Summary

Viral hepatitis has been recognized for more than seven centuries. Although it is one of the oldest known diseases, proof of its infectious nature was only obtained in the 1940s in a series of experiments demonstrating the transmissibility of the disease.

Hepatitis C is a leading cause of liver cancer and cirrhosis, unfortunately, Egypt has possibly the highest prevalence worldwide and highest morbidity and mortality from chronic liver disease, cirrhosis and hepatocellular carcinoma (HCC).

Extensive antishcistosomiasis injection campaigns initiated and propagated Egyptian HCV epidemic. It is expected for HCV to_remain prevalent in Egypt for several decades. In the general population and among blood donors, significantly different prevalence rates have been found in various countries, ranging from 0.003% (Sweden) to 18% (Egypt).

Epidemic spread of HCV in Egypt has been suggested due to strong homogenecity of HCV suptypes(mostly 4a).

About 50% of patients remain infected without an identifiable mode of acquisition even after accurate history taking.

Lack of prophylactic vaccine or universally effective therapy has made prevention extremely important in this chronic infection.

Identification of infected persons and risk factors associated with acquiring HCV may allow us to develop strategies to reduce the incidence of HCV infection and control the resulting epidemic.

The target population of the study was workers in Aluminium Company of Egypt in Nag-Hammadi Qena governorate, who attended the hospital of the company from 1/7/2008 to 1/7/2009. The number of the subject is (590) persons,490males (workers) and 100 females(workers and the workers wives). (130) persons,118 males and 12 females proved to be HCV-eropositive.

All patients with positive HCV antibodies were subjected to the following: (Complete history taking, general examination, abdominal examination, liver function tests, CBC, abdominal ultra sound , quantitative PCR).

The prevalence of HCV among workers in Aluminium Company of Egypt in Nag-Hammadi (22%) is higher than the generally accepted global prevalence in Egypt, 11 % to 14% or 8 to 10 million inhabitants, of whom 5-7 million have active viremia.

It was found that the common risk factors for HCV among the studied group were dental treatment 81% followed by parentral treatment 65.4% followed by surgery 50.8% then Blood transfusion 14.6%. It was also found that the history of bilharziasis was strong risk factor 48.5% and family history of hepatitis C was 42.3% .

As regard the treatment of HCV +ve patients with a combination therapy of interferon & ribavarin , the result was effective and save.

At the end of week 4, the proportion of patients with negative HCV RNA (rapid virological response) was 28/110 (25.4%). At the end of week 12, the (early virological response) was 70/110 (63.6%). At the end of week 24, the proportion of patients with negative HCV RNA was 73/110 (66.4%).

At the end of week 48, the (end of treatment virological response) was 69/110 (62.8%). At the end of week 72(6 monthes after the end of treatment), the (sustained virological response) was 54/110 (49%).

15 patients whose HCV RNA had become negative at week 48(end of treatment) returned to a positive HCV RNA status at week 72(6 monthes after the end of treatment).

25 out of 28 patients(89.3%) whose HCV RNA had become negative at week 4 remained negative HCV RNA at week 72(6 monthes after the end of treatment).

Conclusion

- The prevalence of HCV among workers in Aluminium Company of Egypt in Nag-Hammadi (22%) is higher than the generally accepted global prevalence in Egypt, 11 % to 14% or 8 to 10 million inhabitants, of whom 5-7 million have active viremia.

- The study proved that the majority of cases (70.7%) lye in the oIder age groups (30-50 years) while (10.8%) of cases were below the age of 30 years.
Inspite of the small number of cases in the current study, this may indicate that the prevalence of the disease will decline in Egypt in the coming decades.

- The study revealed that the risk of transmission of the disease is mainly increased by the following variables: residence, education, occupation, socioeconomic score, , Bilharzial infestation, tartar emetic injection, dental management , parentral treatment , surgery , blood transfusion and +ve family history.

Recommendations:

Future national efforts should be directed towards prevention of HCV infection through its different modes of transmission.
Properly prepared (prevention and control programs) will result in reduction of the disease burden on the patients as well as on the wholecommunity .

This can be achieved through:

1- Strict sanitary disposal of hospital waste.

2- Infection control programs in governmental hospitals, including empowerment, ensure availability of supplies (disinfectants, gloves, masks and

gowns) and equipments as autoclaves. This should be followed by continuous follow up and assessment.

3- More precautions in blood banks, continuous supervision and accurate examination. of donors and investigation of the blood units before being transfused.

4- Health education of the public by different means of transmission to avoid.

5- We should thank Ministry Of Health for their efforts in the program of mass treatment of HC cases. As this is very important to eradicate the sources of infection.

6- Health education of HCV +ve individuals and their family members on the importance of avoiding all possible parenteral exposures.

7- Educating all health team on infection control practices in all settings whether public or private.

8- Reguler screening for all students and conducting education campaigns in schools to raise their awareness towards modes of transmission and universal precautions for prevention of infection.

9- Screening of all workers before employment.