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METABOLISM OF CHLORAMPHENICOL BY HUMAN BONE MARROW. C.S. Ambekar, C.R. Kumana, B. Cheung, D. Holt*, L.C. Chan. R. Liang. Dept. of Medicine, The University of Hong Kong & *Karim Center for Meningitis Research, London U.K.

Chloramphenicol (CAP) a broad spectrum antibiotic, mainly causes two types of bone marrow toxicity; reversible marrow suppression and non-dose related, irreversible, often fatal aplastic anaemia. However, it is widely used Hong Kong and elsewhere in this region, but locally at least the incidence of aplastic anaemia. We postulate that marrow toxicity may be related to metabolites generated in bone marrow. This study aimed to determine whether human bone marrow can metabolize CAP succinate when incubated *in vitro* and if so which metabolites are formed. Human marrow was obtained from 63 healthy donors, 15 of whom also provided peripheral blood. All donors gave written informed consent. Marrow and blood samples were incubated at 37^0 C for 15 min. 1, 2 & 3 hr. with and without NADPH and CAP succinate. After centrifugation, the supernatants were analyzed by HPLC (Lichrosorb C18 column, mobile phase - 30% methanol in 10mM Na_2PO_4, pH 6, 1ml/min, isocratic mode) for the presence of metabolites. In 3 of the 63 marrow samples, 3 discrete peaks were detected; retention times were 10.8, 13.5 and 14.9 min. Comparable peaks were only evident after incubation with peripheral blood from one donor on one occasion. In the remaining 60 donors marrow, only one peak was detected (retention time 10.8±2 min.). The retention times of standard CAP and nitrosoCAP were 10.6±2 min and 14.1±1 min respectively. The peak at 13.5 min remains unidentified. We conclude that human bone marrow can metabolize chloramphenicol succinate to chloramphenicol. Bone marrow of some donors can also metabolize chloramphenicol.

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UTILISATION OF STATINS IN A CARDIOLOGY OUTPATIENT CLINIC. Bernard MY CHEUNG, June CHAU, CP LAU, CR KUMANA. University Department of Medicine, University of Hong Kong, Hong Kong.

An audit was carried out on prescriptions of statins in the Cardiology Clinic at Sai Ying Pun Hospital. During a one month period, 104 patients were prescribed statins. The medical records of 99 patients (mean age 65 yrs, range 40-83) were reviewed. 88 patients had ischaemic heart disease (IHD, e.g. previous myocardial infarction, abnormal isotope perfusion scan or coronary angiogram, or typical anginal symptoms), 7 had no definite IHD but risk factors and hyperlipidaemia, and 3 had hyperlipidaemia alone. The baseline lipid profile (mean ± SD) was as follows:

	n	total cholesterol	LDL-C	HDL-C	triglycerides
male	60	6.0 ± 0.7 mmol/l	4.1 ± 0.4 mmol/l	1.0 ± 0.2 mmol/l	1.9 ± 1.3 mmol/l
female	39	6.6 ± 1.1 mmol/l	4.7 ± 1.2 mmol/l	1.3 ± 0.3 mmol/l	2.2 ± 0.9 mmol/l

All patients were treated with a single drug (58% simvastatin, 17% pravastatin, 13% fluvastatin and 11% lovastatin). Only 3 patients were prescribed cholestyramine in addition. The choice of statin was not related to gender, age, pre-treatment lipid profile or indication. The decision to start treatment was appropriate in 48 patients but clearly inappropriate in 35 patients. Starting treatment based on a single abnormal reading was the commonest error (22/35), followed by lack of a recent lipid profile before treatment (8/35) and baseline lipid levels below recommended thresholds (5/35). In 1/3 of those who should be treated, the choice of drug was inappropriate and cost-ineffective. Correlation between lipid profiles performed on separate occasions was moderate (r = 0.55, 0.41, 0.68, 0.60 for total cholesterol, LDL-C, HDL-C and triglycerides respectively). Therefore, treatment based on a single measurement is illogical. However, only 14% patients had 2 full lipid profiles (including LDL-C and HDL-C) before statins were started. In conclusion, decisions to initiate treatment with statins were frequently based on inadequate information. The choice of statin appeared random and often cost-ineffective. There should be more emphasis on diet and usage of cholestyramine in conjunction with a statin. This audit highlights the need to follow lipid-lowering guidelines whenever appropriate.