Archives of Suicide Research **4:** 201–206, 1998.

Clinical note

Failed suicide by *Amanita phalloides* (Mycetismus) and subsequent liver transplant: Case report

PAOLO SCOCCO, GIAMPIETRO RUPOLO and DIEGO DE LEO
Suicide Unit, Department of Neurology & Psychiatry, School of Medicine, University of Padua, Padova, Italy

Accepted 9 September 1997

Abstract. The case described is a serious parasuicide (failed suicide) by voluntary ingestion of a considerable amount of highly poisonous mushrooms (*Amanita phalloides*). The liver transplant performed straight afterwards enabled the patient to survive, but after a period of relative well-being in the immediate postoperative period, her pervasive suicidal ideation returned to the fore in all its dramatic ambivalence. The difficulties involved in managing the case and the decision to transplant a living organ in an individual who has just attempted suicide are discussed.

Key words: *Amanita phalloides*, failed suicide, liver transplant, organ transplant criteria

Introduction

Numerous variables appear to influence the methods adopted for completed or attempted suicide, including gender and age of the individual, any underlying psychiatric pathologies, availability of the suicide method, strength of suicidal intent, the impulsive or premeditated nature of the gesture, or the imitative effect of suicidal methods broadcast by the mass media. It is well documented in the literature that males, especially elderly males, are inclined to use "hard" methods (firearms, hanging, etc.) and that schizophrenic patients often use bizarre methods (fire, improper arms, etc.). It is also well known that restricting the availability of a suicide method reduces its use (Clarke & Mayhew, 1989; Lester, 1995), although restricted methods are often replaced by other forms of self-injury (displacement phenomenon), as indicated by Ohberg et al. (1995).

On occasions the meticulous accuracy behind the premeditation and preparation of some suicides, such as the voluntary ingestion of poisonous mushrooms, leaves us speechless. The literature provides us with two articles on such cases (based on a search through Medline, 1966–1995) oriented around medical health care treatment, one in a diagnostic (Homann et al., 1986) and the other in a therapeutic-prognostic context (Delpech et al., 1990).

The case we would like to illustrate concerns a young woman who attempted to take her life by consuming a large quantity of mushrooms from the *Agariceae* family, *Amanita* genus, *Phalloides* species. These are the most poisonous mushrooms available in nature in Italy and owe their lethal action to cytotoxic action of devastating cytoclastic effect (particularly in the liver and kidneys), with a latency period of 48–70 hours.

Case history

M.A. is a young woman of 21 years of age, first of two children, unmarried and living with her parents. Her father, with whom she has always maintained an excellent relationship, is a keen amateur mycologist. As a child, M.A. often accompanied her father to the woods to collect mushrooms. Through her father's hobby, combined with her own personal interest in fungi, she too became very well-versed in the field of mycology.

After completing art school, she took a two-year specialist course in goldsmith's craft.

No psychiatric and/or behavioural pathologies (including acts of suicide) emerged in the patient's personal and family history.

Background to the parasuicide

In the month of April, M.A. had experienced an important sentimental disillusionment. At the end of the course in goldsmith's art in July, she had decided to take a holiday with some girlfriends, which she described as very enjoyable. On her return from vacation, she found her numerous unsuccessful attempts at finding a job intolerably frustrating.

During the summer, the patient was told of the suicide of a (primary school) friend which was described as "coming out of the blue." During our talks with her she remarked on how surprised and vexed she was that "no-one had realized how deeply unhappy that boy must certainly have been."

The parasuicide took place in the month of September (a time when many species of wild mushrooms grow, including *Amanita phalloides*), after careful consideration of the potentially available methods and taking great pains to avoid the more brutal, less reliable procedures, and the ones she deemed more difficult to perform. After long meditation, she had rejected the idea of ending her life in the same way as her peer (poisoning by car exhaust fumes), as she considered the method to be unreliable (believing it would require a long time, thereby enabling third party intervention, or that the car was not sufficiently sealed to ensure success).

On deciding to poison herself with mushrooms, she very carefully studied the quantity required (to kill a human being) and the latency time elapsing before the fatal effect was achieved. She chose the wood where her father took her as a child to collect the mushrooms (i.e. three large *Amanita phalloides*) and to partake of the meal by which she intended to end her life. On her return home, she told no-one of her actions, managing to mask the nausea and intestinal pain for many hours. After roughly 48 hours, overcome by an initial alteration in her state of consciousness, she revealed the whole story to her parents, who immediately took her to the nearest hospital from where, on diagnosis of serious liver damage requiring a transplant, she was transported by helicopter to Padova General Hospital. The liver transplant was successful and the patient rapidly recovered.

The patient received psychiatric evaluation 25 days after the operation (and was subsequently reassessed on two occasions) by a colleague from the Liaison Psychiatric Service, who reported a substantial absence of important Axis I type psychiatric alterations, but evidence of personality traits with predominantly narcissistic and borderline characteristics.

The ostentatious nature and originality of the parasuicide, together with the uncommon (at least in the Italian experience) health care provided (transportation by helicopter and the transplant operation), was reflected in the patient's initial approach to each new therapist and her enquiries as to whether they had "read her story in the papers."

A feeling of "rebirth", coupled with good compliance and (psychological) adaptation to the transplant, emerged from the initial psychiatric evaluations, as did adequate family support.

The patient expressed concrete plans for the future, although some proposals were incompatible with her physical conditions and real opportunities. On her return home, M.A. was taken into the care of the local psychiatric service and provided with supportive psychotherapy.

Relapse of depression

The patient was brought to the attention of the Suicidology Unit of our Department on the re-emergence of a depressive syndrome with frank suicidal ideation.

During the first session, the patient presented severely depressed mood, frequent outbreaks of crying and a high level of free-floating anxiety. Although suicide intent was not explicitly verbalized, she made it understood that "poisonous mushrooms were not the only method for successfully killing yourself." As to her own attempted suicide, she revealed that the books she had consulted provided details on the outcome of ingestion of *Amanita*

phalloides, without specifying that the devastated liver could be replaced by transplant. This "missing detail" had saved her life, but her life was becoming increasingly difficult to bear.

The sense of "rebirth" experienced in the immediate aftermath of the transplant, had given way to feelings of overwhelming frustration and inability to pursue stable goals in everyday life and work, combined with a sense of guilt at having ruined her body. The problems the patient had had prior to the parasuicide (which she considered unaltered), were now aggravated by the consequences of the transplant, namely the scars, the presence of a foreign body inside her, and the burdensome pharmacological (antirejection) treatment.

During a later session, the patient appeared less depressed and no longer verbally suicidal. She expressed the desire not to be treated by psychiatrists from Padua, both because this reminded her of the suffering endured by reason of the transplant and on account of the problems connected with continual transfers from one town to another (roughly 80 kms). She also expressed the desire "to go it alone" for a while.

The patient's parents (who accompanied her to both sessions) were inclined to accept their daughter's requests. After highlighting to them the unusual aspects of the case, the need for vigilance and specialized treatment, and the willingness of our service to intervene, if necessary, the family was advised to contact at least the local psychiatric services, with whom the daughter had previously been in care.

Discussion

Despite the absence of prolonged observation, otherwise permitting closer understanding of the patient's psychodynamics, we consider this extraordinary case worthy of presentation. Alongside the exceptionally rare suicide method of voluntary consumption of lethal fungi, is the consequent transplant of a living organ, and the questions this raises.

The intervention in question is very demanding, highly expensive and certainly not yet part of routine practice, and in the case in point was crowned by success. What is interesting is that had the operation not been so urgent, the patient would not have been recommended for a transplant.

Levenson & Olbrisch (1993), in a comparative study of the various admission criteria for transplant programs, consider recently attempted suicide or a series of suicide attempts, in addition to the presence of suicidal ideation, to be an absolute contraindication for transplant. A non-recent attempted suicide in the history of a patient appears, instead, to be a relative contraindication for transplant, with the imperative being laid on adequate assessment of preced-

ing motives and the total or partial persistence of such motivation. In the case in point, these considerations were set aside in view of the need to save the patient's life.

As we can infer, however, the scars left by the operation were cause for further suicidal ideation, inducing an important change in the young woman's body image, already complicated by the presence of a new organ which she sensed as alien. The transplant had, in fact, been the object of incredulity and disappointment: an eventuality which had been totally overlooked in the patient's long, meticulous plan. Clinical examination brought to the fore a host of contrasting dynamics: rebellion at the power of doctors but admiration for the surgeons who had operated on her; reprehension at the failure of her self-destructive plan but insecurity precipitated by inability to control her own life events; anger at the damage to her body image but relief at overcoming the suffering endured by reason of the transplant. Albeit verbalized only in part, the patient appeared to ascribe her situation to a sort of predestination, condemning her to live despite her determination to die. All things considered, however, during the relapse of depression, this highly fatalistic view of circumstances appeared to be a means of stemming a new rise of self-destructive ideation, which could potentially be positively utilized in an attempt to "go it alone."

Furthermore, it is hoped that overcoming such demanding life events will successfully reinforce the patient's ego and permit a less "randomly" strengthened return to everyday life.

Acknowledgements

The authors would like to thank Dr. Elisa Tomasella from the Department of Neurology and Psychiatry of the University of Padova for her kind collaboration. We also thank Joanne Fleming for her help with the manuscript.

References

Clarke, R.V. & Mayhew, P. (1989). Crime as opportunity . *British Journal of Criminology*, *29*, 35–46.

Delpech, N., Rapior, S., Cozette, A.P., Ortiz, J.P., Donnadieu, P., Andary, C. & Huchard, G. (1990). Evolution d'une insuffisance renale aigue par ingestion volontaire de Cortinarius orellanus. *Presse Medicine*, *19*, 122–124.

Homann, J., Rawer, P., Bleyl, H., Matthes, K.J. & Heinrich, D. (1986). Early detection of amatoxins in human mushroom poisoning. *Archives of Toxicology*, *59*, 190–191.

Lester, D. (1995). The availability of guns and the rates of personal violence (homicide and suicide). *Italian Journal of Suicidology*, *2*, 73–76.

Levenson, J.L. & Olbrisch, M.E. (1993). Psychosocial evaluation of organ transplant candidates. *Psychosomatics*, *34*, 314–322.

Ohberg, A., Lonnqvist, J., Sarna, S., Vuori, E. & Penttila, A. (1995). Trends and availability of suicide methods in Finland. Proposals for restrictive measures. *British Journal of Psychiatry*, *166*, 35–43.

Address for correspondence: Paolo Scocco, c/o Psychogeriatric Service, Via Vendramini 7, 35137 Padova, Italy.
Tel: 739 (0)49 8216263; Fax: 739 (0)49 8216264; E-mail: scoccopl@intercity.it