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Review

Medical futility and the burns patient

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ABSTRACT

Since its inception in the 1980s 'futility' has been a controversial concept. The history of this concept, its definition and application to burns care are discussed from the perspective of a burn surgeon. Although introduced as an objective (value-free) criterion, futility proves impossible to objectivate and judgements about the value of human life always play a role. The roles of the patient, the doctor, the 'politician' and society at large in futility-decisions are discussed.

Contents

Futility is a recent newcomer in medical ethics. Although there are some references in Hippocrates [1] and a very dubious one in Plato [2] (the latter makes his remarks within the context of a programme of eugenetics and euthanasia that only the Nazis during the Second World War were callous enough to put into practice [3]), the term medical futility was virtually unknown in the literature before 1987. Then, in the mid-1990s there was a sudden surge of interest in futility, so much so that some have talked about the 'futility movement', such as Helft et al. [4]:

> The movement to establish a policy on futile treatment is an attempt to convince society that physicians could use their clinical judgement or epidemiological skills to determine whether a particular treatment would be futile in a particular clinical situation. The idea was that once such a determination had been made, the physician should be allowed to withhold or withdraw the treatment, even over the objections of a competent patient [4].

As is evident from this statement the principle of futility combines a number of ideas. First, that whether a treatment is futile or not can be determined by a physician on objective grounds. Although Helft et al. talked about clinical judgement and epidemiological skills, others have argued that futility

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should be based on sound knowledge of the prognosis of the disease in question. The second idea that is part of the futility concept is that, once a treatment is considered futile, there is no need to be concerned about the patient's wishes. The physician can unilaterally decide to withdraw or withhold the treatment. Recently, Sidler et al. [5] have argued that the medical futility debate must be seen within the context of modernity's 'unbridled striving for control, spurred on by ambition and self-importance', that motivates physicians to treat at all costs. Recognizing that death for some patients is inevitable and can only be postponed but not avoided would open the way to a more humane end-of-life care for such patients.

1. Futility – a short history

It is no coincidence that futility became a popular argument in the 1980s and 1990s. The futility movement of this period can be interpreted as a reaction to the patient autonomy movement of the 1970s. This is negatively expressed in the statement by Weijer and Elliott [6] that futility is an 'ethical trump card' for the physician, which can be used to override the patient's values and violate patient autonomy. However, that the patient should ultimately decide what treatment he or she should be given is not under discussion here. What was the issue was how patient autonomy was interpreted in the 1970s under the influence of neo-Marxist and post-modern authors such as Navarro and Foucault. These thinkers interpreted the medical relationship as a power relation between an all-powerful doctor who held all the cards in his hands and a powerless patient. In such an unequal relationship it was also assumed that the person in power would always act out of self- or group-interest [7]. This led one to believe that patients could only be free to exercise autonomy over their own bodies if the doctor gave no direction whatsoever. The physician had to limit himself by stating the facts of the case, and any hint of moral opinion would destroy the freedom of choice of the patient [8]. This has been referred to as the informative or engineering model of the patient–physician relation [9]. The physician as ethical decision-maker was thus discredited. The clinical situations concerned before the formulation of the 'autonomy' principle were well covered by the non-maleficence principle, but now this concept reeked too much of paternalism, and the need arose for a new concept that was, above all, objective.

2. Futility and the objective

Objective concepts, however, require precise definitions, and the search for a definition of futility has concerned most of the discussion in the 1990s. Definitions that were proposed for futility have been classified as [10]:

- Physiological: the intervention does not result in physiological improvement of the patient
- Imminent demise: the patient is suffering from a terminal disease on which the intervention has no effect
- Lethal condition: the patient is suffering from a terminal disease and the intervention is unlikely to reverse this situation
- Qualitative: the intervention is unlikely to result in restoration to a quality of life that is deemed valuable to the patient. In burns this is an important factor in the decision to treat patients with major burns. As Rode et al. [11] remark, is it acceptable or justified in a limited health resource environment to offer costly interventions that result in survival of a 'disfigured, deformed and disabled person with a poor quality of life'?

Defining futility has proven a difficult endeavour and around the year 2000 many had given up on the effort. Futility, it was concluded, needed to be treated 'as the courts treat pornography, acknowledging that while it cannot be defined, we certainly know it when we see it' [12]. A few still insist that not only is futility definable, but that defining it is easy. Chwang [13], for instance, insists that futility merely means uselessness or pointlessness, but then adds that the real difficulty is in identifying which interventions are useless. But this simply exchanges one term requiring definition for another. (That Chwang remarks that the term useless does not require definition as we all know what it means, is merely another form of the pornography argument.) Schneiderman coined in 1990 what has probably become the best known definition of futility, by insisting that an intervention is futile if it had no beneficial effect in the last 100 patients in the same situation (he restated his position in 2011 [14], also Bailey [15]).

Burn units, fortunately, do not collect fatalities at such a rate. At the Burn Unit at Inkosi Albert Luthuli Central Hospital (IALCH) we had 46 deaths in a two-year period. Even if all these deaths were similar – which they were not – it would still takes us four years to reach the 100 patients mark after which we would be entitled to call a treatment futile. Ismail et al. [16] analyzed the reasons for withdrawing or withholding treatment in 63 patients at the West Midlands Regional Burns Service in Birmingham, UK. In patients under the age of 65 burn size and multi-organ failure were the most common reasons, while in older patient co-morbidities were the most frequently quoted reason. The circumstances in which treatment may be considered futile in a burns unit vary, and this increases the time period over which the 100 cases are managed – a time period during which the success of treatment modalities may radically change. Recently, Rode et al. [11] have proposed that burns patients whose probability of survival is less than 10% should be given quality end-of-life care only. However, this proposal was made in a case report of a child with a 98% TBSA burn and a survival chance of $<10\%$, which they decided to treat and who survived to a meaningful reintegration into society. Apparently, decisions about futility are not simply a matter of percentages.

A related set of problems with objective assessment of futility in burns care are clinical. Prognosis in burns patients is often assessed on the basis of percentage burned area, depth of the burn, the presence of inhalational injury, any concurrent or pre-existing pathology and the age of the patient. The accuracy of determination of the total body surface area burned is notoriously poor if done by people who do not see burns on a regular basis, and sometimes widely off the mark.