Dealing with the Uncertain and the Unexpected: A Report on the First Kidney Transplantations in Aden, Republic of Yemen

Robert D. Fitzgerald MD *
Felix Stockenhuber MD **
Annelies Fitzgerald PhD ***

* Associate Professor, Department of Anaesthesia and Intensive Care, Lainz Hospital, Vienna, Austria & Ludwig Boltzmann Institut for Economics of Medicine in Anaesthesia and Intensive Care, Vienna, Austria
** Professor of Internal Medicine, Chairman of the Department of Internal Medicine, General Hospital, Oberpullendorf, Austria
*** Director of Health Care Communication, Institute for Management and Communication, Vienna, Austria

ANNALS OF TRANPLANTATION, Vol. 10, No. 1, 2005, pp. 44-47

Abstract:
First kidney transplantations were performed in Aden, Yemen in 2003. A difficult medical environment and unrehearsed decision-making process in a country of scant resources were the background of this undertaking. A brief report is given on the medical situation, training and preparedness of the Yemeni medical community for transplant procedures. Initial impressions of psychological aspects of the first ever organ transplantation in this Islamic country are presented.

Key words: Kidney Transplantation; living – Related; Yemen; Psychological Aspects

The Project
In the fall of 2002 the authors were asked to participate in an international team for the conduction of the kidney transplants in Aden, Republic of Yemen to be performed together with the 1st International Congress of Uro-Nephrology. We accepted with pleasure to supply anesthesiological, nephrological and psychological support. Other team members were Abdulla Al-Khader and Faisal A.M. Shaheen from the Saudi Center of Organ Transplantation (SCOT) as organizers and nephrologists, Hussein Al-Kaff and Abdulla Karama Musa from the Yemeni Society for Uro-Nephrology as urologist, Nadey Hakim and Anas Zarka from the United Kingdom as surgeons (Figure 1). Wojciech Rowinski, President of the ESOT, joined the Congress and the team in Aden and helped with valuable advise.

The event took place in March 2003 during the the war in Iraq. This led to warnings by the Austrian government concerning visits to Yemen, but as the preparations for the congress and surgery were well advanced neither we, nor any of the other members of the international team took this into consideration. Already at the airport the extensive security measures were apparent, including a transport in a convoy with a police car with blue lights leading the convoy. However, these measures seemed to be unnecessary as all the people we met, showed an impressive friendliness and hospitality. Already few hours after our arrival we were at the hospital making rounds to see the patients. Donors and recipients were all related, young and the recipients all on hemodialysis. It was apparent, that while they have been prepared that the transplantation would
take place, they did not trust the news, that doctors from Europe would come to perform the transplantations and the perioperative care without any pay, while war was escalating in Iraq. Our appearance was faced by astonishment and a breakout of sentiments, leaving some of them crying while we made our rounds. Visit of the operating theaters and the post-operative care unit led us to believe that extensive preparation was still necessary, especially concerning cleanliness. However, all of our suggestions were taken with enthusiasm and fulfilled perfectly. The whole hospital seemed to be working with us to reach goal and there were not many people in the city of Aden, who did not know about the surgeries to be performed and did not share the enthusiasm which we met at every place in the hospital. In an attempt to optimize the preparations the hospital was closed to the public.

While everything seemed to be prepared, a discussion evolved between the Yemeni Ministry of Health in Sana’a and the Authorities in Aden, concerning the question whether it was possible to perform these transplantations in the setting available at the Aden Hospital. For three days these discussion continued involving various levels of the government and on each day the transplantations were permitted, but only to be cancelled a few hours later. The stress on the transplant team was enormous. While we had to face our patients, who trusted in us and tell them, that we just did not know, if and how the project is going to continue, our surroundings became more and more fierce, as colleagues armed themselves. The third night we spent discussing with a representative of the Yemeni Ministry of Health. The outcome of this discussion was so disappointing, that when the congress was started on the next day, we were all convinced that the transplantations were cancelled. The members of the international team reacted in different ways: while the authors decided, that they will stay on and try to do the possible, others were so disappointed, that they decided to leave and not even to stay for their lectures at the congress.

But on the first day of the congress, a personal phone call of the President of the Yemeni Republic H.E. Ali Abdullah Saleh, put an end to all discussions, when he ordered that the transplantations should be performed without any further delay. While some team members were stopped in the last moment from leaving to the airport, the authors were fetched from the congress hall and was transported under military escort to the hospital. We proceeded with the surgeries immediately and within 24 hours we performed five living related kidney transplantations. When a press conference was held on the third day the donors were all in the conference room, which they reached and left on their feet. More important, the recipients were all well and instantly showed production of urine and decreasing serum creatinine levels. Once again the enthusiasm within the hospital staff, the university and the whole city was overwhelming and was commented in the press and television.

The Psychological Aspects
Stress was not the only psychological aspect the participants of the international team was confronted with. While routine reduced the extent and number of emotionally difficult situations in the European transplant Centers reactions unexpected to the European Doctor and Psychologist confronted us during our whole stay. While waiting on the list for transplantation is already a heavy burden for patients with terminal organ failure in developed countries, it constituted a case of life or death for the five recipients we treated in Aden. They were well aware that no second chance or alternative to their treatment was available. Thus, their emotional situation was extremely tense ranging from outburst of relief, when the team arrived in Aden, to dissapointed
aggression when a delay occurred. As only related donors were accepted the bondage between the donor and recipient displayed sometimes critical levels (Figure 2). One recipient with a hypertensive cardiomyopathy received a kidney from his brother, which like the others showed sufficient function and urinary output. However, in the postoperative period this recipient developed left ventricular failure and pulmonary edema. While he was responding well to the pharmacologic therapy, he accused himself of having harmed his brother, who gave a kidney to him, which he is not making use off. While the brother tried to calm the recipient, the self-accusations progressed into a psychotic state accompanied by a deterioration of the cardiological state of the patient as he refused to accept any drugs, finally leading to the death of the patient.

Another problem constituted the role of the woman in the Arabic society. Already when the international team entered the room with the female patients the first time during the initial rounds in the hospital the reaction was one of panic and shame. This was immediately realized by one of the authors (A.F.), who urged the large group of visiting doctors to leave the room. However, even without being able to communicate with the women in Arabic language, it was possible to establish a close relationship of trust and understanding to the female patients, which endured all the forthcoming troubles of the delayed transplantations.

The Yemeni members of the medical team displayed the same enthusiasm, that we met throughout our stay and which compensated for their lack of knowledge of modern treatments resulting from the isolation of the country. However, the openness to accept critics and to learn from our comments was exceptional and could act as an example for the often appraised projects on development of a failure culture.

As trained nurses were not available, medical students were trained for preparing the patients and on call postoperatively (Figure 3 and 4). While the medical knowledge of these students was far behind that of European Students, they displayed a enthusiasm and a willingness to learn that was extremely impressive. These students supplied a 24 hours coverage for all needs of the patients. They followed the steps of the members of the international team constantly asking for the expertise of the doctors. Yemeni students are suffering from a desperate lack on books or modern medical treatments.

A constant problem for the European doctor who is used to be able to deliver the necessary treatment, when a disease is recognized, is the overwhelming lack of medical supplies and possibilities. One of the authors (F.S.) who visited and worked in a nephrology clinic, was confronted with almost unbelievable medical situations, sometimes only requiring simple treatment, that just cannot be delivered in the setting of the Yemeni medical system. Patients were not only encountered in Clinics but waited in the Lobbies of the Hotels desperately asking for help for themselves or for their relatives. While we collected all the medical supplies we brought with us and distributed them freely to the patients, or took addresses with us to organize some relief from our home countries, even in the short period we were confronted with this constant presentation of such cases, left us with more severe signs of burn-out than much longer periods of our regular work at home would induce.

With all the success of the project the question remains, if it is reasonable to perform kidney transplantations in a developing country, where more simple ways of treatment are sometimes lacking. Transplantations require a sophisticated medical surrounding to cope with the physical and psychological problems. But at the same time we have to face the fact, that while these discussions are going on, people are dying of terminal renal
insufficiency in these countries. Kidney diseases are common in Arab countries and lead in a high percentage to kidney failure. While hemodialysis is possible, means are restricted. At the Aden Conference, data were presented, which were described as scandalous by the presenter, Saaed Mohammed Alwan: 31% of all patients requiring hemodialysis die within two years. On the contrary, patients who can afford it, travel abroad to receive a transplant in countries like India or the Philippines. While the quality and background of these transplantations is often questionable, treatment of transplant patients in Yemen is well established. Thus, with the urgency to prevent patients from needing hemodialysis, to lower costs in the long run and to optimize the allocation of resources, transplantation is a logical alternative when the knowledge and possibilities for the monitoring of immunosuppression are available. In the case of the Aden transplantations, professional monitoring and correct immunosuppression were afforded by the dedicated organizers from the Saudi Center of Organ Transplantation, Abdulla Ahmed Al-Khader and Faissal A.M. Shaheen. Therefore, as the international team has not just performed these transplantations, but also used this occasion to train the Aden team in performing surgery, anesthesia and psychological coverage, we hope that these transplantations will not remain a single event but mark the beginning of a successful and independent transplant program in Yemen.

Correspondence:
Robert D. Fitzgerald MD
Ludwig Boltzmann Institut f.
Medizinökonomie in Anästhesie und Intensivmedizin
Wolkersbergenstraße 1, A-1130 Vienna, Austria
Phone: ++43 1 80110 2701
Fax: ++43 1 80110 2696
Email: robert.fitzgerald@wienkav.at