

the British Heart Foundation should support it. No results can be expected for some time and meanwhile coronary angioplasty has a place for some patients with refractory angina.

M C PETCH

Consultant Cardiologist,
Regional Cardiac Unit,
Papworth Hospital,
Cambridge CB3 8RE

- 1 Page US, Okies JE, Colburn LQ, Bigelow JC, Salomon NW, Krause AH. Percutaneous transluminal coronary angioplasty. *J Thorac Cardiovasc Surg* 1986;92:847-52.
- 2 Olearchik AS, Magovern GJ. Internal mammary artery grafting. *J Thorac Cardiovasc Surg* 1986;92:1082-7.
- 3 Anonymous. The expanding scope of coronary angioplasty. [Editorial.] *Lancet* 1985;ii:1307-8.
- 4 Sowton E, Timmis AD, Crick JCP, Griffin B, Yates AK, Deverall P. Early results after percutaneous transluminal coronary angioplasty in 400 patients. *Br Heart J* 1986;56:115-20.

Gender reassignment today

Nearly 25 years ago three Danish doctors acceded to the request by a man for hormonal and surgical treatment so that he might live as a woman¹; this report ushered in the practice of gender reassignment for transsexualism. At first most psychiatrists and surgeons opposed the suggestion that such a mutilating procedure should be carried out at the request of a patient who was considered to be mentally deranged if not actually psychotic. A lack of information about the long term outcome of the procedure and the possibility of subsequent litigation was also a major deterrent to medical sanction of gender reassignment.

A few psychiatrists, however, notably Harry Benjamin in the United States and John Randall in Britain, were convinced that the quality of life of their transsexual patients was improved by gender reassignment. A burgeoning scientific and medical interest in gender dysphoria led to the establishment of gender identity clinics in several countries. Many follow up studies of gender reassignment were carried out, and these reports agreed that about 70% of patients who had undergone the procedures of reassignment to the opposite gender were satisfied²; some patients, however, requested a surgical reversal to their former gender and others committed suicide after reassignment.

There are many reasons for poor outcome. The diagnosis may have been wrong and transvestites, homosexuals, or patients with severe personality disorder may have sought such dramatic interventions. Patients may not have been given sufficient explanation of what could be achieved by medical and surgical intervention, or the procedures may have been conducted at such a pace that the enormous problems of successful adaptation to the opposite gender role were not overcome before surgery. Recently, two reports have called for a more cautious approach to assessment, management, and the evaluation of outcome; the 70% "satisfaction" rate must be replaced by a rate nearer 100%.^{3,4}

A recent conference at Charing Cross Hospital showed that interest in the problems of transsexuals and helping them through gender reassignment persists.⁵ Guidelines for the procedure are still to be fully developed.

Such guidelines must entail careful assessment by clinicians with sufficient experience of the problems. Pressure by patients for a hurried pace must be resisted. After several interviews and preferably also an interview with a relative, spouse, or cohabitee the decision may be reached that gender reassignment is a reasonable procedure and is likely to relieve

the tormenting distress and improve the patient's quality of life. When this is the case the stages of the procedures should be discussed. A gender reassignment team should include a speech therapist, who will help not only with voice modulation but with training in gender appropriate behaviour. Access to endocrinological advice is important together with laboratory facilities for assessing the effects of hormonal treatment. Although most transsexuals have never engaged in homosexual activity, a preliminary test for the presence of antibodies to the human immunodeficiency virus is a reasonable procedure; a negative result will reassure surgeons, laboratory workers, and practitioners specialising in removing facial hair.

The patient should gradually be encouraged to adopt the clothing of the opposite gender and enabled to live in the desired gender role. This will entail further interviews with relatives and other key people such as personnel officers. There must be full discussion about the effects of hormonal treatment, including its dangers, and the eventual availability of surgery must be considered. Before referral for surgery the patient should be living largely in the cross gender role and accepted by friends and at work in this role. The patient should have arranged for a change of name on all personal documents except passport and birth certificate.

The function of the gender identity clinic team will not end with surgery, and most patients are pleased to know that they will continue to have the support and interest of the advisers they have come to trust. The need for continued hormonal treatment must be carefully weighed, and at present no certain guidelines exist.

Two authors have advised that the outcome should be evaluated by workers who are not members of the clinical team that has prompted the gender reassignment.^{3,4} This is certainly the next stage in evaluating outcome and must soon be undertaken if the administrators of health services are to be convinced that gender reassignment work should continue to be supported from public funds.

PHILIP SNAITH

Senior Lecturer in Psychiatry,
St James's University Hospital,
Leeds LS9 7TF

- 1 Hamburger C, Sturupp G, Dahl-Iversen E. Transvestitism. *JAMA* 1953;152:391-6.
- 2 McCauley E, Ehrhardt AA. Follow-up of females with gender identity disorders. *J Nerv Ment Dis* 1984;172:353-8.
- 3 Lothstein LM. Sex reassignment surgery: historical, bioethical and theoretical issues. *Am J Psychiatry* 1982;139:417-6.
- 4 Abramowitz SI. Psychosocial outcomes of sex reassignment surgery. *J Consult Clin Psychol* 1986;54:183-9.
- 5 Snaith RP. Report on the international gender identity conference held at Charing Cross Hospital, November 1986. *Bulletin of the Royal College of Psychiatrists* 1987;11:98.

Psychological services to general practice

Patients often think that general practitioners can respond to psychological problems only by prescribing drugs. This misconception may have been confirmed by doctors themselves believing that psychological treatments are often ineffective or unobtainable on the National Health Service. This is particularly sad when psychological treatments are extending cover not only to psychoneurosis but also to problems such as compliance and cardiovascular disease.¹ The training of professionals dealing with these problems has diversified. General practitioners themselves have been

influenced by the modified psychoanalytic approach of Balint, which has helped understanding of the doctor-patient relationship but done less for problem management.² More exciting have been the newer approaches of clinical psychology, medical counselling, behavioural nurse therapy, and medical hypnosis.^{3,6} These treatments are brief and aim at changing the thoughts and behaviour of the patient.

But who does what best, for what type of problem, and in what setting? These questions cannot be satisfactorily answered. Some treatments are offered by many different groups—for example, effective behavioural exposure treatment for phobias may be offered by psychologists, psychiatrists, nurses, counsellors, or general practitioners themselves.⁷ The eventual source of treatment depends less on clinical policy and more on the patchy availability of local resources. Patients should, however, be told which treatments are part of the NHS and are not confined to private practice.⁸ It is difficult to know whom to refer patients to, particularly as many fringe treatments of dubious value are available. Clinical psychology is a well defined professional branch of a respected scientific discipline, but as yet it has no established register of qualified practitioners. Within the NHS applicants for posts are carefully vetted and an appointment implies suitable qualifications and experience, but in private practice no such automatic safeguards apply. The definition of psychotherapist is even less clear: again no register exists, and endless arguments about the value of training and the effectiveness of treatment have bogged down the Rugby conference that has been discussing this issue for some years.

Giving patients clear guidance on the effectiveness of different treatments is difficult. The effectiveness of behavioural treatment for phobic, obsessive-compulsive, sexual, and habit problems is beyond doubt.⁹ And clinical evidence and some research trials also suggest that effective treatments are available for depression,¹⁰ anxiety,¹¹ and various physical problems.¹ Among other approaches Rogerian client orientated counselling, Kelly's personal construct therapy, and Berne's transactional analysis have their enthusiasts, but with many treatments—including psychoanalysis—there is little experimental evidence of effectiveness.

Three things will help the general practitioner in this confusion. Firstly, he should have a good knowledge of local resources, and a telephone call to the district clinical psychologist will lead to an understanding of the local policy for dealing with referrals from general practice. Secondly, he must understand in outline the type of treatment likely to prove effective in particular common problems; he can obtain this by discussion with experienced practitioners, often NHS clinical psychologists, or by reading.^{6,12} Thirdly, he will find useful a knowledge of the addresses of national organisations such as the British Psychological Society (St Andrew's House, 48 Princess Road East, Leicester LE1 7DR), the British Association for Counselling (37A Sheep Street, Rugby CV21 3BX), and the British Society of Medical and Dental Hypnosis (PO Box 6, Ashted, Surrey KT21 2HJ), all of which will provide general practitioners with information about qualified practitioners in a particular geographical area.

Finally, those who wish to increase their own skills could attend the various courses run by organisations such as the British Postgraduate Medical Federation (33 Millman Street, London WC1N 3EJ) and the British Association for Behavioural Psychotherapy (Dr John Gardner, Honorary

Secretary, BABP, Mental Handicap Centre, Gulson Road, Coventry CV1 2HR).

R FRANCE

General Practitioner,
Medical Centre,
Camberley GU17 7LS

- 1 Steptoe A, Mathews A, eds. *Health care and human behaviour*. London: Academic Press, 1984.
- 2 Balint M. *The doctor, his patient and the illness*. London: Pitman, 1974.
- 3 Robson M, France R, Bland M. Clinical psychologist in primary care: controlled clinical and economic evaluation. *Br Med J* 1984;288:1805-8.
- 4 Counselling in Medical Settings Division. *Counselling in general practice: the report of a working party*. Rugby, Warwickshire: British Association for Counselling, 1985.
- 5 Marks IM. *Psychiatric nurse therapists in primary care—the expansion of advanced clinical roles in nursing*. London: Royal College of Nursing, 1985.
- 6 Rowley DT. *Hypnosis and hypnotherapy*. London: Croom Helm, 1986.
- 7 Mathews AM, Gelder MH, Johnston DW. *Agoraphobia—nature and treatment*. London: Tavistock Publications, 1981.
- 8 Trethowan WH. *The role of psychologists in the health service*. London: HMSO, 1978.
- 9 Marks IM. *Behavioural psychotherapy*. Bristol: Wright, 1986.
- 10 Blackburn IM, Bishop S, Glen IM, Whalley LJ, Christie JE. The efficacy of cognitive therapy in depression. *Br J Psychiatry* 1981;139:181-9.
- 11 Jannoun L, McDowell I, Catalan J. Behavioural treatment of anxiety in general practice. *Practitioner* 1981;225:58-62.
- 12 France R, Robson MH. *Behaviour therapy in primary care—a practical guide*. London: Croom Helm, 1986.

Runners' anaemia: a paper tiger

Extremely well trained athletes often have haemoglobin concentrations at the lower end of the normal range or 5-15 g/l below it.^{1,2} Continual hard physical training also seems to produce a tendency to iron deficiency^{3,5}; the serum ferritin concentrations of athletes tend to be low, and they are likely to have reduced bone marrow iron stores. In one study the haemoglobin concentration of athletes was raised by treatment with iron.⁵ Athletes may also have occult blood in their faeces from gut ischaemia, and haemoglobin in their urine from intravascular haemolysis. It has been thought that these blood losses might cause the low haemoglobin concentration in athletes. Should, therefore, determined athletes and even joggers be routinely screened for low haemoglobin concentrations and treated with iron when necessary?

The answer is no. In most of these athletes the blood findings that suggest anaemia have alternative explanations. The low haemoglobin concentration of athletes reflects changes in the circulating red cell mass and in plasma volume; as in pregnancy, total body red cells are increased but are diluted by a proportionately greater increase in plasma volume.^{3,6} Hallberg and Magnusson have assessed these changes caused by vigorous and prolonged exercise and have inferred that oxygen availability per unit volume of blood is increased in athletes because of rises in 2,3 diphosphoglycerate concentration in the red cells.^{7,8} As in prepubertal children, this optimises oxygen transport from blood to the tissues. The low haemoglobin concentration seen in athletes is thus usually of no pathological importance, although an athlete may—just like anybody else—have a serious cause for his anaemia.

The reduction in serum ferritin concentration seen in some athletes has been explained by iron stores shifting from reticuloendothelial tissues to extramedullary sites, especially in the liver.⁴ Direct evidence of liver iron stores in athletes is not available to support this hypothesis, but the shift is postulated to arise from hepatic uptake of haemoglobin-haptoglobin complexes formed during slightly increased intravascular red cell lysis in stressed tissues, such as