

Rh Antigen and Phenotype Frequency in Kalba Region, UAE

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Objective: To evaluate the frequency of Rh-phenotypes and the most probable genotype in Kalba region, UAE.**Design:** Random Prospective cohort study.**Setting:** Kalba hospital.**Method:** The study was conducted on 661 blood samples from both sexes and in different age groups who were randomly selected. ABO and Rh phenotype reactivity was determined by using tube method according to the manufacturer's instruction. The Rh antigens studied were D, C, c, E and e.**Result:** The most frequently occurring antigen was found to be e 643 (97.3%), followed by D 602 (91.1%), C 484 (73.2%), c 470 (71%) and E 139 (21%).**The Rh genotypes present in decreasing order of frequency as follows:****R¹r** 204 (30.9%), **R¹R¹** 186 (28%), **R¹R²** 76 (11.5%), **R⁰R⁰** 72 (10.9%), **rr** 48 (7.3%), **R²r** 44 (6.7%), **R²R²** 12 (1.8%), **r'r** 8 (1.2%), **r'r'** 4 (0.6%), **R^zR^z** 4 (0.6%), **R^zR^z** 1 (0.1%), **r'r''** 1(0.1%), **r'r''** 1 (0.1%).**Conclusion:** The study shows that the most frequent Rh antigen in Kalba region is e antigen. Thirteen Rh phenotypic groups of various frequencies were recorded. Knowledge of blood group phenotype distribution is very important for blood banks and transfusion service policies.