of serum vitamin B12, serum folate, plasma parathyroid hormone, and serum aluminium concentrations; haemoglobin electrophoresis; and probably bone marrow biopsy. Clues to the presence of blood loss or haemolysis are a sudden fall in the haemoglobin concentration, a need for repeated blood transfusions, and a reticulocytosis (of at least 3-4%) in the absence of any rise in the haemoglobin concentration. All other causes of erythropoietin resistance yield a low reticulocyte count.

The presence of fragmented red cells on a blood film, a positive Coombs test, reduced serum haptoglobin concentrations, and a raised serum bilirubin or lactate dehydrogenase concentration may strengthen the evidence for haemolysis. The value of testing for faecal occult blood in this context is debatable; three negative results make significant gastrointestinal blood loss unlikely. Three positive results associated with a significant reticulocytosis, absent haemoglobin response, and negative haemolysis screen merit further investigation of the gastrointestinal tract or a trial of gastric acid suppression or both.

Measurement of the C reactive protein concentration is the best screen for infection or inflammatory disease since the erythrocyte sedimentation rate is unreliable in renal failure. If the C reactive protein concentration is less than 10 mg/l then appreciable inflammatory disease causing suppression of erythropoiesis is unlikely. If the concentrations are raised then further investigations may be needed, such as blood and urine cultures, measurement of autoantibodies and viral titres, a Mantoux test, chest radiography, abdominal ultrasonography or computed tomography, isotope bone scanning, and echocardiography. If the serum concentration of parathyroid hormone is raised a bone marrow biopsy may be indicated to assess the degree of marrow fibrosis; if this is severe then erythropoietin is unlikely to be effective and should probably be stopped. A bone marrow biopsy can assess the adequacy of erythroid precursor tissue and screen for conditions such as aplastic anaemia or myelodysplasia.[11] A raised serum aluminium concentration should prompt a desferrioxamine challenge test and possibly a bone biopsy as a positive diagnosis would merit long term chelation treatment with desferrioxamine as an adjunct to erythropoietin.

In a patient in whom erythropoiesis is suppressed by infection or inflammatory disease one of the hardest decisions is what to do about the dose of erythropoietin. Some centres will stop treatment until the infective episode is treated while others increase the dose to high levels with no effect, but at considerable cost. The problem with stopping treatment is that the haemoglobin concentration often falls even lower than it was at the start of treatment, and there is often difficulty in re-establishing a response to erythropoietin. This effect is unexplained but may involve suppression of endogenous production of erythropoietin. A reasonable compromise would be to continue the same dose throughout the infective episode (accepting that a blood transfusion may also be required) and wait for the haemoglobin response to be restored. This may be several weeks after the clinical recovery.

Identifying the cause is not always easy, and multiple factors may contribute. Every case of resistance to erythropoietin warrants thorough investigation, particularly as the treatment is expensive and some causes are easily corrected. Other causes may be permanent. As our understanding of erythropoiesis grows and the contribution of other cytokines and growth factors in this process is elucidated,[17] new treatments might become available that increase responsiveness to erythropoietin.

IAIN C MACDOUGALL
Senior registrar

Department of Nephrology,
St Bartholomew's Hospital,
London EC1A 7BE

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A policy framework for commissioning cancer services

Unlikely to be fundable within available resources

Hippocrates cannot have been overconfident about the provision of care for patients with cancer. In one of his aphorisms he pointed out that patients with internal cancers who were treated survived a shorter time than those who were left alone. Some 25 centuries later informed voices have decried Britain's cancer services, some likening progress through them to the vagaries of the lottery. While this analogy is overly pessimistic, the failure of health planners to respond to the improved understanding and treatment of cancers has more than justified much of the recent criticism.

Many doctors also remain ignorant of what is achievable with good cancer care, which is hardly surprising, given the low priority accorded to teaching on cancer as an integrated subject within the undergraduate curriculum. Already substantial requirements exist for current services—at any time about one million people in Britain have cancer. And with cancers occurring more commonly in older age and people living longer, cancers will be an important and increasing call on our health services for the foreseeable future.

So far in Britain planning for cancer services has focused on local developments without addressing the need to integrate

services on a larger scale. Several groups led by specialists have attempted to redress the balance,[1-3] but the political will to debate or adopt their recommendations has been missing. The publication last year of the report from the Association of Cancer Physicians was opportune.[4] Its proposals for a countrywide network of services, linking cancer units in selected district general hospitals with specialist cancer centres in major hospital complexes, have now been echoed with full authority in a report prepared by the Chief Medical Officers' Expert Advisory Group on Cancers.

A Policy Framework for Commissioning Cancer Services emphasises the roles of the many groups involved in the care of patients with cancer and how they should interrelate.[5,6] Professional bodies, health departments, purchasers, providers, royal colleges, university departments, and charities are all given a role in implementing the report's proposals. The report calls for more non-surgical oncologists and minimum workload requirements for cancer surgeons. Many hospitals have already established the recommended pattern of care; in others, surgeons with smaller practices will have to stop doing cancer surgery. The report encourages purchasers to foster this change through contracts specific for each tumour site. But such a move would certainly fragment the purchasing and almost certainly the provision of care, by shifting the emphasis towards specific cancers rather than providing an integrated service to all those with cancer.

All parties will find much to welcome in the report, although purchasers and providers will be concerned by the accompanying letter from the chief executive of the NHS Executive. It advises that the recommendations should be funded from "within available resources." But idealism and available resources are unlikely to be enough. Although reorganisation may result in some overall savings, extra costs are likely to be substantial in the short term. The need for more staff and the long term underinvestment in cancer services make some financial commitment unavoidable if the proposals are not to be stillborn. Equally important will be the creation of a supraregional coordinating body with executive authority: an enforceable national strategy must exist to prevent the inappropriate self recognition of hospitals as "centres" or "units" and to ensure the proper establishment of the network.

MICHAEL WHITEHOUSE
Professor of medical oncology

Wessex Medical Oncology Unit,
Southampton General Hospital,
Southampton S016 6YD

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Management of first trimester spontaneous abortions

May be expectant treatment for up to three days in selected cases

Many procedures in obstetrics and gynaecology are ripe for re-evaluation. On the basis of a recent paper,[1] surgical evacuation of the uterine contents after all miscarriages in the first trimester may be one of them.

The rationale for curettage as the correct management is based on a series of cases published when parity, general health, and the incidence of criminal abortion differed greatly from now.[2] Doctors reported infection (due to retained products of conception after criminal abortion) and bleeding against a background of anaemia, multiparity, and poor nutrition. Although the incidence of severe adverse events was low, their severity warranted complete evacuation of the uterus. In addition, immediate curettage was thought to decrease the duration of convalescence and avoided the need for routine follow up. All curettings were sent for pathological examination, and procedures were introduced to flag up abnormal reports and recall patients when necessary.

We do not know the natural course of a first trimester clinical spontaneous abortion in current populations because of universal curettage. But a recent prospective randomised trial offers some insight: 81 of 103 patients randomly allocated to expectant management had no ultrasonographic evidence of retained products of conception three days after enrolment to the trial.

The study group was selected from 550 consecutive patients attending the outpatient clinic at Sahlgrenska University Hospital, Sweden. One hundred and sixty patients fulfilled the entry criteria: human chorionic gonadotrophin concentrations above 50 IU/l, incomplete or inevitable spontaneous abortion at less than 13 weeks' gestation, and ultrasonographic assessment of intrauterine tissue of over 15 mm but less than 50 mm anteroposterior diameter. Of the 103 patients, 19 had retained tissue greater than 15 mm at the three day follow up and subsequently had curettage. The control group (comparable in terms of intrauterine volume, and progesterone and human chorionic gonadotrophin concentrations on entry) had the traditional curettage immediately. Short term complications, infection, bleeding, duration of convalescence, and packed cell volume at follow up (day 14) did not differ significantly between the groups. This trial therefore shows that in a carefully selected group of healthy, motivated, well informed women with incomplete or inevitable abortion a substantial proportion will avoid the need for curettage without additional risks in the short term.

Gynaecological units should evaluate their practice in the light of this study and an earlier one in the *BMJ*, which reported the successful medical management of incomplete and inevitable spontaneous abortions.[3] Before moving to non-surgical management of selected women they should review the availability of ultrasonography, their ability to follow up patients, and their current use of theatre time. The best management is not as yet known; further comparative trials seem to be the way ahead.

KEVIN FORBES
Senior lecturer

Department of Obstetrics and Gynaecology,
University of Queensland,
Royal Brisbane Hospital,
Herston 4029,
Australia

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