

Letters to the Editor

Dear Sir,

Pre-operative haemoglobin estimation is essential

At a time of budgetary constraints, Hoare's concern for economics of pre-operative haemoglobin estimation is to be admired but there is more to what meets the eye in his paper (*Journal of Laryngology and Otology* 1993; 107: 1146–1148).

Hoare has correctly stated that the purposes of estimating haemoglobin pre-operatively are to screen for anaemia and to provide a baseline for comparison with post-operative measurements in the event of haemorrhage. By performing surgery on 8 patients with haemoglobin ≤ 10.5 g/dl, he has tried to prove that mild anaemia is no contraindication to surgery since none of the patients suffered any harmful effects. He goes on to conclude that pre-operative haemoglobin is thus unnecessary and rather a wasteful expenditure. But then how would he like to determine whether a patient is mildly anaemic or severely anaemic, if anaemic at all? By clinical judgement or by pre-operative haemoglobin estimation? Clinical assessment of anaemia is very difficult, non-specific and prone to subjective bias. In his own series of 372 patients, anaemia could not be detected clinically in 18 patients but was found on haemoglobin estimation. Because 8 of these patients had their surgery as planned and suffered no complications should not be taken as the carry-home message that anaemic patients would never have any complications.

Anaemia is a disorder characterised by low concentration of haemoglobin in the presence of a normal or near normal blood volume. During induction or maintenance of anaesthesia patients are exposed to the risk of a number of disorders of oxygen transport. The most important of these include arterial hypoxaemia, reduction in blood flow and adverse changes in blood oxygen affinity. Anaemic patients with a reduced oxygen carrying capacity would be less resistant to the effects of these physiological disturbances.

Haemoglobin is the single most important link in the oxygen transport system from lungs to cells as oxygen is bound to haemoglobin during transport. Anaemia by reducing one of the major reserves protecting the tissues from hypoxia, may increase the severity of this complication.

Tonsillectomy and adenoidectomy are the commonest ENT surgical procedures performed in children. Bleeding is the most frequent complication of tonsillectomy and is responsible for the majority of post-tonsillectomy fatalities. Faigel, (1966) found a loss of 12.1 per cent of the estimated blood volume and 18 per cent of the children were noted to have lost 10 per cent of the blood volume. It is true as pointed out by Hoare that acute bleeding reduces the circulating volume but does not affect the haemoglobin concentration initially. In fact, with blood loss there is

loss of haemoglobin as well. By a reduction in the total mass of haemoglobin, oxygen carrying capacity of blood is reduced anyway even if haemoglobin concentration initially does not drop. In a child with pre-operative deficiency of haemoglobin, 10 per cent or so, blood loss at the time of surgery can cause a serious reduction in oxygen carrying capacity of the remaining blood. The haemoglobin concentration ≤ 10.5 g/dl is usually taken as a contraindication to routine surgery but it does not mean that those with haemoglobin < 10 g/dl cannot be operated at all. The decision to operate has to be balanced with the urgency of the surgical procedure. The knowledge that haemoglobin concentration of a patient is low is very important for the anaesthetist as he can make appropriate reduction in drug dosages and adjustments in ventilation and inspired oxygen concentration during anaesthesia. It is particularly true of those with HbS disorders in whom these precautions also minimise the risk of intravenous sickling.

At a time when litigations in medical practice are commonplace, we would not refrain from endorsing the view that pre-operative haemoglobin estimation is important from medicolegal point of view as well. In the court of law, the lack of pre-operative haemoglobin estimation would surely be questioned and it can contribute to the general impression of negligence. The fact that this investigation was not done for economic reasons cannot stand any legal scrutiny.

To us the decision of doing away with pre-operative haemoglobin estimation seems to be only penny wise . . . Common sense suggests that anaemia plays a significant role in perioperative morbidity and even mortality and indeed so in proportion to its severity. However, a very large and carefully controlled prospective study would be necessary to provide statistical evidence to answer this question. In the absence of such data it is a good anaesthetic practice to ensure that prior to an elective operation, the patients are in the best possible condition which must include an optimum haemoglobin concentration. Wyant, (1971) expressed sensibly that we can all write papers to show how we got away with it but surely this evidence does not justify selling short cuts as something particularly virtuous.

Baljit Singh, MD

Ruchi Gupta, MD

S.P.S. Yadav, MD*

Department of Anaesthesia and ENT*

Medical College and Hospital,

Rohtak — 124 001 (India).

References

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Dear Sir

Pre operative haemoglobin estimation in paediatric ENT surgery

Singh, Gupta and Yadav say that common sense suggests that anaemia plays a significant role in the peri-operative morbidity and even mortality of tonsillectomy, but they cite no published evidence in support of this. They present the traditional anaesthetic view of this subject. My reading of the literature failed to find support for the common sense traditional opinion which is why I wrote the paper to challenge it.

The lack of a pre-operative haemoglobin estimation would only contribute to the general impression of negligence if there has been negligence in other areas of care which give rise to litigation. If there is such negligence, then having measured the pre-operative haemoglobin is no defence. Conversely, if there is no negligence in other areas, not measuring the pre-operative haemoglobin is not negligent and would not give rise to litigation. The cardio-respiratory reserve in a fit patient more than compensates for any mild to moderate chronic anaemia. Failure to take an adequate history pre-operatively and to miss symptoms of severe chronic anaemia would be negligent. The maintenance of circulating volume and the early recognition of post-operative bleeding are the most important factors in the safe peri-operative care of tonsillectomy patients.

Testing for sickle cell disease is a separate issue, and I would not dispute that those from at risk groups should be tested.

We do live in a real and cash limited world and the allocation of resources should be based on evidence rather than impression. Measuring the haemoglobin concentration pre-operatively is no substitute for adequate pre-

operative clinical assessment, peri-operative monitoring and post-operative care. Given adequate standards in these areas, then the measurement of pre-operative haemoglobin is superfluous.

T. J. Hoare, F.R.C.S.,
 Senior Registrar,
 ENT Department
 Gloucestershire Royal Hospital,
 Great Western Road,
 Gloucester GL1 3NN.

Dear Sir

Uvulectomy to prevent throat infections

JLO 108: 65–66

Letter to Editor JLO 108:632

Thank you for your comments and we accept that there may be psycho-social reasons for performing uvulectomy that we with our 'Western eyes' do not see. Our intention was really as stated to draw attention to the practice which we felt many otolaryngologists were unaware of rather than to judge the reasons for having it performed. As regards the complication rate we have no accurate figures nor are we or anyone else we suspect likely to obtain them. There have been various severe complications reported and our feeling is that the complication rate is high relative to the same operation performed in a controlled hospital situation with facilities for transfusion and treatment of infection etc. We appreciate however that hospital practitioners are reluctant to perform the operation and the traditional healers are really bowing to local demand. We do accept however that this is a minor procedure and the complication rate per se is likely to be accordingly low.

Dr B. E. J. Hartley,
 SHO Head and Neck Unit,
 The Royal Marsden Hospital,
 London SW3 6JJ.