BRITISH MEDICAL JOURNAL

SATURDAY 1 JUNE 1968

Pathology of Cardiac Transplantation page 506

Antilymphocyte Serum page 507 Vol Carcinogenic Action of Mineral Oils page 508 Neuropathy and Coeliac Disease page 509 Research page 510	untary Sterilization in the Male page 508 Respiratory Distress Syndrome page 509 Subcutaneous Gas page 510 Funds for
PAPERS AND ORIGINALS	
Heart Transplantation in Man—Necropsy Findings I.	G. THOMSON 511
	GLANDS, AND J. J. MACCABE
Acquired Cytomegalovirus Infection GUN CARLSTRÖM	I. IÖRAN ALDEN, SVEN BELFRAGE, GRETA HEDENSTRÖM,
LARS HOLMBERG, FOLKE NORDBRING, AND GÖRAN STERNER	
Degenerative Changes in the Knee after Meniscectomy	J. P. JACKSON
Changes in Oral Glucose Tolerance during the Menstrual	Cycle R. J. JARRETT AND H. J. GRAVER 528
Cause of Stomal Obstruction after Gastroenterostomy	
I. G. M. CLEATOR, C. W. A. FALCONER, W. P. SMALL, AND A. N. S	530
Outbreak of Coxsackie Type B2 Virus in a Children's H	ome in Newcastle upon Tyne 532
JOAN CARMICHAEL, ROSEMARY MCGUCKIN, AND P. S. GARDNER	
PRELIMINARY COMMUNICATIONS	
Antilymphocytic Serum and Tumour Dissemination	K. HELLMANN, ROSEMARY I. HAWKINS, AND SUSAN WHITECROSS 533
	· · · · · · · · · · · · · · · · · · ·
MEDICAL MEMORANDA	
Diagnosis and Natural History of Gas Cysts of the Colon	H. DENDY MOORE 536
Death from Vertebral Artery Thrombosis in Rheumatoid	Arthritis F. W. S. WEBB, J. A. HICKMAN, AND D. ST. J. BREW 537
MIDDLE ARTICLES	CURRENT PRACTICE
Prevalence and Early Detection of Heroin Abuse	Medical Management of Ulcerative Colitis
R. DE ALARCÓN AND N. H. RATHOD	S. C. TRUELOVE
Winchester Address	Today's Drugs Penicillins and Cephalosporins 542
Sir Bruce Fraser on "The Doctor and the Admini-	Any Questions?
strator" 553 Personal View D. RUSSELL DAVIS 555	CORRESPONDENCE 556
Tersonal view D. Ressell Davis	
BOOK REVIEWS 546	SUPPLEMENT
	Special Representative Meeting, Eastbourne, 24 June:
OBITUARY NOTICES 564	Reports and Recommendations of Council, General Medical Services Committee, and Central Com-
NEWS AND NOTES	mittee for Hospital Medical Services
	Agenda of A.R.M., Eastbourne. 155
Epidemiology 567	Central Committee for Hospital Medical Services 174
Motoring 568 Parliament 569	Ophthalmic Group Committee
Medical News	Public Health Committee
309	occusin Committee for Hospital Medical Services 1//

LEADING ARTICLES

Treating the Drunken Offender page 505

Correspondence

Letters to the Editor should not exceed 500 words.

Risks of Abortion. K. Vernon Bailey, F.R.C.O.G.557 Negligence and Doctors. P. W. H. Revington, L.A.M.T.P.I.557 Trimethoprim. A. S. E. Fowle, M.D......557 E.E.G. Signs of Death. G. Pampiglione, Too Ill for Cardiac Surgery? Winifred L. Turner, M.B.; W. E. Leathem, M.B.......558 Heart Transplant Publicity. A. H. Morley, M.B.; A. E. Nicholls, M.R.C.S.; J. K. Harper, F.F.A. R.C.S., and Helen M. Harper, M.B. ...558 Acquired Pure Red Cell Aplasia. H. Foy, D.Sc., and Athena Kondi, M.B......559 Drugs and Sleep. I. Oswald, M.D......559

Advantages of Fenfluramine. N. Santer. 559
Herpes Simplex Cervicitis. D. C. Hutfield M.D560
Long-term Anticoagulant Therapy. F. Nour- Eldin, Ph.D., M.C.PATH560
Sterilization—Male or Female? R. S. Saxton D.T.M.&H
The "Public Drunk." P. M. J. O'Brien M.R.C.P560
Mothers and Children in Hospital. S. R. Meadow, M.R.C.P
Haemophilus Septicaemia. J. L. Greaves
Monoamine Oxidase Inhibitors and Anaesthesia. J. W. Warrick, F.F.A. R.C.S
Idiopathic Facial Palsy. E. D. R. Campbell

Zinc Sulphate and Bedsores. Cyril Cohen
Paracervical Block with Bupivacaine. F. C. R. Picton, F.R.C.O.G561
Cirrhosis of the Liver. B. L. Agarwal, M.D. 561
Folate Requirement in Pregnancy. M. L. N Willoughby, M.D562
Low-dosage Oral Progestogen. W. P. Black F.R.C.S.ED562
Brand Names. L. Wislicki, M.D562
Gender and Sex. A. McKie Reid, F.R.C.S. P. D. Trevor-Roper, F.R.C.S
Medical Assistants' Seniority. W. I. Martin
Role of the B.M.A. W. Ferguson, D.P.H.; A. V Russell, M.B
Surgical Tutors, D. W. Bracev, F.R.C.S.ED562

Indications for Termination of Pregnancy

SIR,—We have studied with interest and some concern the report by the B.M.A. Committee on Indications for Termination of Pregnancy (20 January, p. 171), and find it shows an apparent lack of appreciation of the many changes made in the last 20 years in assessment and treatment of cardiovascular conditions.

The report does not differentiate between the varieties of cardiac failure in pregnancy, and presumably pulmonary congestion, pulmonary oedema, and the clinical picture which for convenience may be termed right heart failure have been taken together. It is also apparently accepted that symptoms necessarily reflect the severity of the underlying heart disease. It states that "severity has been classified for convenience into four main grades, beginning with that in which symptoms occur only on very vigorous activity, to the other extreme of total incapacity. . . . Maternal mortality in cardiac failure ranges from approximately 2% in the milder cases to 18% in the severe. Where atrial fibrillation coexists with failure the mortality may reach 32% "-that is, as judged apparently by this functional classification which corresponds to that recommended by the New York Heart Association (N.Y.H.A.) some years ago. It goes on to say that "in nonpregnant controls corresponding figures would be 2%, 6.7%, and 8% respectively.

These figures certainly do not reflect the present situation in this country. For example, in a large series of patients observed in Newcastle since 1942 atrial fibrillation was present in 56 patients in 66 pregnancies. Only nine developed right heart failure and three pulmonary oedema, and only one of these patients died. There were two more deaths in the total atrial fibrillation group, not associated with heart failure: both deaths were sudden and due to pulmonary embolism and obstruction of the tricuspid orifice by an aneurysm of the atrial septum, respectively.1 Also it is not atrial fibrillation which is so important as the presence or absence of associated adverse factors. The facts are that maternal mortality from heart disease in

pregnancy has fallen to very low levels in recent years, and the usual cause for patients reaching functional grade 3 or 4 is severe mitral stenosis, which can be treated surgically.

The functional classification to which the report refers is an unreliable and potentially dangerous guide to the severity of the underlying heart disease. The only sure basis for correct assessment is to rely on objective findings. Experience has shown that potentially the most dangerous situation is moderate to severe mitral stenosis in a patient who is still practically symptom-free, because it is this type of patient who can suddenly develop fatal pulmonary oedema in pregnancy if the mitral stenosis remains surgically unrelieved.

It also goes on to say that "if by the end of this period [the middle trimester] the patient's condition has hitherto been satisfactory there could well be a reasonable chance of uneventful procedure to term." It is an error to assume that the cardiac output begins to fall at about the 32nd week of pregnancy and that the remaining period is therefore relatively safe, so that termination will prove unnecessary. It has been shown by various workers that the cardiac output rises to a maximum early in pregnancy and thereafter remains fairly constant, there being no fall towards full term.23 These findings are reflected in clinical experience. The facts are that more often than not women who develop pulmonary oedema do so in the last three months. In the Newcastle series 25 attacks developed in 20 pregnancies in 18 patients. Twelve of these 25 occurred after the 30th week and five in the puerperium. Experience in Edinburgh has been similar. Heart disease frequently deteriorates throughout pregnancy, and a maternal death may occur at any stage. Our experience is similar to that summarized in the Ministry of Health Confidential Reports on Maternity Mortality, there being an equal distribution from the 6th to the 39th week.

As regards congenital heart disease the report states that "some conditions are

amenable to surgical intervention without interfering with the pregnancy-for example, persistent ductus arteriosus, interatrial septal defect, and Fallot's tetralogy." However, these conditions are very different. Although rarely necessary, a patent ductus can always be divided or ligated at any stage of pregnancy. Closure of an atrial septal defect requires either hypothermia or open heart surgery, and again is rarely necessary during pregnancy. Repair of Fallot's tetralogy makes open heart surgery imperative with its prohibitive risk to the foetus. It is stated that "termination may have to be considered in severe cases of ventricular septal defect' without indicating whether a large defect is meant or one with associated pulmonary hypertension and reversed shunt. If there is a large defect with cardiac failure, which is most uncommon in pregnancy, termination may be advisable, and if there is a reversed shunt it is imperative. However, termination should be carried out only after adequate medical control of the heart failure.

Comments made in the report on certain types of heart disease such as thyrotoxicosis and ischaemic heart disease do not indicate the rarity of these conditions during pregnancy. Finally, we have not seen a patient in whom termination had to be advised on account of arrhythmias alone nor of heart block.

A clear statement of the present position as regards heart disease in pregnancy and its management would be helpful, emphasizing the rarity with which termination need be advised. We would plead for an early revision of the cardiovascular section of the present report.-We are, etc.,

P. SZEKELY.

Cardiovascular Department, Newcastle General Hospital, Newcastle upon Tyne.

R. W. D. TURNER.

Cardiac Department, Western General Hospital, Edinburgh.

REFERENCES

- Szekely, P., and Snaith, L., Brit. med. 7., 1961, 1, 1407.
 Hytten, F. E., and Leitch, I., The Physiology of Human Pregnancy, 1964. Oxford.
 Kerr, M. G, Brit. med. Bull., 1968, 24, 19.