



# International Journal of Medicine and Pharmaceutical Research

Journal Home Page: [www.pharmaresearchlibrary.com/ijmpr](http://www.pharmaresearchlibrary.com/ijmpr)



## REVIEW ARTICLE

### Review on Non Alcoholic Fatty Liver Disease and Non Alcoholic Steato Hepatitis

H. Mahumutha\*, Nilsha Anil, R. Ramprasad, J. Amutha Iswaraya Devi, N. Venkateshan

Department of Pharmacy, Arulmigu Kalasalingam College of Pharmacy, Krishnankoil-626126

#### ABSTRACT

To focus on NAFLD about its prevalence and its treatment NAFLD referred to as nonalcoholic fatty liver disease (NAFLD) or nonalcoholic steato hepatitis (NASH) with or without fibrosis to hepatocellular carcinoma. Accumulation of excess fat deposit over the liver. This fat deposit is also seen among alcoholics. Alcoholics fatty liver disease is seen in patients who drink or no alcohol. NAFLD is termed as fatty liver and cirrhosis occur when the liver sustains substantial damage liver cells are replaced by scar tissue which result in the inability of the liver to work properly liver enzyme such as gamma-glutamyl transferase (GGT), ALT (alanine amino transferase) and aspartate amino transferase (AST) have recently been suggested as risk factors for cardiovascular disease, impact on myocardial infarction (or) ischemic stroke. Serologic methods or liver biopsy to evaluate the severity of NAFLD. Fatty liver is a very common disorder up to 20% of adults and approximately 8% of children are affected. Non-alcoholic steato hepatitis the more severe form of fatty liver is seen in around 20% of the obese individuals. NAFLD is associated with various metabolic risk factors such as obesity and diabetes and NAFLD is one of the most common chronic liver diseases. Diabetes medicines reduce liver fat in non-alcoholic fatty liver disease. It has found that Empagliflozin a newer treatment for type 2 diabetes reduces liver fat with NAFLD and diabetes. NASH may progress to cirrhosis of the liver and liver cancer. No approved medication treating NASH (or) NAFLD agent like metformin, pioglitazone and vit E limited success in reducing liver fat. Our results suggest that Empagliflozin may help in treating NAFLD.

#### ARTICLE INFO

##### Corresponding Author

H. Mahumutha

Department of Pharmacy,  
Arulmigu Kalasalingam College of Pharmacy,  
Krishnankoil-626126  
MS-ID: IJCPS3644



PAPER-QR CODE

**ARTICLE HISTORY:** Received 15 June 2018, Accepted 12 August 2018, Available Online 10 October 2018

**Copyright** ©2018 H. Mahumutha, et al. Production and hosting by Pharma Research Library. All rights reserved.

This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

**Citation:** H. Mahumutha, et al Review on Non Alcoholic Fatty Liver Disease and Non Alcoholic Steato Hepatitis. *Int. J. Med. Pharm. Res.*, 2018, 6(5): 183-185

#### CONTENTS

1. Introduction. . . . .	184
2. Common Side Effects of Jaundice. . . . .	184
3. Causes. . . . .	184
4. Conclusion. . . . .	184
5. References. . . . .	184

### 1. Introduction

NAFLD is rapidly serious global health problem. it is a chronic liver disease NAFLD may have a more serious conditions named nonalcoholic steato hepatitis. It is a ballooned hepatocytes with accompanied steatosis and inflammation. Hepatic triglyceride storage, mediation of inflammatory activity and hepatocyte injury to include parenchymal fibrosis. NAFLD the presence of hepatocyte injury and fibrosis progression to steato hepatitis.it is mild degree of fibrosis eosinophils in the presence of a lipogranuloma.

A structure composed of a central steatotic hepatocyte accumulation of mononuclear cells and macrophages). Pathological conditions including obesity diabetes and cardiovascular disease and symptoms of a metabolic syndrome. The occurrence of insulin resistance and lipid metabolism, dysfunction, oxidative stress, inflammation, necroapoptosis. Many of the currently used medicinal treatment severe side effects associated with increase risk factor certain types of cancer.

Application of herbal treatment for NAFLD has received attention due to its wide availability, low side effects and therapeutic mechanisms and benefits. Traditional Chinese herbal treatment has been examined for their potential uses as treatment. NAFLD western pharmacologic drugs currently used to treat the disease. The use of herbal medicine extract from plant and pure natural product. Many crude extracts from medicinal plants have significant anti NAFLD effects. Polygonum hypoleucum is the dryroot leguminous is the plant belonging to the genus pueraria. Treatise on febrile disease it has been used to treat cancer, arthritis, nephritis.

#### Empagliflozin Adverse Effects:

Empagliflozin (jaundice) problems with urination – frequent urge to urinate, or little no urinating, increased urinary tract infection such as pain itching . Hypo glycemia take with medication jaundice. Its along with diet and exercise to lower blood sugar in adults with type 2 diabetes reduce cardio vascular death in adults.

### 2. Common Side Effects of Jaundice

- Dehydration
- Dizziness
- Light hardness
- Weak ness
- Yeast infection
- Low blood pressure
- Nausea
- Upper respiratory tract infections
- Do not take jaundice. If you are allergic to empagliflozin if do not take severe kidney problem or are on dialysis

#### Four Stages of jaundice:

- Simple fatty liver ( hepato steatosis)
- Nonalcoholic steato hepatitis (excess fat in liver cell)
- Fibrosis

- Cirrhosis

### 3. Causes

- Oxidative dress ( imbalance between pro oxidant and anti-oxidant chrmicals that lead to liver cell damage)
- Production and release of cytokines
- Liver cell are necrosis( death) called apoptosis
- Adipose tissue inflammation and infiltration by WBC
- Gut microbiota ( intestinal bacteria) role in liver inflammation

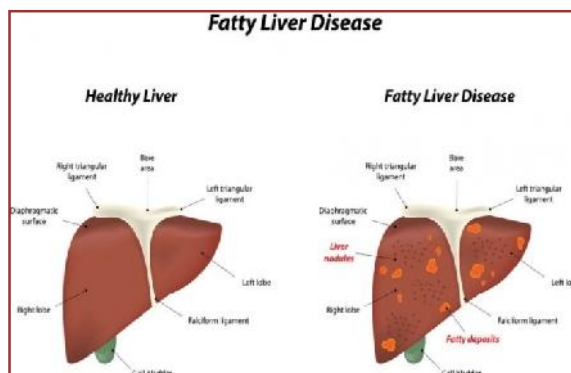


Figure 1:Fatty liver disease

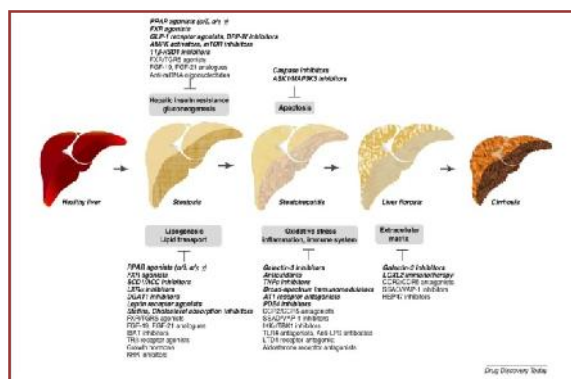


Figure 2: Fatty Liver Condition

### 4. Conclusion

Risk factors include obesity, gastric bypass surgery, high cholesterol and type 2 diabetes. Most people have no symptoms. In rare cases, people may experience fatigue, pain or weight loss. Over time, inflammation and scarring of the liver (cirrhosis) can occur. No standard treatment exists. Instead, doctors will treat the underlying condition, such as obesity. Herbal drug are we are using less side effects and better than the chemical compounds. This review concluded the most effect on alcoholic fatty liver disease and serious condition of fatty liver disease.

### 5. References

[1] Clouston AD, Gadd VL, Irvine KM, Powell EE. New Paradigms in the Histopathology of NAFLD. Current Hepatology Reports. 2014, 13(2):81-7.  
 [2] Khanna S, editor. Non-Alcoholic Fatty Liver

- Disease-ECAB. Elsevier Health Sciences; 2013 Apr 15.
- [3] Chirapongsathorn S. Readmission in Cirrhosis (Doctoral dissertation, College of Medicine-Mayo Clinic).
  - [4] Popper H, Lieber CS. Histogenesis of alcoholic fibrosis and cirrhosis in the baboon. *The American journal of pathology*. 1980, 98(3):695.
  - [5] Choi S, Diehl AM. Role of inflammation in nonalcoholic steatohepatitis. *Current opinion in gastroenterology*. 2005, 21(6):702-7.
  - [6] Bilzer M, Roggel F, Gerbes AL. Role of Kupffer cells in host defense and liver disease. *Liver International*. 2006, 26(10):1175-86.
  - [7] Yeh ET, Tong AT, Lenihan DJ, Yusuf SW, Swafford J, Champion C, Durand JB, Gibbs H, Zafarmand AA, Ewer MS. Cardiovascular complications of cancer therapy: diagnosis, pathogenesis, and management. *Circulation*. 2004, 109(25):3122-31.
  - [8] Edwards IR, Aronson JK. Adverse drug reactions: definitions, diagnosis, and management. *The lancet*. 2000, 356(9237):1255-9.
  - [9] Boulton AJ, Vinik AI, Arezzo JC, Bril V, Feldman EL, Freeman R, Malik RA, Maser RE, Sosenko JM, Ziegler D. Diabetic neuropathies: a statement by the American Diabetes Association. *Diabetes care*. 2005, 28(4):956-62.
  - [10] Kamba T, McDonald DM. Mechanisms of adverse effects of anti-VEGF therapy for cancer. *British journal of cancer*. 2007, 96(12):1788.
  - [11] Johnston R, Uthman O, Cummins E, Clar C, Royle P, Colquitt J, Tan BK, Clegg A, Shantikumar S, O'Hare JP, McGrane D. Canagliflozin, dapagliflozin and empagliflozin monotherapy for treating type 2 diabetes: systematic review and economic evaluation. *Health Technology Assessment*. 2017, 21(2):1-218.
  - [12] Johnston R, Uthman O, Cummins E, Clar C, Royle P, Colquitt J, Tan BK, Clegg A, Shantikumar S, Court R, O'Hare JP. Clinical effectiveness.