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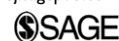
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Abstract

The use of Nasogastric (NG) feeding in the provision of artificial nutrition and hydration at the end of life has, for the most part, been regarded as futile by the medical community. This position has been led chiefly by prevailing medical data. In Singapore, however, there has been an increase in its utilization supported primarily by social, religious and cultural factors expressly to prolong life of the terminally ill patient. Here this article will seek to review the ethical and clinical impact of this treatment and provide some understanding for such decisions in the light of the Duty of Palliative Care [DoPC]. Complemented by virtue ethics theory, the DoPC highlights and seeks to realize the individual case specific goals of care that maximize comfort and quality of life of the patient in the face of rapid attenuation of treatment options and the eminence of the final outcome by considering each of these factors individually in order to provide the best outcome for the patient and the family.

Keywords

duty of palliative care, end of life, nasogastric feeding, palliative care, virtue ethics

Introduction

The use of Nasogastric (NG) feeding in the provision of artificial nutrition and hydration at the end of life has been increasing among palliative care patients in Singapore despite detractors considering such treatment futile. In this article, we raise the issue as to whether the prevailing legal guidance and socio-cultural environment in Singapore is supportive of the clinical evidence to provide this treatment. It is possible that the implementation of such treatment is expected of physicians and indeed countenanced by Singapore's Advanced Medical Directive (AMD) Act 2008.¹ The Act does call for 'reasonable provision of food and water' even at a terminal stage of illness.¹ Here, the accent remains on the word 'reasonable', and it would, on first flush, raise questions about the determination of 'reasonable', and with it, the concept of 'futility'. Clarification ought to be forthcoming from an ethical stance at least. This article will review the ethical and clinical impact of this treatment, and seeks to add balance to the decision-making process leading up to the implementation of NG feeding.

Assessing the clinical evidence

From the experience of this clinician, in a large proportion of cases in Singapore, NG feeding at the end of life is commenced in the hope of nourishing, reviving and indeed prolonging the life of the patient and all too at the behest of emotive calls to prevent 'death by starvation'. The principle clinical role of NG feeding, it

would appear, in these terminally ill patients is to arrest their rapid deterioration. Much of the data, however, regarding NG feeding at the end of life is inconclusive.²⁻⁴ A short course of NG feeding has been found to have no benefit in its attempts to arrest, much less reverse a wasting process which develops over months.^{5,6} Furthermore there has been no evidence of improvement in life expectancy, tumour response or toxicity. In fact, NG feeding has been shown to be detrimental to a patient's quality of life.⁷⁻¹¹ Even its anticipated benefits of reversing sedation and myoclonus (muscle twitching), reducing hallucinations, or increasing a patient's immunity, are inferred from the effects of other means of AN&H (Artificial Nutrition and Hydration), rather than by direct observations and studies of palliative care patients receiving NG feeding.⁷⁻¹⁵

Data also reveals that there exists inherent differences in the pathophysiology of cancer cachexia (weakening and wasting of the body) and starvation, and in fact, cancer patients do not experience starvation at all but a disparate catabolic process that is quite unlike starvation.¹⁶⁻²⁶ Even the fear of death as a result of symptoms related to dehydration seems misplaced. Research has consistently shown that patients without hydration die comfortably and do not suffer.²⁵ Indeed, it is postulated that the cessation of eating and drinking simply mirrors the normal process of dying of old age, and which in turn confers natural analgesic and satiating properties.²⁷⁻²⁹ This then negates the need to persist, let alone commence such treatments simply out of fear of the possible sequelae of dehydration. Rather, these sequelae can and are anticipated and treated pre-emptively with simple oral care that is less invasive and less burdensome than NG feeding.^{15,30} Furthermore, even if there was a life preserving effect, which data does not corroborate, the primary goal of all patients especially those at the end of life is not always to prolong life. If such interventions do have an effect on survival it may be seen as simply prolonging the dying process.²⁵

Concurrently many families feel obliged to countenance NG feeding of their loved ones for fear of having them suffer from hunger pangs. Conversely some patients report being made to feel guilty as a result of having to refuse food. This is not surprising given that many experience early satiety, and an associated reduction in pleasure acquired from eating as a result of immobility, decreased gut motility due to the ongoing effects of chemotherapy, surgery, radiotherapy, medications and disease sequelae, as well as the persistent effects of malabsorption, diarrhoea, vomiting and nausea.^{29,31-33} Furthermore, these patients have reduced nutritional requirements and as a result do not regularly become hungry. It is perhaps unsurprising that symptoms of dehydration or 'starvation' are not common at the end of life.³⁴

The side effects of NG feeding are not insignificant and can be divided into general side effects that are associated with most means of feeding and hydration while specific side effects are effects that are expressly a result of NG feeding. Anticipated general side effects that arise as a result of hydration from NG feeding include: fluid overload, increased urination leading to frequent incontinence, and predisposing to catheterization.²⁹ Other notable drawbacks include skin breakdown, respiratory tract secretions, increased gastric secretions and as such an increase in the frequency of vomiting, ascites (fluid in abdomen), pain and nausea.²⁹ Similarly, hydration has been known to result in increased intracranial pressure predisposing to coma, twitching, fits and irritability. The specific side effects of NG feeding are equally unpalatable and include stomach overload, Re-feed Syndrome, rapid feeding, loss of sphincter control, tube migration, as well as nasal, oesophageal erosions and necrosis.²⁹ There is also a significant and frequently unrecognized impact on the patient's psyche given that a distorted body image is not helped by the presence of a tube protruding from their nose, or indeed the risk of erosions of the nostrils.²⁹ There is also evidence to show that NG tubes predisposes patients to aspiration pneumonias and are themselves prone to blockages in up to 50% of cases within the first two weeks of insertion.^{35,36} Additionally it has been found that many patients with NG tubes become so agitated that they require physical restraint while others require such interventions simply to prevent them self-extubating.^{36,37}

The financial repercussions too are not trivial especially in a society where medical treatment is not fully subsidized.³⁸ This is related to the need for specially trained staff and with that changes and costs of medication and feeding. Similarly the presence of the tube also raises the possibility of the continued administration

of inappropriate medications. Both these factors will in turn increase medical costs and affect discharge plans given the need for family members either to be specially trained or to enlist the help of maids or private nurses or carers.³⁹

Feeding: the ethical considerations

The evidence suggests that NG feeding at the end of life is a ‘futile’ procedure which at best is unlikely to confer significant benefits to the patient, and at worst merely extends the dying process. This certainly meets the definition that Beauchamp and Childress forward.⁴⁰ Present data suggests that there is little possibility of it producing any discernible clinical effect, or indeed if it did, the effects would be so small that it would be negligible. This has to be balanced with significant side effects, and may constitute a further burden to be borne by the patient as he or she dies. Additionally this option of ‘last resort’ has little evidence of tipping the balance of a risk/benefit analysis in favour of its use.

However, Beauchamp and Childress argue that there are times when ‘futility’ is difficult to define.⁴⁰ Indeed, they suggest that one way of viewing this difficulty is what constitutes an ‘acceptable’ percentage of success. However, even this does not get to the crux of the matter. Certainly, defining success in terms of the appropriateness of an intervention ought to involve a number of other considerations, given that some may, when balanced, trump medical determinants. Total and absolute determination by means of clinical evidence risks mitigating the care element of palliative care, and reduces treatment to an algorithm which at best solves only the patient’s clinical needs. Holistic appreciation appears imperative, and can only exist when considerations take into account the patient within a complex interrelated society, whose care and future affects all those involved. It is only when viewed as such can end of life decisions be appropriately balanced. It is upon this platform that we turn our attentions to the Duty of Palliative Care (DoPC).

The Duty of Palliative Care

The idea of the DoPC eschewed here is a means of highlighting these significant differences and the particular conditions that establish palliative care as distinct within the expansive setting that is modern medicine. Given these differences, the DoPC provides a framework of the goals of care that best captures the changing situation both in terms of the rapid attenuation of treatment options and the eminence of the final outcome, with a primary focus on comfort and maximizing the quality of life of the patient.^{41,42}

A noble goal indeed, yet it is difficult to adequately measure, let alone ascertain how best to improve a patient’s quality of life (QoL). What is clearly required for such notoriously difficult discernments pertaining to a patient’s QoL, are judgements that are reproducible, measurable, and with defensible endpoints to ensure accountability within the decision-making process. This, however, may not be so simple, given that in most cases the end points and end result are patient dependent and therefore case specific. It therefore follows that socio-economic, cultural, religious and psychological factors that have such an influence ought to play a significant part in these considerations, thereby making it a complex interplay of factors that affect decision-making, rather than simply being a matter of discerning whether the medical evidence supports its implementation.^{43,44} Improving a patient’s QoL is far more complex. It would therefore follow that if a physician were able to elucidate a patient’s goals of care, this could provide a good surrogate for measurable end points for QoL judgements. These end points would represent the hopes, wishes, values and ideas of the patient and their loved ones, coupled with the practical help that can be realistically generated by supportive teams providing management options and focused on realizing those factors that matter most to patients. These facets can then be translated to discernible goals that can be aimed at improving the patient’s QoL. Additionally, with the waning of the duty to *cure* and to prolong life, and the ascension of the duty to maximize comfort which may utilise treatments that may hasten death, the duty of palliative care allows for the balancing of

conflicting moral principles, providing more 'weight' to be placed on the duty to optimize comfort over the duty to attempt to cure and the use of treatment options that may not always be entertained in 'normal' circumstances and vice versa. This then allows for other treatment options that would not normally be thought appropriate in a curative scenario to be considered among those patients near the end of life.^{41,42} Thus, the provision of NG feeding which has been deemed appropriate for those patients in a curative posture, but may not be with those close to death, based, for the most part, on clinical data, may now experience a change of fortunes when seen in this light.

Supplementing the DoPC with virtue ethics

It is clear that the application and indeed requests for NG feeding goes beyond what many consider 'standard practice'. The review of the clinical data thus far does show a not insignificant number of side effects and morbidities which naturally become more of a concern given that they apply to a group of patients that can ill afford any further burden upon their already tenuous condition. Similarly, the application of families for the implementation of such an intervention while being cognizant of their potential problems also begs elucidation.

Here a cool, objective and detached review of the situation using duty based (deontic) ethical frameworks does little to mitigate these lingering questions but simply highlights the apparent failure of the purely deontic approach. Instead the character of the decision makers becomes increasingly significant within such proceedings. From the point of view of the health professional, an action that potentially goes against the grain of standard practice and even guidelines in some settings needs to be understood. The character of these professionals in standing up for what they are doing in the light of what they have decided and undertaken is important. Simply acceding to the requests or indeed acting out of obligation is hardly acceptable but rather acting in the belief that such action may be in the best interest of this particular patient, is. Motivation to do the right thing by the patient is telling of a health professional's character particularly when resistance exists within the team and convincing dissenters of the need for such an undertaking is required. It is only a health professional that holds to virtuous characteristics and hence virtuous motives and desires that is liable to succeed. Here these characteristics are more likely to be convincing if they are in sync with the health professional's thinking and behaviour or in keeping with values and beliefs that resonate within the health professional motivating her to go over and beyond the call of duty, simply as a cause of her convictions. It is these convictions that define in part her character.

The character of the health professional now plays a significant part in considerations. A virtuous health professional is one that is disposed through the habituation of the best feeling, reasoning and action within specific situations so as to realize the best possible outcome and does so simply as a means to its own end. Indeed, it is through such virtuous actions that a health professional realizes the goal of areteic beliefs which is eudemon or a 'flourishing' life. It follows that virtuous health professionals motivated by their character will act morally and in this case elucidate what it is in the best interests of the patient and the family. They therefore look deeper and work harder to understand and realize the best outcome for the patient and their family. In so doing this requires of the health professional to identify each person that they care for as individuals, distinct from others and act in such a way as to realize what it is their patients would want.

Such an approach would therefore be in keeping with the ethos of palliative care which espouses holistic care. Indeed an areteic approach would consider not just the character of the health professionals, their beliefs, their experience as well as their emotional, psychological and spiritual facets but also require of these health professionals to apply this same approach to their patients and their families with a view to realizing their beliefs of what they would consider befitting of a virtuous life.

In turn, understanding the character of the family and the patient are important in understanding their respective beliefs and ideas of what it is to live a virtuous life. This then involves the consideration of their

respective beliefs, culture, social status, financial situation, spiritual facets as well as their background, values and past experiences which requires of the health professional exhibiting the virtues of respect, patience, compassion and empathy to unravel the motivations for their requests. In turn, through the utilization of emotional responsiveness the health professional will be able to provide the appropriate support to these individuals.

These character traits or virtues as mentioned above are required to aid in the formation of the patient–carer bond. Here the virtues play an integral role within the formation of this bond that will enable the health professional to garner the patient’s trust. Here it is that little bit extra, that extra mile beyond the call of duty that needn’t be extravagant or excessive and may be as simple as providing a cold drink or some basic mouth care to parched lips that aid in the forming of these bonds. It is this concern that imbues the action, the flesh upon the skeletal framework of basic duties that cannot be taught, simulated or fabricated. ‘It is only in giving from the heart, do we receive’ being the ethos. It is this genuine appreciation and concern for another that goes beyond the ‘goading of obligation’ that moral character is ascertained and these essential bonds formed upon which holistic care is based.

Here the importance of the character of palliative care team members is highlighted. The virtues of patience and empathy in dealing with sometimes angry, frequently grieving patients and family members, compassion and emotional maturity in dealing with the physical and emotional distress of so many around them and finally emotional responsiveness in providing the appropriate support to family, patient and colleagues alike is clear. In fact these virtues have become the calling cards or badges of honour that are bestowed upon the members of the palliative care teams.

As a result, professional duty that comes from participating in a palliative care team also requires that certain ideals and practices are met by health professionals. Certainly it can be said that certain virtues are desired indeed required of members. Compassion, patience, empathy and emotional maturity and responsiveness are imperative for any member of the palliative care team. While such virtues can be honed, even learnt, they cannot be fabricated nor garnered simply by following guidelines and orders. These virtues that inspire health professional involvement in palliative care provides an insight into the character of the health professional while illustrating the importance of having these virtues to working within this specialty. Simple compliance to obligation, duty and guidelines will hardly be sufficient to meet the requirements of the professional duty of palliative care.

Indeed palliative care epitomizes the importance of including the motivation, character and virtues of an agent into general ethical considerations, given that the frailty, vulnerability and complexity of patients makes it particularly likely that actions carried out by health professionals in the name of symptom control may instead produce regrettable side effects including death. Simply analysing actions will not fully crystallize the motives and blameworthiness of an action, rather the consideration of the character, motivation and past actions may shed some light to the ethical considerations. Here the assumption is that the moral person, in keeping with their character for being virtuous, is more inclined to act morally.

A virtuous standing is liable to envisage more understanding and draw positive reviews than one who had not possessed by the character, even if they both carried out the same actions for virtuous reasons. Here a better understanding of the motives of the agent can be elucidated from the character of the health professional. The same may be said of the health professional that goes against the grain simply for what she thinks may be in the patient’s best interests; for example in commencing NG feeding in the dying patient despite evidence to show it is unlikely to be beneficial, but does so anyway after considering all the salient facts pertaining to the particular case.

The positive reinforcement of such successes, from those cases where health professionals can provide appropriate attentive, compassionate care and gain as much in return from such endeavours that will enable health professionals to develop and hone these virtues. This then is the formation of ‘practical wisdom’ and a virtuous flourishing life which according to virtue ethics is the goal of life. Indeed, the practical wisdom and

the virtues infused within the health professional's character will hold her in good stead with her colleagues and patient's alike and be translated to other aspects of her life further fulfilling her own life requirements.

Having seen the complementary effect of areteic considerations, it is unsurprising that Beauchamp and Childress advocate that 'areteic' considerations should supplement 'deontic' theories in addressing these frequently complex end of life deliberations that are laden with cultural expectations.⁴⁵ This amalgamation of virtue based (areteic) and duty based (deontic) theories forwarded by Campbell appears to be aptly suited in addressing this conundrum, where there is a need not just to focus on the immediate action but upon the wider facets of emotion, reason and cultural sensitivities.^{45,46}

Confucianism

As part of this better understanding of cultural nuances, some elucidation with regards to Confucianism and its familialism variants is helpful given that most families irrespective of race, culture, social status or religion within this region adopt it in varying degrees. Familialism is defined as 'a social pattern in which the family assumes a position of ascendancy over individual interests', pointing to familial interest and well-being trumping the general interest and well-being of the individual.^{47,48} Given that Singapore remains largely populated by peoples of Chinese extraction, many of whom still hold to these beliefs in varying degrees, it becomes cogent to focus on this popularist ideal of familialism.³⁸

Based on the second century BC teachings of Confucius, the basic precept of Confucianism revolves around the concept of communality where the central concern is not the individual but the family. This 'horizontal' aspect of Confucianist thinking highlights the importance placed on the complex, diverse and delicate communal relationships both within the family and within the larger society. Crudely, Confucianism can be seen to have communitarianism, virtue and care aspects. This communitarianism like aspect then promotes a sense of duty to act for the 'good of the family', which in turn propagates the idea of filial piety.^{49,50} Meanwhile the strength of character and motivation alluded draws parallels with virtue ethics. It is unsurprising then that Confucianism is not easily classified within western ideals.⁴³

Filial piety alludes to the duty of the younger generation to care for the elders within the family unit.⁵¹⁻⁵⁴ This is a duty not to be trifled with, research has shown that meeting expectations while carrying out this duty has a significant effect on the psyche of carers entrusted with this role.⁵⁵⁻⁵⁷ Rather unsurprisingly this act of caring frequently translates into 'doing everything possible' to maintain hope and life of the elders even in the face of what physician's might consider 'futility'.⁵⁸ Failure to meet such expectations is liable to elicit derision from the larger family unit.⁵⁹⁻⁶⁰ Hence it is surprising that families attempt to broach the use of NG feeding given that it is a clear sign that feeding is being carried out and filial expectations are being met.

There is also a hierarchical patriarchal element to the Chinese belief, leading to many decisions being made by the senior members of the family or the eldest son, depending on the family unit.^{49,50} Furthermore, given the interlocking affiliations between the many members contained within the family, decisions frequently involve the whole family unit, particularly where costs and care are involved. Additionally there is also the underlying belief that the family as whole or indeed its senior members are better equipped to deal with the situation and more adept at adjudging the potential response and effects of the news on the patient.^{49,50} Certainly the application of NG feeding would be perceived by the patient, at least according to some families, as reiterating that everything is being done to 'get them better'. Conversely, should fluids and feeding be stopped, it is liable to render patients with a feeling that things were deteriorating and thus become dejected and 'lose hope'. Here, the maintenance of retaining this hope is considered integral to care and recovery and in the pursuit of this hope, nondisclosure and even sometimes misleading the patient through the provision of potentially 'risky' interventions are adjudged to be acceptable. After all, many families argue that it is they, that as a unit will bear this risk, burden and its consequences hence reaffirming their desire for NG feeding for their loved one. Acceptance of the inevitable among some Buddhists

and Taoists is considered inauspicious and even regarded taboo, so some interventions such as NG feeding are carried out in spite of other considerations.⁶¹

Importantly, in considering the issue of NG feeding upon this cultural background, where the provision of food to the dying is an irreproachable facet of filial duty, intricately interweaved with the local and culturally influenced belief that feeding prolongs life and is essential for the maintenance of hope for the patient, a better understanding of the familial motivation can be best understood.⁴³ So too is the belief that the maintenance of hope among the dying is necessary to prevent suffering.^{49,50} Therefore it follows that for many, realizing these aims becomes a goal of care, that may not only be held by the family, but by the patient themselves as a result sometimes of collusion. Indeed, this belief is not only seen among Singaporean Chinese, but also among other ethnic, cultural, and religious groups within the region.^{29,43,62-69} Upon such a background, decision makers and caregivers are expectantly meant to adopt appropriate stance and act to realize these goals. Failure to do so is akin to failing in one's most basic of duties to ones elders and is liable to garner derision from the extended family.⁵⁸ It is therefore unsurprising that some caregivers simply persevere, and indeed seek to request for escalation to NG feeding, even in the face of a dire outlook.⁶⁹⁻⁷¹ Indeed, some go further in seeking alternative treatment options either to replace or supplement conventional interventions in a bid to maintain a semblance of maintaining hope.^{69,72-74}

Here it would seem that realizing these hopes and goals ought to improve the patient's QoL since they may be the only means that a physician can ascertain what facets are most important to the patient. Thus, these factors ought to be taken into consideration as they may then sway the balance in favour of the implementation of NG even in the face of overwhelming scientific data to the contrary. Clinical experience in Singapore has revealed as much: NG feeding has on occasion been started on dying patients based in part on their own previously stated wishes but also upon other facets of holistic care assessment. This wish is hardly surprising given that a significant proportion of elderly Chinese Singaporean patients when interviewed voiced their wish for NG feeding at the end of life.⁶³ Considerations of such factors are imperative in the balancing of treatment options and hence need to be given adequate consideration, rather than be considered side issues or indeed subordinate to the clinical data. This then points to the fact that the risk benefit analysis requires decision making to be case specific.

Conclusion

There is no denying that this premise is based on patients remaining resolute in their wishes and unwavering in their goals as much as they need to be realistic of their possibilities. Given the ever-changing conditions at this stage of life, patients may change their minds or indeed maintain unrealistic goals that cannot ever be met, and may do so despite efforts to rationalize their expectations. There may be patients that upon achieving their goals choose to give them up or reverse their decisions. However, working with the patient and family remain the best way physicians can ascertain realistic goals of care, and realize them in an effort to improve a patient's QoL.⁷⁵ Assertions that QoL may be determined by calls of 'dignity' and 'meaningful life' are given short shrift here, as they do with Beauchamp and Childress, given that they both hold too much value added meaning that is dependent upon the assessor and do not in fact meet the three facets that are hoped any holistic judgement on QoL, which are reproducibility, measurability and defensibility would meet.³¹

Working within this triumvirate of expectations, the issue of holistically assessing the best interests of the patient is equally difficult to discern. This is particularly so if in fact the patient's wish is not parallel to normal practice. Some understanding of the patient's background, beliefs and clinical situation may shed some light. Similarly within this situation, meeting the wishes of the family may sometime be called for if the patient, who now cannot voice his preferences, is shown to have held those beliefs. After all, the definition of Palliative Care advocates equal consideration for the family as they do for the patient, though

understandably the physician must be satisfied that this decision is not going to be too burdensome on the patient and is clear that should it become so, the intervention will be stopped.⁴⁷

Indeed, within the Singapore context, NG feeding is not immediately considered futile not simply as a result of the AMD Act but because there are significant considerations that ought to be balanced out before implementing a plan of action. Veritably, decisions ought to be made in accordance with the DoPC which applies not simply a deontic framework but areteic ideals to ensure that clinical data is not the prime consideration and where each case is considered on its own merits.

Conflict of interest statement

The author declares that there is no conflict of interest.

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