TABLE I

Data of fertility of ABO compatible and incompatible matings

Observations	Compatible Matings $n = 589$	Incompatible Matings $n = 432$
1. Mean number of living children per mating	4·51 ($t = 5·510$;	3·73 $P < 0·001$)
2. Proportion of childless marriages	0·031 ($\chi_1^2 = 0·01$)	0·027
3. Mean number of pregnancies excluding abortions	5·26	4·90
4. Proportion of Pre-natal Mortality of children	0·348	0·476
5. Proportion of Post-natal mortality of children	0·411	0·694
6. Fetal wastage	17·15%	31·90%

♀A × ♂O and ♂A × ♀O matings revealed an apparent increase of 0 children from ♀O× ♂A matings than from ♀A × ♂O matings, which are significant at 5 % level ($\chi_1^2 = 5·31$). There is 21% deficiency of "A" children in ♀O × ♂A as compared to ♀A × ♂O matings. The incompatibility matings have more "observed" values than "expected" under random matings. The Chi-square value is again significant at 5% ($\chi_1^2 = 4·69$), in respect of the comparison between the ♀B × ♂O and ♂B × ♀O. There is a 16% deficiency of "B" children in ♀O × ♂B matings as compared to ♀B × ♂O matings.

TABLE II

Frequencies of pre- and post-natal deaths in ♀A× ♂O/ ♀O × ♂A and ♀B × ♂O/♀O × ♂B matings

Sl. No.	Matings	No. of Live Births	No. of Deaths Pre Natal	No. of Deaths Post Natal	X^2
	♀ × ♂				
1.	A × O	464	41	40	2·436
2.	O × A	401	50	68	1·060
3.	B × O	462	42	38	1·457
4.	O × B	402	58	73	4·728*

* $P < 0·02$

The differences between the matings as mentioned above excepting sl. no. 4 are significant only at 5 %, while the segregation of children out of ♀A × ♂B do not show any significant value indicating that there is no deficit of incompatible children.

Although extremely important as a health problem, ABO erythroblastosis does not represent a serious fetal loss from the biological point of view, while evidence on many kinds shows a much larger and biologically important loss of possible incompatible children early in pregnancy/prior to the recognition of pregnancy. The only definite evidence for selection was that against incompatible fetuses or neonates in the ABO system due to hemolytic disease. New studies about other causes of incompatibility selection are needed to help in the evaluation of its importance in man.

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Ranchi 834001, *April* 27, 1977.

1. Matsunaga, E., *Blut*, 1956, **2**, 188.
2. Cohen, B. H., *Amer. J. Hum. Genet.*, 1960, **12**, 180.
3. Newcombe, H. B., *Ibid.*, 1963, **15**, 449.
4. Chakravartti, M. R., *Indian J. Phy. Anth. Hum. Gen.*, 1976, **1**, 128.

DETECTION OF ANTIGENS AND ANTIBODIES IN FILARIAL SERA BY COUNTER CURRENT IMMUNOELECTROPHORESIS

THE importance of counter current immunoelectrophoresis (CIE) as a good serological technique is being recognized by various investigators, for its simplicity and sensitivity with added advantage of detection of antigen and antibody in the sample at same time. Desowitz and Unat (1976) have shown the presence of antibodies to microfilarial and adult male *D. immitis* antigens. in human and animal filarial sera by counter current immunoelectrophoresis.

W. bancrofti microfilariae were isolated from blood samples from human carriers by dextran sedimentation and antisera were raised in rabbits for the microfilarial antigen. Anti microfilarial sera and microfilarial antigen were used for detection of antigen and antibody in the sera of humans infected with *W. bancrofti* by double diffusion and counter current immunoelectrophoresis.

Sixteen sera from human carriers (microfilarial count ranging from 1 to 94/20 c.mm. of blood) were analyzed. No precipitin band was observed either for the antigen or antisera by double diffusion. However counter current immunoelectrophoresis of human filarial sera showed the

presence of precipitin bands (1 to 3) with rabbit antimicrofilarial sera indicating the presence of soluble antigens in all the cases and one precipitin band with microfilarial antigen indicating the presence of antibody in two cases. Use of counter current immunoelectrophoresis in detection of soluble antigens is being investigated further for application as additional confirmatory test in the diagnosis of filariasis.

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Wardha, *June* 27, 1977.

1. Desowitz, R. S. and Una, S. R., *J. Helminthology*, 1976, 50, 53.

COMPARISON OF THE PROTEIN COMPONENTS OF HEN'S EGG YOLK LOW DENSITY FRACTION OF GRANULES (LDFG) AND LOW DENSITY FRACTION (LDF)

LDFG AND LDF (also called very low density lipoprotein; VLDL) of hen's egg yolk have long been considered to be similar because of their similarity in lipid content and lipid composition[1,2]. Recently, the protein components of VLDL were isolated and characterised in this laboratory[3]. Here we report preliminary data to show that the protein components of LDFG and VLDL are similar.

LDFG of white plymouth rock egg was carefully separated from granule solution after ultracentrifugation[4]. It was dissolved in 0·05 M Tris-HCl buffer pH 8·2 and dialysed against the same buffer with three to four changes. The solution was centriguged to remove precipitated lipovitellin-phosvitin complex and was chromatographed on DEAE-cellulose column as described by Raju and Mahadevan[3]. LDFG-apoprotein was obtained from LDFG and fractionated using Sephadex G-200 column[5]. SDS-polyacrylamide gel electrophoresis was performed by the method of Weber and Osborn[6].

Sephadex G-200 elution pattern of LDFG-apoprotein consists of three fractions namely, zone A, zone B and zone C. These three fractions resemble those of VLDL-approprotein shown in Fig. 1. Variation in the distribution of zone C-protein fraction in LDFG and VLDL is evident from Fig. 1. This differences in ratio of zone C to zone A protein fractions could be due to a difference in the distribution of zone C-protein fraction or due to the difference in the two egg strains (VLDL is obtained from white leg horn egg). Figure 2 shows similarities in SDS-gel pattern of the apoproteins of LDFG and VLDL. Both these experiments suggests that the protein components of LDFG and VLDL are similar.

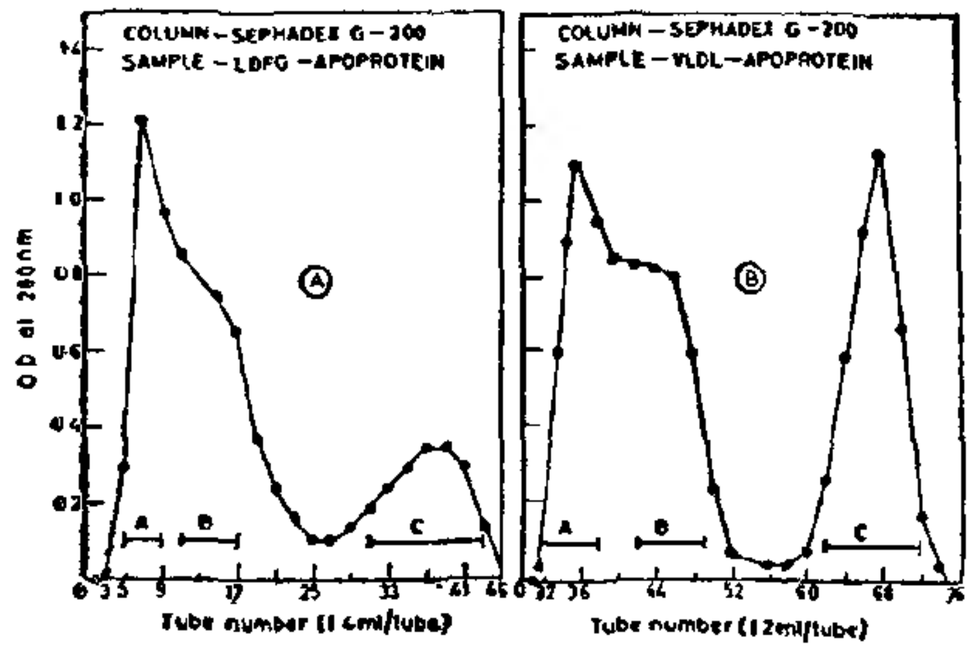

FIG. 1. A: Gel filtration of LDFG-apoprotein on Sephadex G-200. About 60 mg protein dissolved in 2·8 ml of 0·5% SDS was loaded on Sephadex G-200 column (1·8 cm × 73 cm) and the column was eluted with 0·5% SDS. 1·4 ml fractions were collected at a flow rate of 15 ml/hour. B: Gel filtration of VLDL-apoprotein on Sephadex G-200[5]. About 50 mg protein loaded in 1 ml of 0·5% SDS on sephadex G-200 column (1·3 × 100 cm) and the column was eluted with 0·5% SDS. 1·2 ml fractions were collected at a flow rate of 6 ml/hr.

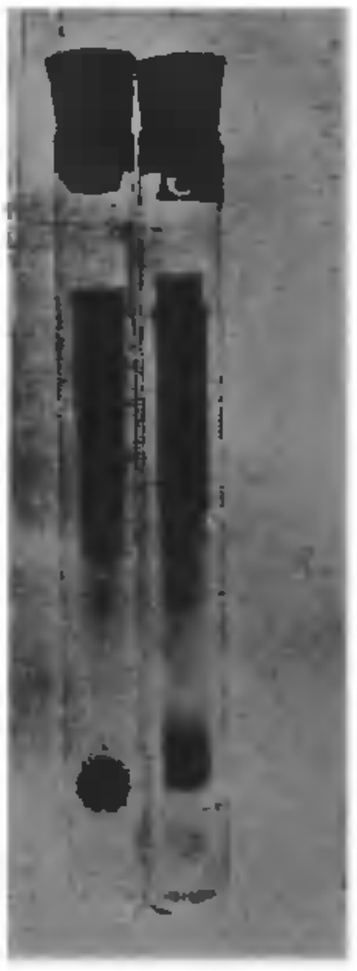

FIG. 2. SDS-polyacrylamide gel electrophoresis of the apoproteins of VLDL and LDFG.

Picture : VLDL and LDFG.

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