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Chang and Eng: why did one die when the other did?

For those not familiar with them, or maybe too young to remember them, Chang and Eng were the first pair of conjoined twins to be called 'Siamese'. They were given this description by the circus owner PT Barnum, because their mother was Thai (that their father was Chinese did not matter to Barnum). They were born in 1811. They married two sisters and between them they fathered 21 children. Chang became an alcoholic and suffered a stroke which left him paralysed on his right side, which handicapped Eng as well. Eng remained reasonably healthy.

Chang became ill and died in bed. The doctor who had agreed to come to separate them when one of them died, could not reach them for a few hours, during which time Eng died as well.

An autopsy was performed, but the result was not universally accepted. The doctors decided that Chang had died of vascular difficulties but that Eng had died of 'fright'. A friend of the twins, Isaac Armfield, disagreed when he said that the blood flowed from one to the other through the connection, and that the blood had flowed out of Eng's body.

But, when Chang got drunk, Eng was not affected, and when one of the twins was given asparagus, the typical methyl-mercaptan odour in the urine was not detected in the other twin's urine. A certain Dr Kenneth R Winston writing in a neurological journal said that the death of a second conjoined twin soon after the first is caused by unrestricted shunting of blood to the dead twin who has no vascular tone and who returns little or none of the blood, leading to the death of the second twin by exsanguination.

In the case of Chang and Eng, the vascular connection may not have been very large, but the autopsy did show the lives of the twins to be connected by a very narrow neck in the ligament which joined them. The connection was sufficient to let Eng's blood drain away over the few hours

that it took for the doctor to arrive. He died of blood loss.

From the autopsy findings, it appears that it would have been an easy matter to separate the twins during their lives by cutting the 18 cm band which joined them, but without radiography or other sophisticated tools to examine their circulation, the surgeons would have been very reluctant to take the chance.

Last year, conjoined twins who shared a heart were successfully separated and survived. Unfortunately, none of this was even dreamed of when the original 'Siamese' twins died in 1872.

(Alexander E. *North Carolina Med J* 2001; **62**(2): 66-68.)

Sildenafil improved erectile dysfunction and quality of life in men with comorbid mild-to-moderate depression

A randomised, blinded (patients, clinicians, data collectors, and outcome assessors), placebo-controlled trial with 12-week follow-up in men with erectile dysfunction (ED) and mild-to-moderate depression was conducted to determine if depression affects ED treatment response to sildenafil and if improvement in ED affects depression.

In this trial the subjects were 152 men (mean age 56 years) who had ED for ≥ 6 months (mean duration 6 years); a stable relationship with a female partner for ≥ 6 months; a *Diagnostic and Statistical Manual of Mental Disorders* (4th edition) (*DSM-IV*) diagnosis of depressive disorder not otherwise specified; and a Hamilton Depression Rating Scale score of ≥ 12 . Exclusion criteria included presence of another axis I psychiatric disorder, current use of nitrates or any antidepressant medication, and abnormal serum hormone levels. Eighty-nine per cent of patients were included in the analysis.

Seventy-four men were allocated to flexible-dose (25 - 100 mg) sildenafil begun at 50 mg, and 78 were allocated to matching placebo, both to be taken 1 hour before sexual activity.

The main outcome measures were changes in sexual function, depressive symptoms, quality of life, and adverse effects.

Results

Analysis was by intention to treat. More patients in the sildenafil group were classified as treatment responders (improvement in erections and ability to have sexual intercourse and a score of ≥ 21 on the erection function domain of the International Index of Erectile Function Scale) than patients in the placebo group.

Improvement in ED was highly correlated with improvement in depressive symptoms and quality of life, regardless of treatment type (76% of ED responders v. 14% of ED non-responders achieved depression remission). Treatment-related adverse effects occurred in more patients who received sildenafil than placebo (47% v. 13%, $p < 0.001$).

The results led to the conclusion that in men with ED and mild-to-moderate depression, sildenafil was associated with improved ED. Improvement in ED was associated with improvement in depressive symptoms and quality of life.

(Seidman SN *et al. Am J Psychiatry* 2001; **158**:1623-1630, quoted in *ACP J Club* 2002; **137**: 21.)

The effect of behavioural therapy on urinary incontinence: a randomised controlled trial

To evaluate the effect of a low-intensity behavioural therapy programme on urinary incontinence in older women, a randomised clinical trial for community-dwelling women (at least 55 years of age) reporting at least one urinary incontinent episode per week was conducted. Women were randomly assigned to a behavioural therapy group ($N = 77$) or a control group ($N = 75$). The treatment group had six weekly instructional sessions on bladder training and followed individualised voiding schedules. The control group received no instruction but kept urinary diaries for 6 weeks. After this period, the control group underwent the behavioural therapy protocol. The treatment and control groups were compared, and the efficacy of behavioural therapy for all women (treatment and control groups before and after behavioural therapy) was evaluated.

Women in the treatment group experienced a 50% reduction in mean number of incontinent episodes recorded on a 7-day urinary diary compared with a 15% reduction for controls. After behavioural therapy, all women had a 40% decrease in mean weekly incontinent episodes, which was maintained over 6 months. Thirty women (31%) were 100% improved (dry), 40 (41%) were at least 75% improved, and 50 (52%) were at least 50% improved. There were no differences in treatment efficacy by type of incontinence (stress, urge, mixed) or group assignment (treatment, control).

The authors concluded that a low-intensity behavioural therapy intervention for urinary incontinence was effective and should be considered as a first-line treatment for urinary incontinence in older women.

(Subak L *et al. Obstet Gynecol* 2002; **100**(1): 72-78.)

Factors affecting restarting smoking after bypass operations

What starts a patient smoking again after quitting before a bypass operation? Recently a study was conducted in Turkey to determine the predictive factors of restarting smoking after bypass operations.

The study comprised 84 male patients who underwent an operation for coronary and peripheral occlusive disease. Data were collected by a questionnaire that included questions related to the type of operation, the patient's smoking habits before and after operation, demographic factors, and cardiovascular risk factors.

Results

The interval between the surgery and the survey was 10.4 months. The rate of restarting smoking after surgery was 21.4%. Patient age, type of the operation, preoperative cigarette consumption rate and influence of the patient's family on smoking cessation appeared to be factors predicting a return to smoking.

The researchers found that patients who restart smoking after bypass surgery were younger, had a higher preoperative cigarette consumption rate, had less family support for smoking cessation than those who ceased smoking, and underwent coronary bypass surgery. Clinicians should keep these factors in mind for cessation programmes after bypass operations.

(Cikiricioglu M *et al. J Thorac Cardiovasc Surg* (Online) 2001; **5**(1): www.ispub.com/ostia/index.php?xmlFilePath=journals/ijtcvs/vol15n1/smoking.xml)