Grieving and Breathing

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In John Bowlby's last major work, his biography of Charles Darwin, he pays tribute to Ashley Conway's systematic studies of hyperventilation, which have made Conway one of the world's leading authorities on this topic. Like Charles Darwin, many bereaved people suffer from the symptoms of hyperventilation and it is important for counsellors to recognise these symptoms when they meet them and to give appropriate and effective advice.

Editor

This paper intends to explore the two-way interaction between feelings and breathing, and discuss some clinical implications for bereavement counselling.

The condition of particular relevance is hyperventilation (HV). This is properly defined as 'breathing in excess of metabolic requirements', which means breathing more than is needed. HV, even for relatively short periods of time, brings about a state of hypocapnia, a low level of carbon dioxide (CO_2) dissolved in the blood. A number of physical triggers can lead to HV, including pain, exhaustion, drug withdrawal (including alcohol and tranquillisers), hormonal changes during the menstrual cycle, and fever. Here, however, the concern is more specifically with what is probably the most common cause of HV—emotional arousal. An increase in rate and/or depth of respiration is a normal consequence of emotion, and part of the 'fight or flight' response.

HV reduces the proportion of CO_2 dissolved in the blood, and because CO_2 is acidic in solution, this reduction upsets the blood's balance of acidity and alkalinity. Because blood goes everywhere and affects all cells in the body, HV can produce a very wide range of symptoms, which can often be frightening to the client. An additional problem is that for the doctor the array of symptoms can be misleading, and make accurate diagnosis more difficult.

HV induces a number of important physiological changes in the body:

- *Stimulation and depression of activity.* Initially there is stimulation of nerve cells, but with continued HV this is followed by depression of activity. This process is often reflected clinically in agitation in early stages and weariness later.
- *Heart rate goes up.* Some people are more aware of this than others. The rate may be felt as being rapid and/or irregular as a result of HV.
- *Oxygen dissociation.* As the blood becomes more alkaline as a result of HV, the red blood cells release oxygen less easily. This can have the paradoxical effect that despite the fact that HV involves over-breathing, the cells of the body may actually have less oxygen available to them.
- *Vasoconstriction.* Blood vessels narrow down in response to HV, and this is of particular importance in the cerebral arteries where blood flow and oxygen availability to the brain are reduced.

HV may be chronic (ie going on most or all of the time) or acute (ie breathing may be all right for most of the time, but suddenly switches into HV).

Symptoms

The physical changes described above can cause a wide range of symptoms. Physically the most common include dizziness, light headedness, tingling or numbness, chest pain, muscle tension, blurred vision, headaches, palpitations, breathlessness and exhaustion. Psychologically HV is often associated with anxiety or panicky feelings, occasionally feelings of unreality and sometimes depression. People who HV are often frightened that there is something seriously wrong with them. Sensations actually produced by HV may be misinterpreted by the client as symptoms of an impending heart attack, multiple sclerosis, brain tumour or madness.

The degree of fall in CO_2 might be expected to correlate to some extent with the degree of emotion generated. HV often occurs after bereavement, and may be brought on by a reminder of the loss[1,2]. It is not, however, simply related to the magnitude of the expressed grief, and clinical observation suggests that it may also be associated with *failure* to express emotion.

Anxiety may be worsened if the symptoms experienced are similar to those suffered by the deceased, particularly if the bereaved was a relative. A client's belief that vulnerability is inherited may escalate and perpetuate the vicious cycle of anxiety and symptoms. Focusing on palpitations, breathlessness or dizziness, believed to be similar to the symptoms by the deceased, may be interpreted by the client as reproducing the heart attack, serious neurological problem or respiratory failure that brought about the bereavement.

For those with access to a physiological laboratory the diagnosis of HV can be confirmed by the safe and painless technique of capnography, sampling the proportion of CO_2 from exhaled air. For counsellors and therapists without access to such sophisticated equipment, straightforward observation may be helpful. The pattern of breathing in HV is: (a) often through the mouth (b) almost always involves noticeable movement of chest and neck muscles and (c) the rate may be elevated (18 breaths per minute or more is suggestive of HV). If these signs are observed either continuously or acutely in response to discussion of the bereavement, together with reports of the kind of symptoms listed, it is worth seriously considering whether the client is hyperventilating.

Treatment

By the time HV is identified, a vicious circle has often been established. The emotional distress precipitates HV, the HV causes symptoms, the symptoms cause more distress, this stimulates further HV and so on. There may, therefore, be a number of different levels at which it is appropriate to intervene to break up this cycle, all of which may be important:

- Help the client to understand what is going on. Not understanding increases uncertainty and feel-

ings of being out of control, which exacerbate the HV. Anxious clients presenting symptoms of HV to a general practitioner or casualty officer will often be given a well-meaning reassurance that 'there is nothing wrong'. This is not helpful and can be positively counter-productive. There *is* something wrong if the client is hyperventilating, and the client's perception of this deserves to be respected and validated. Giving information is important, and acknowledging the existence of a problem helps to correct misleading and harmful self-diagnosis.

- Where there are physical symptoms worrying to the client or therapist, it makes sense to have these assessed by the GP or relevant specialist. It is, of course, possible that HV and an organic problem are both present, and screening out serious physical illness can be helpful to all concerned. As low blood sugar levels have been shown to exacerbate some of the effects of HV, encouraging the client to eat appropriately may also have a beneficial effect.
- Restore the CO_2 balance to relieve the symptoms. This can be done in three ways:

(i) Put CO_2 into the system—re-breathing into a bag has an effect quite quickly. Re-breathing into cupped hands may also help.

(ii) Increase the rate of CO_2 production. Using major muscle groups may help—for example by pacing up and down.

(iii) Reduce the amount of air that is breathed. This will restore the acid balance of the blood, calm the nervous system, slow the heart rate, cause the blood vessels to dilate, and allow the oxygen that is present in the blood to be released more easily to the body. It is virtually impossible for a normally healthy person to under-breathe. Teach the client to breathe through the nose, slowly and low down in the abdomen. The chest should barely move. Breathing should be slow and regular, avoiding breath-holding and sighing. Talking may also need to be slowed down.

The first two measures described above are really first aid. The third, if practised, will provide a way not only of helping the client become calmer, but also of maintaining that calmness. Irregular thoracic breathing often becomes habitual, perhaps over a course of years since the bereavement. Retraining to breathe efficiently may well demand some practice from the client, but the benefits are likely to make the effort worthwhile. Clients seem to find breathing exercises much easier to put into practice once emotion has been acknowledged and expressed.

- Deal with the feeling that initiates or maintains the HV. Finding ways to deal with bottled up feelings is often very helpful. Empathetic probing usually reveals a failure to grieve for the lost person. Reasons for such failure to acknowledge and/or express feelings may be many. 'Men don't cry.' 'I didn't have time for my own feelings . . .' 'I had the children to look after . . .' 'I had to keep in control to take my exams/start my new job/prepare for the baby' etc.

Treatment necessarily begins with a sensitive history-taking. Open-ended questioning about the client's symptoms (eg 'When did things seem to start going wrong?' rather than 'When did you first experience the light-headedness?') will often elicit spontaneous replies such as: 'Ever since Mum died.' Often this kind of remark will be qualified by 'I don't know why, but ever since Mum died . . .' HV clients will also often report that they coped surprisingly well with the bereavement at the time. It is interesting to note that the irregular, jerky thoracic breathing patterns seen in these cases is very similar to the breathing pattern of someone who is actually crying.

The first goal of treatment will often be to enable the patient to express grief and to cry. Connections can be made between the recall of the bereavement, and its effect on breathing and the consequent production of symptons. This helps to end the deadlock of: 'is it something wrong with my body or is it all in my mind?' Allowing and encouraging the patient to cry stabilises and slows the breathing pattern and this effect is observable both in the short term, within minutes of crying stopping, and in the longer term too. Of course, sadness may not be the only supressed feeling arising from a bereavement that may be associated with HV. Stress involving surviving family members, anger, a sense of helplessness, fear and guilt can all be significant factors.

HV is often associated with anxiety about losing control in one way or another. Clients are often afraid that if they start feeling an emotion then they will not be able to stop. Any small event or reminder (of which they may not even be consciously aware) which evokes their feelings therefore becomes threatening to them, escalating the vicious circle of anxiety about losing control and HV. The ability to experience the feeling within a non-threatening and supportive relationship, to be able to express it and then find that they can come away from it, and to be able to talk about their feelings, increases their sense of control and prevents escalation. This relieves the anxiety and the HV that follows it.

Physical pain is known to stimulate HV (eg Glynn *et al*)[3], which may have some adaptive benefit in reducing perception of the pain. The same process may also apply to emotional suffering, where HV might help to numb emotional 'pain'. If the emotional pain is expressed, released or relieved, the HV is no longer psychophysiologically adaptive, and can therefore be relinquished.

Therapy in this kind of situation is most effective when flexible. A dogmatic application of a single therapeutic model is unlikely to benefit more than a minority of clients. As breathing and blood CO_2 levels affect thinking and feeling, appropriate interventions may need to take into account physiology, psychodynamics, behaviour and cognition. Different aspects may be emphasised to fit the individual client's needs. A flexible, empathetic, broad-based approach is likely to produce the greatest benefit.

References

1. Burns BH, Nichols MA. Factors related to the localisation of symptoms to the chest in depression. *British Journal of Psychiatry* 1972; **121**: 405-409.
2. Conway AV, Freeman LJ, Nixon PGF. Hypnotic examination of trigger factors in the hyperventilation syndrome. *American Journal of Clinical Hypnosis* 1988; **30**: 296-304.
3. Glynn CJ, Lloyd JW, Folkhard S. Ventilatory response to intractable pain. *Pain* 1981; **11**: 201-211.

Further Reading

Braeshear R. Hyperventilation syndrome. *Lung* 1983; **161**: 257-273.

Lazarus HR, Kostan JJ. Psychogenic hyperventilation and death anxiety. *Psychosomatics* 1969; **10**: 14-22.

Lum LC. The syndrome of chronic hyperventilation. In: Hill OW (Ed). *Modern Trends in Psychosomatic Medicine*. London: Butterworth, 1976, pp 196-230.

Magarian GJ. Hyperventilation syndrome: infrequently recognised common expressions of anxiety and stress. *Medicine* 1982; **61**: 219-236.

Nixon PGF, Freeman LJ. The 'Think test': a further technique to elicit hyperventilation. *Journal of the Royal Society of Medicine* 1988; **81**: 277-279.

NOTICES

Request for Subjects

'I am writing a dissertation entitled 'The Relationship of Psychosocial Variables and Long-Term Bereavement in the Death of a Parent, Spouse or Child'. I need help and can only learn from those who have already gone through the experience of bereavement.

I am looking for subjects between the ages of 18 and 80 who lost a parent, child or spouse ten years ago, with the person who died having been no more than 50 yeas old at the time of death. Participation will consist of filling in a personal data sheet, the Texas Revised Inventory of Grief, the Grief Experience Inventory, and the Coopersmith Self-Esteem Inventory, which will take approximately 1½ hours or less.

If you know of anyone who has experienced such a loss and is interested in participating, please ask them to write to: Virginia A. Simpson, MA, 328 Walsh Road, Atherton, California 94027.'

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