

Pointers

Hastings Centenary Meeting: Programme of Worcester Clinical Meeting, 21-24 April 1966 (*Supplement*, p. 221).

Sequelae of Radiotherapy for Spondylitis: Dr. W. M. Court Brown and Dr. Richard Doll review 14,554 patients with ankylosing spondylitis treated by x rays. There was an excess mortality not only from leukaemia and aplastic anaemia but also from other cancers arising in heavily irradiated tissues (p. 1327).

Prevention of Tetanus: Dr. A. O. Lucas and Dr. A. J. P. Willis report an increased frequency of tetanus at U.C.H. Ibadan when antitetanus serum was replaced by penicillin prophylaxis (p. 1333).

Self-poisoning: Professor Neil Kessel stresses how often the act is impulsive and discusses prevention (p. 1336). Leader at p. 1323.

Industrial Dermatitis: Dr. F. R. Bettley reviews the difficulties of accurate diagnosis (p. 1340). Leader at p. 1322.

Antibiotic Therapy and Salmonella Excretion: Dr. J. M. S. Dixon reports that antibiotics did not shorten the period of symptomless excretion of *Salmonella typhimurium* in children after food-poisoning (p. 1343).

Tuberculin Response in Cancer: Mr. L. E. Hughes and Mr. W. D. Mackay note a depressed response in some cancer patients, which may be reversed by surgery (p. 1346).

Haemorrhage after Adenotonsillectomy: Mr. H. B. Holden and Dr. J. J. Maher draw attention to the frequency of serious blood loss in children (p. 1349). Leader on this page.

Erythrore in Experimental Cholera: Dr. P. K. Bhattacharya and colleagues in Calcutta report inhibition of *Vibrio cholerae* by erythrore (p. 1351).

Finger-tip Injuries: Grafting without suture (p. 1352).

Current Practice: Mr. M. Ellis writes on "Infections of the Hand" (p. 1353).

Polycystic Disease: Clinicopathological conference (p. 1356).

Group Practice: Centre at Guildford (p. 1362).

Adolescent Psychiatric Patients: B.M.A. Psychological Medicine Group conference (p. 1364). See also *Supplement*, p. 226.

Medical Education in Britain: Professor R. Milnes Walker's views on reform (p. 1365).

Pertinax: "Without Prejudice" (p. 1367).

Postgraduate Medical Federation: Sir John McMichael to succeed Sir James Paterson Ross as director (p. 1379).

G.M.S. Committee: Inquiry into all branches of N.H.S. and debate on B.M.A. Emergency Treatment Service (*Supplement*, p. 224).

G.M.C.: President's address and Disciplinary Committee (*Supplement*, p. 227).

Bleeding after Adenotonsillectomy

While there may be controversy over the indications for removal of tonsils and adenoids the operation remains a common one—possibly the commonest operation in children. And some of them die every year after it. Since the operation is often a matter of choice rather than necessity, these deaths are particularly tragic. A paper by Mr. H. B. Holden and Dr. J. J. Maher in the *B.M.J.* this week (page 1349) draws attention to precautions which may be taken.

Complications, apart from those due to anaesthesia, are likely to be due to loss of blood, and the control of haemorrhage is the most important single therapeutic measure. Scrupulous attention to ligation of bleeding-points will normally take care of the tonsil bed, but the adenoid bed cannot be reached in the same way, and thus even in the most skilled hands there is likely to be an appreciable loss of blood from it. In Holden and Maher's short series the average loss after adenoidectomy alone was 77 ml., as compared with 128 ml. when tonsils were removed as well. In their larger series of 50 adenotonsillectomies performed by one surgeon and anaesthetized by one anaesthetist Holden and Maher found no difference in loss of blood whether halothane or ether was used, but they do point out that laryngospasm, gagging, or straining produced by imperfect anaesthetic technique may materially increase the amount of blood lost at operation.

Surgical and anaesthetic technique can therefore keep loss of blood during tonsillectomy down to a certain extent, but even under the sophisticated conditions of a London teaching hospital and in skilled hands the loss of blood was more than 10% of the total blood volume in 18% of Holden and Maher's cases. This is the same figure as W. E. Spoerel, L. W. Hersey, and R. A. Greenway¹ reported in 197 children. A child losing more than 14% of his blood volume in a short time (Holden and Maher's average time for operation was 12.4 minutes) will undoubtedly require transfusion. A child may safely lose 10% of his blood volume, but post-operative bleeding in these cases, which cannot be measured, must be dangerous. Spoerel and his co-workers recommend measuring the content of the suction apparatus to detect those children who may be in urgent need of fluid replacement. A. S. Shalom² said they amounted to 40% of the cases. Provided these children are identified, and blood is cross-matched for them, fatalities due to post-operative haemorrhage can result only from unrecognized bleeding. This may be masked either by the effects of sedative drugs or by the child's swallowing blood and not vomiting it up. The trained nurse can recognize the gulping of blood down from the pharynx, and will look for it when she sees a rising pulse.

What measures can be taken pre-operatively to guard against serious loss of blood after adenotonsillectomy or, for that matter, any other elective operation on a child? First, the debilitated and anaemic child must receive treatment before operation, because he is the one

whose compensatory reaction to haemorrhage may be poor. Secondly, and perhaps specially important in the treatment of children, is the avoidance of fluid deficit: most children are in good condition on arrival in hospital for operation, but Holden and Maher show that 62% of their patients took less than 50% of the fluid they needed during the pre-operative period in hospital, partly owing to apprehension in a strange environment and partly because they were not actively encouraged to drink. Pre-operative purgation was condemned by Sir John Fraser³ in 1926, as was excessive starvation. Gastric emptying is delayed by apprehension, but fluids should certainly be given up to four hours before operation and clear fluids can safely be given to small children up to two hours. Intravenous infusion before and during operation may be of value in special circumstances. For example, children with renal disease who are unable to concentrate urine and therefore require a large amount of fluid to clear the solutes cannot tolerate a reduction in fluid intake for four to eight hours and can be put into renal failure by it. In the normal patient, however, an infusion of 5% glucose will actually cause slight dehydration because of incomplete sodium conservation in the glucose diuresis, and similarly 0.9% (isotonic) saline, though it may temporarily expand the extracellular fluid space, may eventually

cause slight dehydration because excretion of the excess chloride will take with it a certain amount of water.⁴ Attempts to build up a fluid reserve before operation are therefore of little value.

In general, acute loss of blood is corrected by vasoconstriction, which reduces the volume of the vascular bed, and by a transfer of interstitial fluid to increase the volume of the circulating blood. Avoidance of pre-operative depletion of fluid in the normal child will ensure that an adequate amount of fluid is available for transfer. Likewise avoidance of excessive heat or cold will allow normal vasoconstriction in response to loss of blood as well as minimizing loss of fluid through sweat. When the body's reaction to haemorrhage by vasoconstriction and transfer of fluid can no longer compensate for the loss of blood, the blood-pressure will fall. Thus, though the rising pulse may give warning, the measurement of the blood-pressure is the best indication of the need for treatment by blood transfusion or the infusion of plasma or plasma substitute.

¹ Spoerel, W. E., Hersey, L. W., and Greenway, R. A., *Canad. med. Ass. J.*, 1960, 82, 1265.

² Shalom, A. S., *J. Laryng.*, 1964, 78, 734.

³ Fraser, J., *Surgery of Childhood*, 1926, p. 36. London.

⁴ Stewart, J. D., and Rourke, G. M., *J. clin. Invest.*, 1942, 21, 197.

Occupational Dermatitis

Often enough a case of occupational dermatitis presents the physician with the problem of trying to determine whether the disease is due to the patient's constitution or to external factors in his working or domestic environment. This week Dr. F. Ray Bettley discusses in an article at page 1340 of the *B.M.J.* many of the difficulties that must be faced in reaching a diagnosis, emphasizing that a long period of observation of the patient and his circumstances will sometimes be needed if the facts are to be correctly elicited and interpreted.

Perhaps dermatologists should now agree to use the terms eczema and dermatitis synonymously, so that the former does not necessarily connote a constitutional reaction and the latter an external occupational cause. Confusion will remain so long as clinicians continue to mean different things by these terms, especially if the terms are intended to indicate differing aetiology. A patch of dermatitis has no well-defined morphological changes allowing a diagnosis to be made between dermatitis of constitutional origin and dermatitis due to external factors, occupational or domestic. Therefore the family doctor or examining medical practitioner may find it impossible to make a correct initial diagnosis with any accuracy. Even the consultant dermatologist with his special training and long experience of the disease finds this difficult and sometimes impossible. It is equally difficult for the general practitioner, having provisionally decided that the dermatitis has been caused by an external factor, to decide, without the expert help of the industrial medical officer, whether sufficient cause exists in the patient's working environment to justify a diagnosis of occupational dermatitis. Allergic sensitivity is only very occasionally the cause of occupational dermatitis, irritant factors having the major role. But there is no method of excluding allergic sensitivity other than by skin-testing, and to decide whether skin-testing is indicated or not requires special training in the method and

particularly in the interpretation of the results. The reason for skin-testing is often misunderstood, and when the results of the tests are negative the mistake is sometimes made of interpreting them as meaning that the substances tested cannot be the cause of the dermatitis when they may well be—but acting as irritants and not as allergic sensitizers.

To the difficulties often encountered in the attempt to make an accurate diagnosis of occupational dermatitis must unfortunately be added the burden of the present imperfect system of certification. Legislation is such that a variety of doctors with diverse statutory functions are brought into the case—general practitioners (both the patient's family doctor and also the examining medical practitioner), dermatologists, industrial medical officers, and members of medical boards of the Ministry of Pensions and National Insurance, of local appeal tribunals, and of medical appeal tribunals. Few, if any, can believe that this outdated system functions satisfactorily or that the industrial worker or society gets full value from the medical skills available within the framework of the National Health Service. Under this system an assessment, vital to the patient, may be sought on a number of occasions from different clinicians whose specialized knowledge varies greatly; some of them may not even have had the opportunity to examine the patient during the phase of the abnormal skin changes. Prolonged observation, together with thorough investigation and treatment, such as can be carried out in special hospital units, is not possible in every case, and the most practicable course may be on the lines discussed at the Annual Clinical Meeting of the B.M.A. in Dundee earlier this year.¹ At that meeting a panel consisting of an appointed factory doctor and adviser to the Ministry of Labour, a dermatologist, and an industrial medical officer proposed that whenever possible the industrial worker with

¹ *Brit. med. J.*, 1965, 1, 985.

² Bell, J., *Scotsman*, 5 July 1962.