Introduction

The prevalence of HCV infection in the general population varies greatly in different parts of the world, and is estimated to be between 0.1% and 5%, with the peak prevalence of as high as 20 to 25% in Egypt. According to current estimates, nearly 2 to 4 million individuals in the US and more than 5 million people in the Western Europe are chronically infected with the HCV. Many have not yet been diagnosed, because of the lack of symptoms and major risk factors. Thus it is expected that many HCV carriers will be diagnosed in the near future and will come to medical attention. This is mainly because of increasing interest in HCV infection from patient advocacy group, public health advisory boards and institutions that have raised the issue of the "silent epidemic" of HCV and are encouraging individuals at risk to be tested. **(Marcellin; 2004).**

For unknown reasons, Egyptians have the highest worldwide prevalence of HCV infection. The first evidence was provided by a study on Egyptian blood donors living in Saudi Arabia, which indicated an anti-HCV antibody prevalence of 19.2%. **(Saeed et al; 1991).**

Interferons (IFNs) have potent and wide ranging biological effects,so interferons (IFNs) have been the object of a great deal of scientific interest since their discovery in the late 1950s. Throughout the 1960s and 70s, their antiviral, immunomodulatory, antiproliferative, and antiangiogenic effects have been characterized. The development of recombinant interferon-a2a and other interferons in the early 1980s led to a large number of clinical trials in oncology, virology, and immune deficiencies. interferons are now commonly used in the treatment of viral

hepatitis, chronic granulomatous disease, and specific forms of leukemias, as well as other disorders. **(Sen et al; 2002).**

Interferon therapy has been used to treat chronic hepatitis C for more than ten years but the optimum regimen has not been yet defined. While the International Consensus suggests the use of 3 million units three times per week for at least 12 months as "standard" schedule for chronic hepatitis C, with an expected rate of sustained response between 15% and 25%, there is emerging evidence that other, more aggressive schedules may improve these results. Recent data indicate that virologic resistance or escape during the early phase of treatment are the major determinants of therapy failures**. (Reichard et al; 2005).**

Early flu-like side effects are predictable and are encountered in the majority of patients. These tend to occur within 6-8 hours after starting treatment and are worst with the first injections. These side effects include fever, malaise, tachycardia, chills, headache, arthralgias, and myalgias. However, they are usually acceptable at doses of 3-6 million units (MU) of interferon alpha, and tachyphylaxis generally develops after the first few injections. These side effects are ameliorated by paracetamol**.(Okanoue et al; 1996).**

Despite our substantial clinical experience and significant advances in our understanding of their modulatory effects on cellular activity, neurotoxic side-effects related to interferons are still somewhat poorly understood. Central neurotoxicity manifesting as somnolence, confusion,fatigue, lethargy, psychiatric symptoms, focal neurological deficits, and, even coma have been observed during interferon-a therapy. Neurotoxicity occurs in as much as one third of patients treated for

malignancies and somewhat less often in cases of viral hepatitis. **(Merimsky et al; 2004).**

Ocular side effects are infrequently reported during interferon(IFN) therapy, including among else, cases of transient blurred vision, increased intraocular pressure, neovascular glaucoma, anterior ischemic optic neuropathy,retinal detachment, papilloedema. **(Manesis et al; 2007).**

A better documented and apparently more frequent complication, is interferon retinopathy, characterized by cotton wool spots, retinal hemorrhages, and microaneurysms occurring in an appreciable proportion of patients receiving high-dose interferon , rarely macular or papillary oedema, capillary non-perfusion and sometimes retinal or even choroidal vascular occlusion. The latter may be irreversible, while uncomplicated forms are usually reversible.**(Chambers et al; 2007).**

All patients should receive an eye examination at baseline. Patients with preexisting opthalmologic disorders (e.g., diabetic or hypertensive retinopathy) should receive periodic opthalmologic exams during interferon alpha treatment. Any patient who develops ocular symptoms should receive a prompt and complete eye examination**.(Tsolakos et al; 2003).**