

# The nature of care in the management of lymphoedema; not without laughter!

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Care, laughter, pain, science

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This journal has carried many articles on the technology of care. Several of them have been written by myself. This time I will write about the attitude of care. Technology is all about science, whereas attitude is about humanity.

In 1959, CP Snow, speaking in Cambridge about science and humanity, described them as two cultures, which mostly do not speak to each other (Snow, 1959). Earlier in that century, Sir William Osler who headed medicine in Oxford (1905–19) gave his final lecture on the same theme (Osler, 1919). Sir William is regarded as the father of modern medicine. He had been the first modern physician at Johns Hopkins in Baltimore, USA, where he wrote ‘The Principles and Practice of Medicine’, a textbook that ruled the roost for 40 years at least, ran over many editions and was translated into several languages, all over the world (Osler, 1892).

This year is 100 years since he died in Oxford and we are celebrating him in Oxford with several seminars on the theme ‘For health and wellbeing, science and humanity are one’.

In the management of lymphoedema, clearly we cannot do without science. It helps us to understand the functions, as well as the failure of function of the lymphatics, their

## Abstract

In 1959, CP Snow claimed there were two cultures, science and humanity, that did not speak to each other (Snow, 1959). Previously, the father of modern medicine, Sir William Osler, had written of their role for the best practice of medicine. 2019 marks the centenary of his death, which is being celebrated in Oxford by a series of lectures based on the theme ‘For Health and Wellbeing Science and Humanity Are One’. One of these lectures is about the swollen leg. The understanding of this requires science, also known as care technology, but the application of care to the leg also requires humanity, which is the attitude of care. This attitude ranges from sympathy and compassion to kindness and the bringing of cheer. Contemporary studies of the limbic system of the brain indicate that cheer that includes laughter is probably more desirable than compassion. In the management of the swollen leg, the nature of care deserves a rethink of how best practice can relieve pain and anxiety by the release of endorphins or by switching the autonomic nervous system towards the vagal from the sympathetic. Osler’s extraordinary gift of friendship may be, in 2019, a worthy model.

surrounding interstitium, the permeability of the capillary bed and the effect of overfilled veins, as well as the epidermis, which provides so many of the chemicals influencing the dermis when it is in repair. It is when we use this knowledge to apply care that we meet up with humanity.

Whether the cause is filariasis, cancer, podoconiosis, a genetic defect or just the frailty of old age, oedema is a disability causing great discomfort and disfigurement. The quality of life is poor and we see individuals rejected by their family and community. To help them receive the benefits of science, they need an attitude of care to help them. It has much in common with humaneness, which is one interpretation of humanity and of care. It is used to restore the quality of life and good relations with family and community. It is also a spectrum or range of attitudes from sympathy, compassion and empathy, through kindness, the bringing of cheer and friendliness. Each one of these terms has a meaning and they are by no means all the same. The learning point of this article is that in the management of lymphoedema, they may each have a different effect.

If we return to William Osler and make a study of why he was such a good doctor, we

learn from Sir Arthur MacNalty, who first met Osler as a student at Oxford and went on to become the eighth Chief Medical Officer in the UK that Osler “advanced the science of medicine, he enriched literature and the humanities: yet individually he had a greater power” (Golden, 2003). This “greater power”, he tells us was, in fact, friendship and the bringing of cheer.

An American physician seeking to explain competence and caring writes in a book on professionalism: “Brighten the day with cheerfulness” (Bryan, 2017). Meanwhile, Osler himself wrote: “Hilarity and good humour, a breezy cheerfulness — help enormously both in the study and in the practice of medicine.” He added: “It is an unpardonable mistake to go about among patients with a long face” (Osler, 1906).

I recently gave some thought to how severely injured soldiers end up winning gold medals at the Paralympics. Is it the cheerfulness of Prince Harry that helps? Also how do the Royal Marines or members of the SAS put up with the toughness and bullying of their training? Finally, in the film recently repeated on television named ‘They Should Not Grow Old’, one sees troops in appalling conditions on the Somme, about to go over

the top to their death and they manage to do so after minutes of extraordinary cheerfulness, joking and laughter. It is known as *Esprit de Corps* or *camaraderie*, an antidote for bullying.

Before returning to science for an explanation, two other 'conditions' are worth describing. They are the painful bruising syndrome and stigmatism (Ryan, 1976) and the injuries inflicted in some religious ceremonies mimicking Christ's wounds, without pain nor harm and with complete healing. I have investigated persons bleeding quite severely, in pain, while very compassionate about Christ's wounds. One presented every Friday with urticaria and a bleeding cross on her forehead. Unquestionably, emotion is playing a part in this effect (Kechichian et al, 2018).

I have taken photographs of daggers inserted through the neck and swords inserted above the liver in Malay ceremonies without pain and bleeding and without apparent delay in healing as a scarless injury. I have a DVD of an Indian Yogi lying on a bonfire of burning dry firewood. He says the fire is his friend!

When I was a teenager, hypnotists could still legally plunge knitting needle-like instruments through the upper arm of the hypnotised individual they had brought up onto the stage of the New Theatre in Oxford. I have also seen surgical operations done under the influence of acupuncture.

Before giving a scientific explanation of such pain control, and suggesting you can think of new ways of caring for your patients, let's see what Osler said: "A devotion to science, a saturation with its spirit, will give you that most precious of all faculties — a sane, cool reason which enables you to sift the true from the false in life and at the same time keeps you in the van of progress" (Osler, 1907).

He also wrote: "The man of science is in a sad quandary today. He cannot but feel that the emotional side to which faith leans makes for all that is bright and joyous in life. Fed on dry husks of facts, the human heart has a hidden want, which science cannot supply; as a steady diet it is too strong and meaty, and hinders rather than promotes harmonious mental metabolism" (Osler, 1904).

Osler added: "Science is organised knowledge, and knowledge is of things we see. Now the things that are seen are temporal; of the things that are unseen science knows nothing, and has at present no means of knowing anything" (Osler, 1904).

He also wrote: "Magic and religion control

the uncharted sphere — the supernatural, the superhuman: science seeks to know the world and through knowing it, to control it" (Osler, 1921).

For a while, I thought that explanations might include a form of hypnotism. But we now know much more about the brain and how pain is controlled, as well as the role of the emotions.

I have also learned in India that yoga is effective in the management of lymphoedema and, as a consequence, have learned more about its effects on the nervous system. But while in India, being impressed by how well the patients are doing in The Institute of Applied Dermatology in Kerala, I was also impressed by the manner of the counselling; there is plenty of it. The counsellors do not cry with the patient. They provide hope and with it cheer.

And then British TV has introduced us to chimpanzees and we learn how they benefit from grooming. But what can one learn from all this?

### How the brain works

There is a limbic system of the brain linked to the sensory system and, therefore, involved in pain control. It is linked to parts of the forebrain where foresight, memory, imagination and thoughts about spirits, ancestors and gods can act as controls. One can talk to the amygdala, a part of the limbic system, and influence it by auto-suggestion to direct attention to a localised part of the body.

The brain can release endorphins as substances inhibiting pain and anxiety. They are released by stroking, grooming and massage, as well as by hypnotism (Vanhaudenhuyse et al, 2009). The autonomic nervous system has the sympathetic nervous system and the release of adrenaline to help us suddenly take fright and flight. Much of this is a balancing act opposite an effect triggering the parasympathetic nervous system carried especially by the vagal nerve, mostly on the left of the trunk.

Yoga exercises, especially when uncomfortable, can stimulate the sympathetic nervous system, but mostly, discomfort should be avoided and yoga is used to stimulate the parasympathetic and vagal system. The lymphatic system, which is so dependent on body movements, benefits from yoga because of movement, but also yoga can control the autonomic stimuli causing the muscular walls of collecting lymphatics to contract.

One form of yoga is called laughing Yoga. Oxford workers have shown how social laughter interacts with the limbic system and releases endorphins; it diminishes pain (Dunbar et al, 2002; Manninen et al, 2017).

It is not clear how much the feeling of laughter (the sense of the ridiculous) or, alternatively, the muscular contractions of laughter are the more important. Since the time of Darwin, there has been a belief that facial movements are important and the position of smiling can be mimicked and one can have the same effect by placing a pencil between the teeth.

### How should we manage lymphoedema?

We should encourage movement, we should care for the skin. We should avoid pain and sadness. We should avoid the long face and emphasise cheer. I am impressed by Indian counselling and by the appearance of those that provide it. I have long felt it was more therapeutic in some way than simply the instructions provided.

### References

- Bryan C (2017) Medical Professionalism in the New Millennium: A Neo-Oslerian Call to Caring. In: *Medical Professionalism Best Practices: Professionalism in the Modern Era*. (eds.) RL Brynny DS Paaaw, M Papadakis, S Pfeil. Alpha Omega Alpha Honor Medical Society: Aurora, Colorado pp41–57
- Dunbar RI, Baron R, Frangou A et al (2002) Social laughter is correlated with an elevated pain threshold. *Proc Biol Sci* 279(1731): 1161–7
- Golden RL (2003) William Osler at 150: an overview of a life. In: *The Quotable Osler*. (eds.) Silverman ME, Murray TJ, Bryan CS. American College of Physicians: Philadelphia ppXV11–XXXV
- Kechichian E, Khoury E, Richa S, Tomb R (2018) Religious stigmata: a dermatopsychiatric approach and differential diagnosis. *Int J Dermatol* 57(8): 885–93
- Manninen S, Tuominen L, Dunbar RI et al (2017) Social laughter triggers endogenous opioid release in humans. *J Neurosci* 37(25): 6125–31
- Osler W (1892) *The Principles and Practice of Medicine*. D Appleton and Company: New York, NY pp7
- Osler W (1904) *Science and Immortality*. Houghton and Mifflin: Boston, Mass pp1–83
- Osler W (1906) *The Student Life in Aquanimitas, With Other Addresses to Medical Students, Nurses and Practitioners of Medicine*. P Blakiston: Philadelphia, PA pp469–74
- Osler W (1907) The reserves of life. *St Mary's Hospital Gazette* 13: 95–8
- Osler W (1919) The old humanities and the new science. The Presidential Address delivered before the Classical Association at Oxford. *Br Med J* 2(3053): 1–7
- Osler W (1921) *The Evolution of Modern Medicine*. Yale University Press: New Haven pp527
- Ryan TJ (1976) *Psychosomatic Vasculitis in Vasculitis, stasis and ischaemia. (Major problems in dermatology)*. WB Saunders: Philadelphia, PA pp9
- Snow CP (1959) *The Two Cultures: The Rede Lecture*. Cambridge University Press: Cambridge pp1–52
- Vanhaudenhuyse A, Boly M, Baeteeu E et al (2009) Pain and non-pain processing during hypnosis: a thulium-YAG event-related fMRI study. *Neuroimage* 47(3): 1047–54

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