Surgery to quieten the yelling of a demented old man

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Author's abstract

The 84-year-old man's incessant yelling caused him to be unmanageable in all settings – at home with his aged wife, in nursing homes, and on the medical and psychiatric floors of a Veterans Administration Medical Center. A host of behavioural and pharmaceutical interventions were attempted unsuccessfully. Finally, it was proposed that a single, recurrent laryngeal nerve be crushed in order to 'render his voice to be a very acceptable soft tone' (1).

Mr B was typical of many older Americans who retire to sunny Arizona in the southwestern United States. He and his wife resided 2,000 miles away from family in the northern states. Retirement years had been relatively problem-free, as Mr and Mrs B enjoyed good health and sufficient income. Mr B was a veteran of World War I whose working years were spent as a carpenter. He was described by his wife as a mild-mannered man of few words, an apolitical person who did not drink or smoke.

His initial admission to the Veterans Administration (VA) Medical Center in 1975 for cardiac problems was brief and uneventful and he returned home. Five years later he was admitted again. During this hospitalisation the 80-year-old man was confused and agitated. His 78-year-old wife of 60 years reported increasing forgetfulness and that in recent months she had had to supervise his activities more closely. Mr B was subsequently discharged to a Tucson-area nursing home under an agreement where the VA pays for the care.

The next two years were punctuated by a fractured hip and treatment for cardiac problems and pneumonia. Mr B's cognitive capacity continued a marked decline with concomitant yelling. In fact, the patient's yelling grew so incessant and loud that it disrupted his stay at home with his wife in a mobile home park, in the nursing home, or on the medical floor of the hospital. He was eventually admitted to the VA's acute-care psychiatric unit where a host of pharmaceutical and behavioural interventions were totally unsuccessful. At one point Mr B was observed

yelling ('Ahhhh! Ahhhh!') 45 times per minute, non-stop for seven hours.

One intervention into the yelling problem involved the application of bilateral hearing aids connected to a microphone which was placed in front of the patient. Such 'amplified auditory feedback', along with various other creative interventions, were unsuccessful and the patient's yelling continued unabated. Involuntary commitment to a long-term psychiatric hospital was entertained briefly, but rejected as inappropriate for this severely demented individual who was now incontinent of bowel and bladder, losing weight, and subject to recurrent pneumonias. Mr B's wife stated she could not take him home, and all the nursing homes in Tucson refused to accept him because of the yelling.

The staff in the psychiatric unit of the hospital were beginning to weary of Mr B's relentless yelling. Feelings of discouragement, frustration and helplessness were aggravated by the non-auditory effects of noise, such as reported by Cohen and Weinstein. They report that persons are more adversely affected by noise if they cannot control it and if they do not know when it will start and stop (2). Furthermore, they write that such noise narrows one's attention span to only the most salient aspects of the situation, to the neglect of more subtle cues. People exposed to such noise often demonstrate less helpfulness, an overall decrease in social interactions, and have a tendency to exhibit headaches, anxiety, nausea, and other symptoms (1).

After two months of exasperation and thwarted attempts to stem the yelling, an *ad hoc* advisory board consisting of psychiatrists, internal medicine physicians, an ear, nose and throat surgeon and other staff, recommended that a single, recurrent laryngeal nerve be crushed. The committee indicated that the surgical procedure could be done under local anaesthesia and would 'not compromise the patient's ability to clear secretions or to breathe, but would render his maximum voice level to be a very acceptable soft tone' (1).

The committee unanimously endorsed the procedure, as did Mrs B, who by this time felt guilty, ambivalent and anxious. She admitted to this writer that her husband's continued yelling and uncertain

Key words

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disposition had caused her to 'feel like I'm on an emotional roller coaster'.

However, the Surgery Department subsequently refused to approve the procedure on the grounds that it was not without risk, and that it involved non-medical surgery. It was unethical to operate on healthy tissue. Accordingly, the controversial procedure was never done. Mrs B was in the process of making arrangements for the operation to be done at a private hospital when the patient became lethargic. He was transferred to a medical floor of the hospital where he died from pneumonia. The findings of a post mortem include the diagnosis of senile dementia of the Alzheimer's type (1).

A recent literature search and discussion with ear, nose and throat specialists reveals no report of a crush or section of a recurrent laryngeal nerve to diminish a person's hollering or for other purposes of behavioural control. However, the operation is commonly done in the treatment of spastic abductor dysphonia, an organic-neurological condition that is characterised by a hoarse, jerky, or groaning voice. Surgery for spastic dysphonia normally involves unilateral section – as opposed to crushing – of the left recurrent laryngeal nerve. Dedo's and Izdebski's study of 300 patients found negligible surgical complications. Although not a cure for spastic dysphonia, the surgery improves communicative abilities and allows a speech pathologist to intervene effectively and 'fine tune' the voice (3). Other writers report similar results (4,5,6).

Nerve crush to eliminate yelling in some ways parallels psychosurgery, the name given to a variety of neurosurgical techniques which were performed between 1935 and the early 1960s when tranquillising medications proved more effective and less invasive in controlling the agitation, compulsions, intractable pain, etc, of certain individuals (7).

The advent of effective psychoactive drugs in the late 1950s brought about more predictable – and less controversial – results than leukotomies. Controversy surrounding psychosurgery and subsequent social and political pressure in the late 1960s and early 1970s, focused on the moral and ethical implications rather than the medical. This pressure in the US led to the setting up of the National Commission for Protection of Human Subjects of Biomedical and Behavioral Research in 1974 in order to evaluate the need for and appropriate circumstances for psychosurgery.

In addition to drawing a general comparison between laryngeal nerve crush and psychosurgery, an anecdotal parallel of a similar behaviour-change surgery is useful for further comparison. The author's colleague, a doctor, reported that when he was in training in the early 1960s, a patient with Münchhausen's Syndrome was able to cause abnormal electrocardiogram (ECG) readings by voluntarily fluttering his diaphragm. The legally competent patient then presumably consented to surgery on the phrenic nerve which, after crushing, eliminated the man's ability to use his diaphragm to cause abnormal

ECG readings.

Many behaviour-changing therapies in years past, such as that in the anecdote described above, understandably helped pave the way for necessary controls and safeguards. Nevertheless, a behaviour-change operation such as the laryngeal nerve crush, when compared to psychosurgery, can probably be justified in terms of relative safety and efficacy.

Informed consent issues are invariably of importance when there is the dilemma of operating on old and legally incompetent persons. In such cases, it is necessary, in multidisciplinary consultation, to consider the person's functional and cognitive status prior to onset of the acute problem and the attitude of the family. In Mr B's case, he was severely and chronically impaired prior to the onset of his yelling, and family wishes, ie his wife's concurrence with the surgery, were considered. The multidisciplinary committee which reviewed unsuccessful interventions and dispositions to date, and whose purpose for convening was to provide institutional sanction for the surgery, was neither an *ad hoc* nor a permanent bioethics committee. Nevertheless, both the *ad hoc* decision-making committee, as well as the Surgery Department, which subsequently vetoed the operation, weighed non-maleficence and beneficence issues, and applied clinical or situational ethics to a complex situation.

Non-maleficence usually refers to the non-infliction of harm, but beneficence also refers more broadly to the removal of harmful conditions. Mr B's yelling comprised a very bothersome and problematic condition for those around him, although it was not harmful in the sense of being dangerous. Nevertheless, had the operation been done, other persons would have directly benefited in terms of institutional order and the elimination of noise and its unpleasant effects on others.

The patient, too, would have likely benefited from the surgery. Although the operation might not have prolonged Mr B's life, the quality of his life might have been enhanced. As a quieter individual, his presence would have produced a much less negative effect on others, and other persons would probably have been more inclined to give him positive attention, or at least not to avoid him. With the yelling eliminated, he could have lived in a less restrictive setting, and possibly in his own home.

The author, who was very familiar with Mr and Mrs B between 1980 when the yelling problem began and the patient's death in 1984, interviewed Mrs B one year after her husband's death. In the interview she maintained her position, wishing that the operation would have been done for the sake of her and her husband, as well as for the good of others. But her reflection contained no bitterness or ascription of fault towards any party, as she appeared to appreciate the complexity and controversy of the situation.

The overall management of this frail, demented and aged man demonstrated a continual consideration of cost versus benefit, as well as choice between the

perceived best interests of the patient and accepted standards of practice. In the end, the totality of a national health care system for veterans was able to contain but not to ameliorate a protracted and unusual problem for which there were no easy or uncontroversial solutions.

Substituted judgement was impossible to reconstruct in the absence of written evidence attesting to Mr B's wishes in such a situation. However, in retrospect his wife indicated the belief that her husband would have opted for the surgery, as 'he was a kind and quiet man who never wanted to bother other people'.

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References

- (1) Medical record of Mr B.
  - (2) Cohen S, Weinstein N. Nonauditory effects of noise on behavior and health. *Journal of social issues* 1981; 93, 1: 36-70.
  - (3) Dedo H, Izdebski K. Problems with surgical (RLN section) treatment of spastic dysphonia. *Laryngoscope* 1983; 93, 3: 268-271.
  - (4) Costenbader W. Long-term results in spastic dysphonia. *North Carolina medical journal* 1984; 45, 1: 63-64.
  - (5) Kenan P, Riski J. Spastic dysphonia helped by clipping recurrent laryngeal nerve. *North Carolina medical journal* 1983; 44, 6: 381.
  - (6) Aronson A, De Santo L. Abductor spastic dysphonia: three years after recurrent laryngeal nerve resection. *Laryngoscope* 1983; 93, 1: 1-8.
  - (7) Kolb L, Brodie H. *Modern clinical psychiatry*. Philadelphia: Saunders, 1982: 843-846.
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