PEGASYS, PEGINTRON, AND RIBAVIRIN

Pegasys (peginterferon alfa-2a), Pegintron (peginterferon alfa-2b), Ribavirin (Moderiba, Rebetol, RibaPak, Ribasphere, RibaTab, ribavirin tablets/capsules)

RATIONALE FOR INCLUSION IN PA PROGRAM

Background

Hepatitis C is a viral disease caused by the hepatitis C virus (HCV) that leads to inflammation of the liver. Most people who were recently infected with hepatitis C do not have symptoms, but most people infected with hepatitis C develop a chronic infection. Untreated, chronic infection can lead to liver cirrhosis and/or liver cancer. Six genotypes of the hepatitis C virus exist and genotyping is essential to effective treatment. Hepatitis C infection may be detected in the blood by the HCV RNA assay. Disease status may be monitored by assays of biochemical liver tests or liver biopsy (1).

The goals of HCV treatment are to remove the virus from the blood and reduce the risk of cirrhosis and liver cancer that can result from long-term HCV infection. The most common treatment regimens are based on combinations of pegylated interferon alfa, ribavirin, and a protease inhibitor (1).

Chronic hepatitis B virus (HBV) infection is a growing health problem affecting over a million people in the United States and at least 350 million people worldwide (2). Patients with chronic hepatitis B are at an increased risk to develop cirrhosis, liver failure, and liver cancer. The goal of chronic hepatitis B therapy is to prevent these complications by decreasing the patient’s hepatitis B viral level and maintaining it at low levels for as long as possible (3).

Hepatitis B e antigen (HBeAg) and Hepatitis B viral DNA (HBV DNA) are both markers of HBV replication and their presence provides a rationale for initiating therapy to stop the progression of liver disease. In the past, the ability to detect HBV DNA in the serum by hybridization assays was a major factor in determining which patients should be treated. This assay is sensitive enough to detect viral DNA when it is present in amounts ≥ 10^6 copies/ml and consequently this viral level became an important benchmark in treatment algorithms. As improvements in viral detection have advanced it has become apparent that it is not possible to designate a single HBV DNA value that can differentiate between inactive hepatitis B carriers and patients suffering from chronic hepatitis B. Recent practice guidelines have recommended that alanine aminotransferase (ALT) levels and
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Liver biopsies can be used to determine which patients with low HBV DNA levels require treatment (3).

Pegasys works by both stimulating the immune system and inhibiting viral replication. It also has a longer half-life than conventional interferon which allows for once-weekly dosing (5). Pegasys has been shown to produce superior clinical outcomes in patients with HBeAg-positive chronic HBV and significantly higher response rates in chronic HBV patients that are HBeAg-negative (4).

For patients with compensated cirrhosis the goal is to prevent the progression to decompensated cirrhosis and to prevent the development of liver cancer. Interferon therapy is not recommended in patients with decompensated cirrhosis because it increases their risk for developing bacterial infections and it can potentially worsen their condition (5).

Regulatory Status
FDA-approved indications: (6-10)
1. Pegasys is an antiviral indicated for the treatment of chronic hepatitis C (CHC) in patients 5 years of age and older with compensated liver disease
2. Pegasys monotherapy is indicated for CHC only if patient has contraindication to or significant intolerance to other HCV antiviral drugs
3. Pegasys monotherapy is also indicated for treatment of adult patients with HBeAg positive and HBeAg negative chronic hepatitis B infection who have compensated liver disease and evidence of viral replication and liver inflammation
4. PegIntron, as part of a combination regimen, is an antiviral indicated for the treatment of chronic hepatitis C (CHC) in patients with compensated liver disease
5. PegIntron monotherapy should only be used in the treatment of CHC in patients with compensated liver disease if there are contraindications to or significant intolerance of ribavirin and is indicated for use only in previously untreated adult patients

Limitations of Use:
Pegasys alone or in combination with ribavirin without additional HCV antiviral drugs is not
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recommended for treatment of patients with CHC who previously failed therapy with an interferon-alfa. Pegasys is not recommended for treatment of patients with CHC who have had solid organ transplantation (6).

If Pegasys is administered with other antiviral agents, the contraindications to those agents also apply to the combination regimen (6).

PegIntron may cause or aggravate fatal or life-threatening neuropsychiatric, autoimmune, ischemic, and infectious disorders. Monitor closely and withdraw therapy with persistently severe or worsening signs or symptoms of the above disorders (7).

Ribavirin may cause birth defects and fetal death: avoid pregnancy in female patients and female partners of male patients (8-10).

Summary
Hepatitis C is a viral disease caused by the hepatitis C virus (HCV) that leads to inflammation of the liver. Untreated, chronic infection can lead to liver cirrhosis and/or liver cancer. The most common treatment regimens are based on combinations of pegylated interferon alfa, ribavirin, and a protease inhibitor (1).

Pegasys is an antiviral indicated for the treatment of adult patients with HBeAg positive and HBeAg negative chronic hepatitis B infection who have compensated liver disease and evidence of viral replication (6).

Prior authorization is required to ensure the safe, clinically appropriate and cost effective use of Pegasys, Pegintron, and ribavirin while maintaining optimal therapeutic outcomes.

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