princess Diana, Dodi Fayed, their driver and bodyguard crashed into a concrete pillar in the Alma tunnel. The driver and Mr. Fayed were killed instantly. The bodyguard, sitting in the front right seat, suffered severe facial injuries and a broken wrist, but was saved largely thanks to his seat belt and airbag. Princess Diana, was not wearing a seat belt, also survived the initial crash but suffered major thoracic trauma, in addition to several superficial cuts on the forehand, arm and thigh and a dislocated shoulder. The first witnesses on the scene found her sitting on the floor with her legs on the backseat and her head wedged between the backs of the two front seats. Her eyes were open and she mumbled several indistinct phrases. The bodyguard later said he remembered hearing her call out Dodi Fayed’s name. Other heard her murmur “My God”.

Figure 1

The car in which Diana was killed August 31, 1997

Given the nature of the shock, a frontal crash into an immobile object at the speed of 100 km/hr or more, there was a strong probability of a deceleration injury resulting in possible internal lesions. Yet none of the medical personnel who initially treated her in the tunnel appears to have suspected internal hemorrhaging. Instead, they spent nearly an hour doing onsite treatment of a symptom - falling blood pressure - rather than treating its cause - an internal lesion.

The first doctor on the scene was a physician with the private medical service SOS Medicins. He happened to be driving through the tunnel in the eastbound lane within a minute of the accident. He stopped his car and went to attend

to the passengers of the crashed Mercedes. He immediately observed that Fayed and a driver were death. The front seat passenger was already being attended to by an off-duty firemen who also happened onto the scene. So he turned his attention to the blonde woman in the rear, whose identity was not immediately apparent to him. His first impression, as he later told an interviewer, was that the woman was not in a hopeless condition, and had a chance to survive. He admitted, however, that he did not know about her internal problems.

Without his equipment, there was little he could do except to place her head in a position that made it easier to breathe and to administer an oxygen mask. He also used portable telephone to call the emergency medical service, describe the location of the accident and the nature of the injuries. Other passersby had also called for help within a minute of the crash.

The first unit of the Sapeurs-Pompiers, a military emergency service, arrived within seven minutes and began to administer treatment. At 12:40 a.m.,15 minutes after the accident, the first SAMU ambulance arrived with its on-board physician. In a deposition given later to French investigators, the physician said Diana was agitated, crying out, and did not seem to understand everything he said to reassure her. He added that she repeatedly moved her left arm and right leg. He immediately started an IV drip.

Though she was apparently conscious when the SAMU arrived, he reported that Diana suffered a cardiac arrest while he and his assistants where extracting her from the car. At that point, he said, he intubated the patient, put her on a respirator and performed an external chest massage to reestablish a cardiac rhythm. He then installed her in the SAMU ambulance, known as a “mobile hospital unit” because it is so well equipped, and proceeded to carry out the more detailed examination and treatment.

Clearly, Diana was in serious condition, and the fact that she suffered a cardiac arrest obliged doctors to take emergency measures on site. The question is: did they spent too long treating her on site and driving her to the hospital, given that she was hemorrhaging and could only be saved by operating to repair her internal injuries?

The SAMU team spent nearly an hour, until 1:30 a.m. treating Diana in the tunnel. Then the ambulance drove her at a snail’s pace to Piete-Salpetriere hospital, 6.15 kilometers away. At that time of night, it would normally take five or 10 minutes to do that drive along the riverfront expressway. But Diana’s driver, applying standard French emergency procedures, drove extremely slowly so as not to subject the fragile patient to shocks and bumps. As a result, it took them some 40 minutes to make the drive, and the ambulance stopped within a few hundred yards of the hospital to treat a sharp drop in blood pressure.

By the time Diana reached the emergency room, it was nearly an hour and 45 minutes after the crash. According to the deposition of the on-duty doctor, who admitted her into the hospital, she arrived alive and with a cardiac rhythm. Though she had no serious external injuries, X-rays indicated internal hemorrhaging that was compressing her right lung and heart. Within 10 minutes of her arrival, the patient again suffered a cardiac arrest, prompting the doctors to inject large doses of epinephrine directly into the heart, and to perform an emergency thoracotomy.

According to testimony of the chief surgeon on duty that night, the operation revealed that the source of the hemorrhaging was a single lesion, which he described as a partial rupture of the left pulmonary vein at the point of contact with the left atrium. The tear was sutured and the hemorrhaging was stopped. But despite nearly two hours of manual internal massage, and the application of electroshocks, it was impossible to reestablish a heartbeat. The patient was declared death at 4 a.m.

At a press conference one hour later, the doctors read a five sentence communiqué that cited an important wound in the left pulmonary vein as the source of the internal bleeding that killed her. The communiqué made no specific mention of other lesions. Nor did the French corners report, which listed the cause of death as internal hemorrhaging due to a major chest trauma and a phenomenon of deceleration which caused a rupture of the left pulmonary vein.

From subsequent medical testimony given to French investigators, it is clear that there were no other significant lesions. This flatly contradicts the assertion, made by the French Health Minister and other officials, that Diana suffered multiple internal injuries that left her no chance of survival. This self-serving claim is simply not supported by the facts.

Nor, apparently, has it convinced the Judge, who is heading the investigation into Diana’s death. Instead of accepting this simplistic and exculpatory view, he has requisitioned Diana’s hospital dossier and has requested a detailed report

on her treatment before and after her arrival in the hospital. His decision to delve into Diana's treatment has caused consternation among French medical officials, who insist that they should always be considered above reproach and beyond question.

Such claims notwithstanding, it is the opinion of many experts that a patient suffering from a partial tear of the pulmonary vein would indeed have a chance to survive if the wound was treated quickly enough in the operating room. In researching our book, Scott MacLeod and I consulted numerous specialists on both sides of the Atlantic. The French physicians we interviewed, who admittedly did not have any direct knowledge of Diana's case, would only speak anonymously for fear of violating the strict code of ethics of France's powerful Ordre des Medicines, which forbids physicians to discuss details of doctor-patient relationships. In the polemics that followed the publications of Death of a Princess, most French commentators conveniently ignored these French sources and accused us of basing our analysis only on the views of so-called cooperative American doctors half a world away. This is simply not the case.

Let us look here at some of the expert views we presented, beginning with those of two eminent French specialists.

The first is the chief cardio-vascular surgeon at a major Parisian hospital. Question about this type of injury and the chances of surviving it, he gave us the following response: the pulmonary vein is a large vessel that empties into the left atrium of the hard. It is a large vein, with a heavy blood flow, which can be ripped in the case of a major shock, or deceleration. This leads to a pulling on the vein, which can cause it to snap and rip off. That provokes a hemorrhage in the chest that is very quickly fatal. If it is really torn off, there's mutually no chance of survival. The blood empties out very quickly and, with compression of the heart, the lungs, and then a heart attack, and the person dies were quickly.

The condition is rarely diagnosed, however. The reason, says the specialist, is that people with such injuries generally die before they can be treated. They are usually dead on arrival at the hospital, because they die en route. Like all the lesions affecting the large blood vessels, this one causes such massive hemorrhages that you don't have time to get the victims to the hospital and operate. Such people can die in several seconds or several minutes, so when help arrives and they are transported, they often die before they reach the operating table.

But not always. That depends, this French expert continues, on the extent of the hemorrhaging. If you have a big hole or small hole in the vessel, the blood doesn't flow out at the same rate. Those who arrive alive are the ones who have incomplete ruptures of the vein. That can happen. The proof is that Diana arrived alive in the hospital, so there must not have been a complete rupture.

Another French physician, the head of emergency services at a large Paris hospital, says the fact that Diana did not die immediately of a massive hemorrhage indicates that the tear in the pulmonary vein was either a small one or that it was partially closed, perhaps by a bone fragment from her fracture rip. Thus, in his opinion, it might have been possible to safe her with some luck and intelligence if that was her only internal lesion.

American experts unfettered by France's medical gag rule, where freer to analyze and speculate. One such was Dr. John Ochsner, Chairman Emeritus of surgery at the Alton Ochsner clinic in New Orleans, and one of America's pre-eminent cardio-vascular surgeons. A ruptured pulmonary vein is a rare, rare injury, says Ochsner. The much more common deceleration injury is to the aorta. Once the aorta ruptures, death is instantaneous. That is not necessarily the case with a pulmonary vein, says Ochsner. Because the pulmonary vein is a low-pressure system, the bleeding is less rapid and can kind of clot and form a pseudo closure. The pressure going in there is almost a negative pressure, because of the inspiration from the heart. So the lowest the pressure ever is is when the blood is flowing into the heart. In contrast, when it's going out of the heart (through the aorta), it's the highest pressure. So the reason Diana didn't bleed out right away is that the tear was probably clotting and because the pressure there is so modest.

Would a person in that state have any chance of survival? Sure, says Ochsner, depending on the size of the rent, or tear. If it wasn't too big, they could put the patient on a heart lung machine and just go in and do the repair electively. It's pretty obvious: with that lesion, if you can get them in hospital and on a heart lung machine early enough you can save them. But time is of essence.

Precisely, in the U.S., the standard approach to emergency treatment is "scope and run" meaning accident victims receiving minimal onsite treatment from paramedics and are rushed to the operating room. In France they favor extensive

onsite treatment and stabilization, performed by specialized doctors arriving in fully equipped mobile hospital units. Both systems have their advantages and drawbacks. But the French method, which is excellent in many respects and saves many lives in the aggregate, may not have been the best adapted to a case like Diana's.

As Dr. Ochsner points out, you couldn't try to repair that injury on the scene, you'd have to be in the hospital. Concerning the go slow driving technique to avoid shocks and bumps, Ochsner bristles. Shocks and bumps? You know, if you trying to save a life, you have to get them to the operating room quickly. Asked point-blank if the princess of Wales would have been saved if she had gotten to the hospital faster, Ochsner replies: I can't second-guess anybody. What I'm saying is that if there was a small rent, the patient would have plenty of time. But if it's big enough and slowly bleeding, as her was, something between a minor tear and a complete bleed out, there had to be some resistance of flow with a clot or something. Otherwise she would have bled out. What I'm saying is this: given that she was still alive after nearly two hours, if they have gotten her there in an hour, they could have saved her.

Ochsner's view is supported by Dr. David Wasserman, an American physician with nine years experience in emergency rooms of one of the country's biggest urban hospitals. If they had gotten her to the operating room sooner, she would have had a far greater chance, he says. You could never diagnose that kind of injury in the field. Spending all the time on onsite treatment was absolutely the wrong approach with this patient.

While not accusing any individual medical worker of professional errors in treating Diana - indeed, they clearly followed standard French procedures - Dr. Wasserman argues that the fault lies with the whole French approach to emergency medicine. Stabilizing patients in the field is a mistake we made for decades in the U.S. before we abandoned it in favor of the "scoop and run" method about 10 years ago, he says. Before that, we found we were losing more patients by messing with them in the field than by getting them to the hospital. All kinds of studies have found a major negative correlation between the time spent in the field and patients prognosis.

Dr. Philip Brewer, chief of emergency services at Yale New Haven hospital in Connecticut, fully shares this view. As soon as internal bleeding starts, he says, a clock starts ticking in you have only a limited time to live, he says. The only way to stabilize someone with a major hemorrhage is to stop the hemorrhage. The only place you can do that is in the operating room. It is impossible to stabilize someone in this condition for a half-hour or an hour out on the public road somewhere. Concerning Diana's injuries, a partial tear of the pulmonary vein, Brewer says that it is an injury that is often fatal but not necessarily fatal. Could Diana have been saved? Brewer believes she could have been. She was killed by a drunken driver, but an emergency medical system that was too slow did not save her. Her chances of survival were diminished by a system that took 101 minutes to get her to a hospital that was 6 kilometers away.

Subsequent to the publication of "Death of a Princess", a number of British specialists stepped forward and essentially supported our conclusions. Among them: Dr. Andrew Mason, spokesman for the British Association of Accident and Emergency Medicine; Dr. Peter Craig, former chief of surgery in the British Army; and Dr. Stephen Miles, a specialist in emergency medicine in Royal London Hospital, who declared in the Daily Telegraph that all the resuscitation in the world at roadside wouldn't have saved her. The only way she could have been resuscitated was by operating.

All these expert views point to the conclusion that Diana might have been saved had she been operated on sooner. The indignant French reaction to our book reduced the entire debate to a nationalistic argument over whether American or French emergency medicine was better. One French specialist, vice president of the SAMU, even suggested that we were inspired by crass commercial motives because the French were successfully exporting their system and their mobile hospital units. This is an absurd and unhelpful reaction. We are neither doctors nor exporters. Our only aim was to raise the legitimate question, in light of the objective facts. There's nothing nationalistic about it.

Indeed, the debate between proponents of "scoop and run and onsite stabilization has long been raging within the French medical community itself, as the French Health Minister pointed out following the publication of our book. If we have helped to fuel this debate, then I believe we have made a positive contribution to French emergency medicine, which, like any system, has room for improvement.

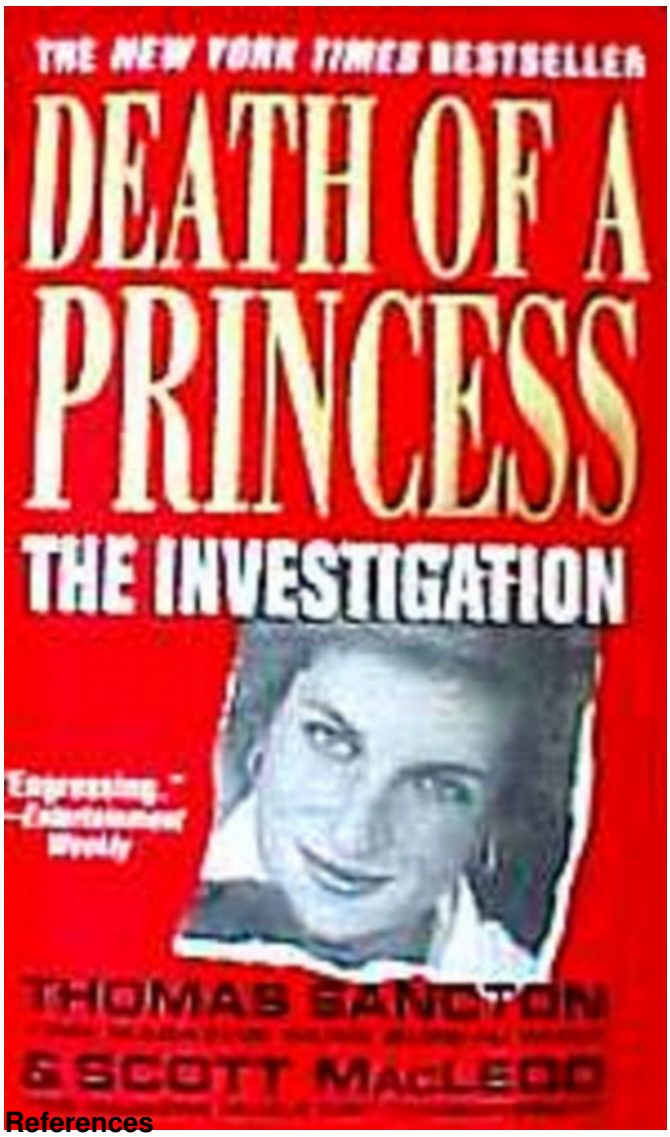
The current French system is of a very high-quality. But is it the ideal approach for every type of emergency? Certainly not, no more than the American system. Different kinds of cases may require different approaches. In an interview dedicated to attacking our book, the vice president of SAMU

noted that major road accidents like Diana's account for only 12 percent of the cases treated by the SAMU. The majority of the cases are comprised by such things as falls, domestic accidents, cardiac accidents and neurologic problems.

Wouldn't it, therefore, make sense to imagine a mixed system adapted to the particular case? A system in which a major road accident victim, with high probability of internal injuries, would be taken quickly to the operating room, while heart attack victims would receive intensive care in the field? One would hope that France, the country that claims to incarnate free thinking and free speech, could approach this question without passion or nationalistic hand-wringing.

Figure 2

Book written by Thomas Sancton (author of this article) and Scott MacLeod



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