Summary

* This study was carried out on blood donors who were selected from El-Gharbia and El-Kalubeia blood banks and grouped as follow:

- Group (I) : 112 donors which were the volunteer blood donors from El-Gharbia blood banks.

- Group (II) : 90 donors which were the volunteer blood donors from El-Kalubeia blood banks.

* The selected donors had no jaundice , also they were taking no medications which likely to cause elevation of liver enzymes.

* They were examined for hepatitis B virus and hepatitis non-A, non-B virus by the following test:-

(1) Alanine amino-transferase (ALT) by colorimetric method.

(2) Hepatitis B core antibody (HBcAb) by enzyme linked Immuno-Sorbant Assay (ELISA) method.

(3) Hepatitis B surface antigen (HBsAg) by Indirect Haemo-agglutination (IHA) method.

(4) Antibody to Hepatitis C virus (Anti-HCV) by second generation Enzyme Linked Immuno-Sorbent Assay (ELISA 2) .

* From the present study, it was found that

- The incidence of hepatitis B carriers state among blood donors was 5.4% (11/202), it was 4.4% (4/90) in El-Kalubeia blood banks while it was 6.25% (7/112) in El-Gharbia blood banks.
- The incidence of hepatitis C carriers state among blood donors was 24.8% (50/202) , it was 24.1% (27/112) in El-Gharbia blood banks, while it was 25.6% (23/90) in El-Kalubeia blood banks.
- Total incidence of non-A, non-B hepatitis , by using the surrogate markers , was 31.2% (63/202) , it was 27.7% (31/112) in El-Gharbia blood banks , while it was 35.5% (32/90) in El-Kalubeia blood banks .

By comparing the relation between positive donors for Anti-HCV and the presence of the two surrogate markers , it was found that , among 50 positive donors to Anti-HCV , 16% (8/50) had elevated ALT only this incidence was ranged from 11.1% (3/27) in Group1, to 21.7% (5/23) in Group2, 6% (3/50) were positive to HBcAb only this incidence was ranged from 7.4% (2/27) in Group1, to 4.3% (1/23) in Group2, and 42% (21/50) had both elevated ALT and positive to HBcAb this incidence was ranged from 40.7% (11/27) in Group1, to 43.5% (10/23) in Group2 . So, a total of 64% (32/50) were positive to one or both of the surrogate markers .

On the other hand , in this study , it was found that 40.8% (11/27) were negative to the surrogate markers among positive donors for Anti-HCV in (Group I) and 30.5% (7/23) were negative

to the surrogate markers among positive donors for Anti-HCV in (Group II) . So, a total of 36% (18/50) were negative to the surrogate markers for Non-A, Non-B hepatitis among positive donors for Anti-HCV antibodies .

By comparing the relation between negative donors for Anti-HCV and the presence of the two surrogate markers , it was found that , among 152 negative donors to Anti-HCV , 17.6% (15/85) were positive to one or both of the surrogate markers in Group1 , 23.9% (16/67) were positive to one or both of the surrogate markers in Group2 . So, a total of 20.4% (31/152) were positive to one or both of the surrogate markers for non-A, non-B hepatitis among negative donors to Anti-HCV antibodies .

Conclusion

- From the present study, it is clear that non-A, non-B hepatitis has a high incidence between Egyptian volunteer blood donors . So, the use of the surrogate markers for non-A , non-B hepatitis which are the presence of HBcAb and the elevated of ALT levels , beside the already present tests used which are, HBsAg and anti-HCV antibodies , contributes to the continuing effort to safeguard the blood supply , and so, it is effective in the reduction of the incidence of post transfusion hepatitis.