

New Therapeutic Approaches in the Treatment of the Non-Alcoholic Fatty Liver Disease

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Introduction

- Non-alcoholic fatty liver disease (NAFLD) is defined as the excessive lipid accumulation in the liver.
- It goes from simple hepatic steatosis to non-alcoholic steatohepatitis (NASH), in which inflammation, fibrosis and cell death are already present.
- Around 30-40% of simple steatosis cases progress to NASH, which has a worse prognosis and it is estimated to become the leading cause of hepatic transplantation in the near future.
- It affects approximately 20-30% of the world population, and its prevalence is increasing exponentially, following the growth trend of the metabolic syndrome, which is very common among individuals with this disease.

Objectives

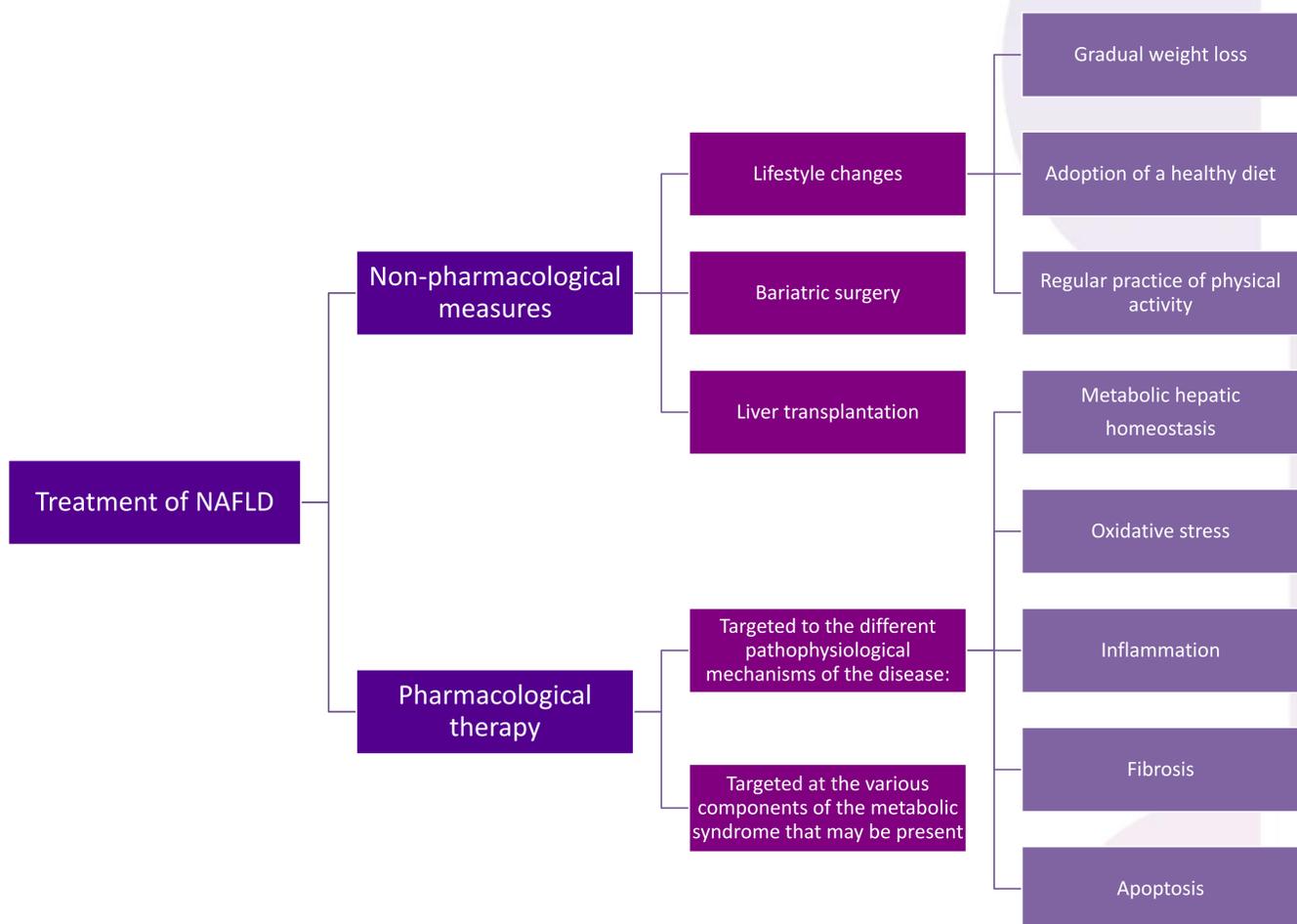
- Answer the question: What are the new therapeutic approaches in the treatment of NAFLD?
- Carry out a literature review that allows the systematization of the existing information on the treatment of NAFLD.

Methods

- The sources were searched by using the electronic database PubMed, starting in February 2017 and ending in March 2017.
- The terms "non-alcoholic fatty liver disease review", "non alcoholic steatohepatitis review", "NAFLD review" and "NASH review" were used as descriptors.
- Only scientific articles published in the last 10 years and written in English have been included. Preference was given to scientific articles corresponding to joint reviews.
- Throughout the literature search, 161 articles were collected, whose content was later analysed, and 46 articles were selected for the preparation of this monograph.

Results

- The treatment of NAFLD involves combining non-pharmacological measures with pharmacological therapy.
- Considering that most individuals with NAFLD are overweight, obese and/or have metabolic syndrome, the first treatment option is a change in lifestyle accompanied by gradual weight loss, through the adoption of a healthy diet and the regular practice of physical activity.
- Bariatric surgery is an option in the case of morbidly obese individuals. Liver transplantation is a last resource in case of terminal liver disease.
- However, the adoption of non-pharmacological measures, such as diet and exercise, do not succeed in the vast majority of cases, so it is essential to combine these behaviour change strategies with a pharmacological approach.
- Taking into account that the metabolic syndrome is present in the majority of individuals with NAFLD, the treatment of this disease must include the treatment of the various components of the metabolic syndrome that may be present, namely obesity, insulin resistance, type 2 diabetes mellitus, hypertension and dyslipidaemia.
- Other drugs used in the treatment of NAFLD are targeted at the different pathophysiological mechanisms of the disease, acting on metabolic hepatic homeostasis, oxidative stress, inflammation, fibrosis and/or apoptosis.
- Despite the high number of drugs studied and clinical trials performed, no drug has yet been shown to have a therapeutic benefit which is significant enough for it to be approved as NAFLD-specific therapy.



Discussion/Conclusions

- With the notion that the prevalence of this pathology is going to keep rising, the therapeutic emptiness associated with this disease becomes a problematic issue, making it necessary that the investigation in this field continues.
- Therefore, it is essential to:
 - Improve the quality of data obtained from non-invasive diagnostic methods, allowing for a more effective, inexpensive and embracing screening of the population, not having to resort so often to liver biopsy.
 - Further deepen existing knowledge about the pathophysiology of NAFLD, in order to more effectively target therapeutics, discover new targets and allow for the synergistic combination of various therapies.
 - Clearly identify the risk factors associated with this pathology and those leading to a poorer prognosis, promoting a more effective tailored treatment for each individual, aiming to prevent the progression of the disease or even to make regression possible.
- Above all, it is imperative that research into new approaches to NAFLD treatment continues.