

## Non-compliance or suicide attempt: a case study

### Noncompliance czy zamach samobójczy – opis przypadku

Robert Pudło<sup>1</sup>, Magdalena Piegza<sup>1</sup>, Michał Zakliczyński<sup>2</sup>, Marian Zembala<sup>2</sup>

<sup>1</sup>Department of Psychiatry, Medical University of Silesia, Tarnowskie Góry

<sup>2</sup>Department of Cardiac Surgery and Transplantation, Medical University of Silesia, Silesian Center for Heart Diseases, Zabrze

Kardiochirurgia i Torakochirurgia Polska 2010; 7 (3): 338–340

#### Abstract

Both noncompliance and suicide attempts are frequent in post-orthotopic heart transplantation (OHT) patients. However, distinguishing between noncompliance and suicide is difficult. A case of a young woman after OHT who withdrew immunosuppressive drugs several times was presented. The last withdrawal led to the patient's death. Psychiatric examination conducted during one of hospitalizations revealed the signs of social phobia with no features of depression. The patient did not show any suicidal thoughts. She even appeared to be frightened by possible consequences of immunosuppression cessation. In spite of this, a consecutive fatal treatment interruption took place. Due to the fact that the patient's place of residence was remote from the transplantation centre, it was impossible to provide her with continuous psychological support. Each case of immunosuppressant withdrawal requires thorough diagnosis with respect to mental disorders and possible suicidal actions. Patients at risk should be covered by continuous psychological care.

**Key words:** heart transplantation, suicide, noncompliance.

#### Introduction

The term "compliance", defined as the degree to which the patient yields to the doctor's instructions, has been criticised for at least ten years or so, as expressing a paternalistic attitude towards patients. For this reason, the term is slowly being supplanted by the word "adherence", as semantically more neutral, or replaced by fully politically correct "concordance". Referring these comments to a group of heart transplant recipients it has to be remembered that survival in this population is conditioned not only by following the doctor's instructions but also by an in-depth self-observation and the patient's active attitude towards his/her disease and treatment. Therefore, according to the

#### Streszczenie

Próby samobójcze i odstawianie leków immunosupresyjnych są częstym zjawiskiem u chorych po transplantacji serca (OHT), zwłaszcza u osób młodych. W niektórych przypadkach odróżnienie próby samobójczej od braku współpracy (*noncompliance*) może być trudne.

W pracy opisano przypadek młodej kobiety po OHT, która kilkakrotnie przerywała przyjmowanie cyklosporyny, co w konsekwencji doprowadziło do śmierci chorej. Konsultacja psychiatryczna przeprowadzona w czasie jednej z hospitalizacji ujawniła objawy fobii społecznej bez objawów depresyjnych i bez myśli samobójczych. Pacjentka deklarowała obawy przed przerwaniem immunosupresji, co jednak nie przeszkodziło jej w wielokrotnym odstawianiu cyklosporyny. Miejsce zamieszkania pacjentki i trudności z dojazdem uniemożliwiły stałe korzystanie z pomocy psychologicznej i psychiatrycznej.

Wydaje się, że każdy przypadek odstawienia immunosupresji wymaga diagnostyki psychiatrycznej i/lub psychologicznej, w tym rozważenia ryzyka samobójstwa. Celowe jest objęcie pacjentów z grup ryzyka wsparciem psychologicznym.

**Słowa kluczowe:** transplantacja serca, samobójstwo, brak współpracy.

authors of this paper, the term "adherence" – in the sense of knowing and obeying the rules of conduct – proves to be most adequate. It seems, however, that in the face of a permanent danger of transplant rejection and death of the post-transplantation patient, semantic nuances are becoming less and less significant. Hence, in this article the above-mentioned terms are used interchangeably.

The problem, specific to post-transplantation patients, is an ambiguous borderline between non-compliance and suicidal actions (or rather lack of action). Some deaths, especially those which result from an interruption or lack of regularity in taking immunosuppressive drugs, cannot be easily interpreted. Thus, there are cases when it is diffi-

**Address for correspondence:** Robert Pudło, MD, Department of Psychiatry, Medical University of Silesia, ul. Pyskowska 49, 42-612 Tarnowskie Góry, Poland, tel./fax +48 32 285 43 58, Email: pudlomaro@wp.pl

cult to differentiate between non-compliance and suicide. This paper presents a case of a young woman after OHT, who stopped taking immunosuppressive drugs a few times, which eventually led to her death.

### Case description

A 20-year-old woman with a history of congestive heart failure due to the family form of dilated cardiomyopathy underwent a procedure of OHT on 19 May 2000. She encountered a number of significant acute rejection episodes (ISHLT grade  $\geq 3A$ ), including two episodes with hemodynamic compromise. For this reason, she was treated several times with high-dose corticosteroids therapy and antithymocyte globulin, and her maintenance immunosuppression comprising basically cyclosporine-A, mycophenolate mofetil and prednisone, was modified to tacrolimus, mycophenolate mofetil and prednisone (while sirolimus and methotrexate were used for a short period of time and discontinued due to poor tolerance). Her first discharge after the transplantation took place 4 months after the surgery. Afterwards, she was admitted several times due to the symptoms of transplanted heart failure and significant acute rejection was confirmed with endomyocardial biopsy. It was noticeable that at the time of admission her immunosuppressive drug concentrations were very low, but continuation of treatment with currently recommended doses resulted in toxic concentrations of tacrolimus and mycophenolic acid. Last admission took place on 30 January 2002. Acute rejection was confirmed with endomyocardial biopsy. Despite the intensive treatment of rejection, pharmacological and mechanical support of the heart, the patient died due to the irreversible cardiogenic shock on 7 February 2002.

At the point of heart transplantation, the patient was a secondary school student. She was brought up by relatives of her deceased mother in a foster family. She had satisfying relations with her family, and she found it difficult to make contact with her peers. In the opinion of the clinical staff, the patient was a nice, slightly shy person. She manifested periods of increased irritability and mood changes. She took her final secondary school examination during the first hospitalization. Having passed the exam, she took up studies at the Faculty of Sociology. She regularly saw the doctor in order to control the concentration of immunosuppressive drugs as well as to have a testing myocardial biopsy. During all instances of her stay at the transplantation centre she seemed to co-operate and to be aware of the consequences of disregarding the doctor's instructions; however, during one of last hospitalizations she admitted that she had not been taking drugs due to permanent and troublesome side effects (nausea, vomiting), which disqualified her as a full member of the student group.

A psychiatric examination carried out during the fifth hospitalization revealed the symptoms of social phobia and immature personality. In spite of a decreased mood, the psychopathological picture did not meet the criteria for a depressive syndrome at that time. Paroxetine and psycho-

therapy were recommended. The patient admitted to anxiety in peer relationships and she avoided social situations leading to discomfort. She did not show suicidal thoughts, but she was ambivalent. She complained of mood changes and lowered self-esteem. She perceived herself as not adjusted to life in the society. She emphasised lack of acceptance in the peer group, which she linked to the side effects of immunosuppression. She considered her life totally unsatisfying; on the other hand, she was afraid of death. Due to the fact that the patient's place of residence was remote from the transplantation centre, it was impossible to provide her with continuous psychological support.

### Discussion

An attempt in defining non-compliance after transplantation was made by Rodriguez who defined a non-compliant patient as the one who misses visits in the medical centre and the laboratory, delays information about problems, does not follow diet instructions and modifies drug doses [1]. Such a definition, although still incomplete, at least shows the range of possible problems. The incidence of non-compliance is difficult to estimate; moreover, the comparison of various findings is a risky task since it is practically impossible to compare drug taking with diet keeping or attending regularly the myocardial biopsy. This point of view may be supported by divergences to be found in the literature concerning the estimation of non-compliance incidence within the range of 1-50% [2]. Some authors divide compliance into various spheres. For example, Dew et al. examined 101 patients and found insufficient co-operation in seven various spheres [3].

The most frequently described effect of non-compliance is death resulting from acute transplant rejection. It is particularly clear later after the operation. For instance, Sigfusson et al. state that 2 out of 5 deaths caused by acute rejection occurring over 5 years after the transplantation result from the interruption of immunosuppressive drug therapy, while Dew et al. estimate that 25% of late deaths are caused by non-compliance [4]. According to Sabine de Geest, effects of non-compliance include acute rejection, chronic rejection, graft loss and increased treatment costs [5]. There have also been cases when immunosuppression interruption was simply one of the ways of committing a suicide [6].

It seems necessary to select a group of patients requiring more psychological or psychiatric attention. Therefore, one of the directions that research may follow is to look for predictive factors of insufficient compliance already during the pre-operation period [3, 7]. Although the opinion that non-compliance is unpredictable is still quite strong, efforts are still being made to establish a list of predictive factors [3, 8].

The comparison of numerous studies indicates that one of the most important demographic predictive factors of non-compliance is age. Problems usually concern children, adolescents and elderly people with the first symptoms of dementia. Problems of the infantile and senile age do not require any comments; on the other hand, while establishing the reasons for non-compliance in very young people,

one should consider the importance (greater at this age) of appearance, minor disabilities and independent lifestyle for finding a partner, a job, etc. The effects of non-compliance are particularly dangerous for the population of young people [9]. Stiller et al. claim straightforwardly that non-compliance is a derivative of immaturity [10].

In the case of our patient, medication noncompliance is fostered by many factors. One of these is the belief that the treatment is unnecessary and difficult to manage. On the other hand, ambivalence and difficulties in functioning may eventually lead to suicide. Education about the adverse effects of medication should be considered when making therapeutic decisions.

A psychiatrist has to bear in mind that non-compliance may result from current mental disorders, such as depression. It seems that this factor, and especially possible ways of treating it, is underrated, although the findings concerning the correlation between depression and non-compliance clearly show that there exists a causal relationship between these two phenomena [11].

### Conclusion

Each case of immunosuppressant withdrawal requires thorough diagnostics with respect to psychic disorders and possible suicidal actions. Patients at risk should be covered by continuous psychological care.

### References

1. Rodríguez A, Díaz M, Colón A, Santiago-Delpín EA. Psychosocial profile of noncompliant transplant patients. *Transplant Proc* 1991; 23: 1807-1809.
2. Laederach-Hofmann K, Bunzel B. Noncompliance in organ transplant recipients: a literature review. *Gen Hosp Psychiatry* 2000; 22: 412-424.
3. Dew MA, Roth LH, Thompson ME, Kormos RL, Griffith BP. Medical compliance and its predictors in the first year after heart transplantation. *J Heart Lung Transplant* 1996; 15: 631-645.
4. Sigfússon G, Fricker FJ, Bernstein D, Addonizio LJ, Baum D, Hsu DT, Chin C, Miller SA, Boyle GJ, Miller J, Lawrence KS, Douglas JF, Griffith BP, Reitz BA, Michler RE, Rose EA, Webber SA. Long-term survivors of pediatric heart transplantation: a multicenter report of sixty-eight children who have survived longer than five years. *J Pediatr* 1997; 130: 862-871.
5. De Geest S, Dobbels F, Fluri C, Paris W, Troosters T. Adherence to the therapeutic regimen in heart, lung, and heart-lung transplant recipients. *J Cardiovasc Nurs* 2005; 20 (5 Suppl): S88-S98.
6. Ortali G. Suicide by interruption of immunosuppressive therapy. *J Cardiothorac Vasc Anesth* 1992; 6: 644.
7. Dobbels F, Vanhaecke J, Desmyttere A, Dupont L, Neveris F, De Geest S. Prevalence and correlates of self-reported pretransplant nonadherence with medication in heart, liver, and lung transplant candidates. *Transplantation* 2005; 79: 1588-1595.
8. Dew MA, DiMartini AF, De Vito Dabbs A, Myaskovsky L, Steel J, Unruh M, Switzer GE, Zomak R, Kormos RL, Greenhouse JB. Rates and risk factors for nonadherence to the medical regimen after adult solid organ transplantation. *Transplantation* 2007; 83: 858-873.
9. Lawrence K, Stillely CS, Olshansky E, Bender A, Webber SA. Further exploration: maturity and adherence in adolescent and young adult heart transplant recipients. *Prog Transplant* 2008; 18: 50-54.
10. Stillely CS, Lawrence K, Bender A, Olshansky E, Webber SA, Dew MA. Maturity and adherence in adolescent and young adult heart recipients. *Pediatr Transplant* 2006; 10: 323-330.
11. Wray J, Waters S, Radley-Smith R, Sensky T. Adherence in adolescents and young adults following heart or heart-lung transplantation. *Pediatr Transplant* 2006; 10: 694-700.