



## EDITORIAL

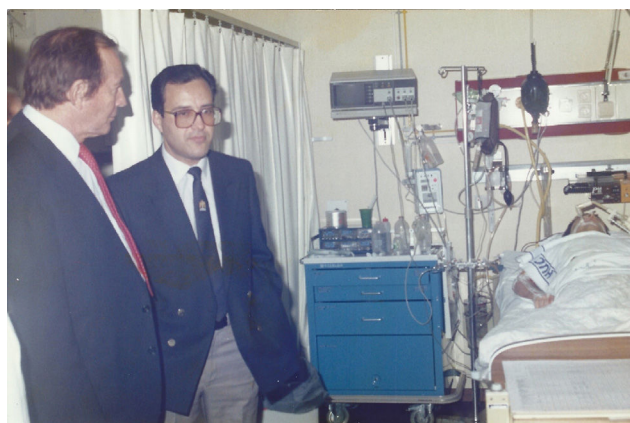
# ‘‘The Operation’’, half a century later

## «A operação», meio século mais tarde

Manuel J. Antunes



Centre of Cardiothoracic Surgery, University Hospital and Faculty of Medicine, Coimbra, Portugal



*‘‘You learn from mistakes, but success gives you the courage to go ahead and do it further’’ – C Barnard.*

December 3, 1967. Exactly fifty years ago. The world was stunned by the news that the first successful heart transplantation had been performed at the Groote Schuur Hospital in Cape Town, South Africa, by a then little known surgeon, Christiaan Neethling Barnard. The heart of a young woman, Denise Darvall, who was overrun by a car in a city, was implanted in the chest of a 54-year old patient dying of end-stage heart failure, Louis Washkansky.

E-mail address: [antunes.cct.chuc@sapo.pt](mailto:antunes.cct.chuc@sapo.pt)

I was then a 4th medical school student in the neighboring Mozambique and, when I saw the newspapers’ titles, I thought the impossible had been done! Scientifically, this milestone was first described in an article published by the end of the month (December 30) in the South African Medical Journal under the title of ‘‘The Operation’’.<sup>1</sup>

Barnard’s deed was hailed by many as one of the greatest triumphs in modern medicine, also because it had a significant impact in other solid organ transplantations. Perhaps the most important medical contribution of Prof. Barnard was his courage to proceed with the transplant of a human heart at a time when other surgeons who, having relentlessly pursued experimental and animal work, hesitated to be the first to do it on a human being. And his prowess was criticized by some of those who did not dare. The unavailability of a clear definition of death deterred many who were afraid of making the jump, especially in the United States, where Barnard had learned and practice the technique of transplantation. It is worth noting that this event occurred before the Harvard Criteria of Brain Death was developed in 1968. Still today, it is not known whether Denise’s heart had had its last beat when removed.

Although the patient survived only 18 days, this feat was a milestone in a new field of life-extending surgery. Prof Barnard’s second heart transplantation was performed less than one month after the first, on January 2, 1968. The patient, a dentist named Philip Blaiberg, survived 594 days after the operation, the longest survivor of the first series of patients submitted to the procedure. Barnard was later to

<https://doi.org/10.1016/j.repc.2017.12.002>

0870-2551/© 2017 Sociedade Portuguesa de Cardiologia. Published by Elsevier España, S.L.U. All rights reserved.

be also the first to perform a heterotopic heart transplant, an operation that he devised himself. Forty-nine consecutive heterotopic heart transplants were performed in Cape Town between 1975 and 1984. He was also the first one to attempt xenograft transplantation in a human patient, as a desperate attempt to save the life of a young girl he could not get off the cardio-pulmonary bypass pump after a redo aortic valve replacement. He was later accused of wrongdoing by her parents!

Barnard's first successful operation was immediately followed by many surgeons around the world. And when most, disillusioned by the poor results, gave up cardiac transplantation, he and only a couple of other surgeons pursued their efforts, until the advent of Cyclosporin, in the 1980's, helped resuscitating this operation throughout the world. Only then, and with the additional experience, the heart transplant operation became standard.

Prof. Barnard turned into an international superstar overnight and was celebrated around the world for his daring accomplishment. "On Saturday, I was a surgeon in South Africa, very little known; on Monday, I was world renown." That's how he recalled the events in December of 1967. Having been multiple times cover of the most important international magazines, he never denied that his new fame pleased him and once said that "any man who says he does not like applause and recognition is a fool or a liar"!

Often considered as a spoilt and arrogant personality, Prof Barnard was nonetheless kind and considerate. Soon after the first transplant, I, then a simple fourth-year medical student in a different country, as mentioned above, wrote him a letter (there was no e-mail!) with four questions about the ethical and legal problems arising from heart transplantation, which were the theme of a dissertation I

had to present to my faculty. To my delight and the surprise of many around me, I received a personal letter from him, answering my questions, one by one. Despite the instantaneous fame, he cared. When I first met him personally, 13 years later, he still remembered this episode.

Prof Chris Barnard died in Cyprus, where he was on holiday, on September 2, 2001, shortly before he was to complete 79 years of life. Ironically, faulted by the organ which was the objective of his professional life. I was lucky to get acquainted with him during my professional passage through South Africa and a friendship later developed. He visited me in the Department in Coimbra in the early 90's (Figure). The first human heart transplantation probably influenced my own choice of a professional career. Like many others'. I believe that he was a great surgeon and a fine personality.

The 50th anniversary of the first heart transplantation was solemnly celebrated in a scientific event held in Cape Town from 2-4 December. I was there, among more than one hundred other cardiac surgeons from around the world, including many pioneers.

Naturally, he was the central "star", but we all missed him very much!

## Conflicts of interest

The author has no conflicts of interest to declare.

## Reference

1. Barnard CN. The operation. A human cardiac transplant: an interim report of a successful operation performed at Groote Schuur Hospital, Cape Town. *S Afr Med J.* 1967;41:1271-4.