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Review: Health and nutrition to substitute paracetamol

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Abstract--- Health, as defined by World Health Organization is a state of complete physical, mental and social wellbeing.^[1] In a healthy body, resides healthy mind and constructive thoughts of improvement. The importance of maintaining a good diet, exercising and meditation have been highlighted from time immemorial.^[1, 2] It is the hale and hearty body, which not only catalyzes a strong personal growth, but also contributes to a nation building. However, in the present age of globalization, where everything happens with a click of button, the fast lifestyle demands quick responses and meeting early deadlines. On one hand, they are proved to be effective for an institutional growth, but on the other hand, these stressors contribute majorly to unhealthy lifestyle, depression, mental overload and fatigue. Common episodes of headache, eye strain, pain, tiredness and other such health issues have become prominent among people in the recent years.^[3-5] With the increase in workload, the demand of quick recovery from such common problems has also increased. Shockingly, the compositions of Acetaminophen and Paracetamol has been the most common treatment method to deal with such symptoms. Irrespective of the knowledge of the consumer and the side effects associated, paracetamol has become an agent of choice among a wide range of population majorly to cure even slightest of pain symptoms. The activity of popping up different compositions of paracetamol has become so communal, that its long terms side effects like liver damage and gastrointestinal bleeding is generally ignored.^[6] Thus, there is a critical need to shift the focus of common population as well as

physicians towards more effective natural plant-based alternatives to ease the issues of pain, headache and fatigue for which paracetamol is generally administered. At the same time, the focus is also need to be put towards healthy lifestyle and food consumption along with equal focus on yoga and meditation. Study reveals that prolong use of medications may result into liver, kidney toxicity but the effect differs to different people according to body size, gender, age, etc. The diverse realm of ethnomedicinal plants possess numerous alkaloids and bioactive compounds which acts as substitute for Paracetamol. We have to raise awareness to do maximum plantation and to educate people about importance of medicinal plants. The further sections of this paper analysis these aspects in elaborate details.

Keywords---Paracetamol, Toxicity, Ethnomedicinal plants.

Introduction

As our lifestyle is now getting techno-savvy, we are moving away from nature, and this has led to our increase dependence to synthetic medications leading to adverse short- and long-term health risks. Herbs are considered as natural products that are free from side effects, they are comparatively safe, eco-friendly and locally available. Traditionally there are lot of herbs used for the ailments related to different seasons. There is a need to promote them to enhance the general wellbeing and strengthen the innate immunity of population so as to prepare the body for deadly outbreaks like the COVID-19. These herbal products today are the symbol of safety in contrast to the synthetic drugs, that are regarded as unsafe to human being and environment.

- Medicinal plants may provide three main kinds of benefits:
- Health benefits to the people who consume them as medicines;
- Financial benefits to people who harvest, process, and distribute them for sale; and
- Society-wide benefits, such as job opportunities, taxation income, and a healthier labour.
- Paracetamol (acetaminophen) is one of the most widely used analgesic which is easily available on a non-prescription basis throughout the world. Because of this, it poses a risk of overdose either deliberately or unintentionally.
- Along with its needed effects, acetaminophen (the active ingredient contained in paracetamol) may cause some unwanted effects which includes drowsiness, fatigue, rashes and itching. Children may occasionally experience low blood sugar and tremors, and feeling hungry, faint and confused after taking paracetamol. Overdose symptoms include Abdominal pain, nausea, vomiting, liver problems, seizures, coma and death.
- Since ancient times, plants have always been a reliable and important source of bioactive compounds used to treat several diseases, and thus play a central role in human health. In addition, medicinal plants are a rich source of bioactive secondary metabolites that have a wide range of medicinal uses.

Methodology and Data Analysis

The online survey study was conducted in Delhi, India, and a total of 150 respondents including students have participated. The questionnaire was about the usage of ethnomedicinal plants as substitutes for Paracetamol between November 2021 to February 2022. 50 objective questions through Google form were framed and distributed online through Whatsapp, emails, and other social sites. Also, telephonically medicos were questioned regarding stastical usages of painkillers. All respondents gave their response in the survey. The data was collected, the questionnaire was decoded and analyzed using the Google form data analysis.

Medicinal Plants



Fig. 1(a)



Fig. 1(b)

Turmeric is often referred to as the “golden spice” and is used for a wide range of ailments. It also improves circulation and prevents blood clotting. Turmeric’s active ingredient curcumin is responsible for lowering the levels of enzymes in the body that cause inflammation. If we take $\frac{1}{2}$ tsp of turmeric powder in water, thrice a day, it results in good effect. Drinking turmeric milk in warm water reduces aches and pains. Similarly, Neem is a member of Meliaceae family and it plays important in promoting health because it contains rich source of antioxidants. Usage of Neem leaves has been mentioned in Chineses, Unani, Ayurvedic medicines and especially in Indian subcontinent to prevent various diseases.

Importance of Health and nutrition

Good nutrition is an important part of leading a healthy lifestyle. Combined with physical activity, our diet can help us to reach and maintain a healthy weight, reduce our risk of chronic diseases (like heart disease and cancer), and promote our overall health. Nutrition is defined as nourishment or energy that is obtained from consuming foods in healthy quantities. Unfortunately, for many of us, proper nutrition is far from what we get from our daily diet. Eating healthy, ‘nutritious’ foods is important for remaining healthy.

Our Role

Help keep adolescents/ youth healthy: Teach adolescents the importance of taking care of their health. *Engage them in scheduling routine check and immunizations visits. Ensure continuity in their mental health and occupational health care. Encourage them to eat healthy, drink water* – instead of sugar sweetened beverages – for strong teeth, be physically active, or learn something new. It can help them stay healthy and focused. Help adolescents/ youth stay socially connected: *Encourage adolescents to reach out to friends and family via phone, video chats, social media, or even via video games.* Schools may have tips and guidelines to help support their social and emotional needs.

Nutrition is an essential aspect of a healthy lifestyle and the importance of getting it right cannot be overstated – let's start by going into the benefits of having a nutritious diet.

- Weight management: A lot of us mistakenly associate weight loss with fad diets, but eating a nutritious diet is really important for weight management.
- Protecting us from chronic diseases: Many chronic diseases such as type-2 diabetes and heart disease can be cured taking balanced diet.
- Strengthening our immune system: Our immune system requires essential vitamins and minerals in order to function properly.
- Delaying the onset of ageing: Certain types of food such as tomatoes and berries can increase vigour and improve our health.
- Supporting mind and Body: Our mind and body remains active and fit with proper nutrition.

Result and Discussion

The survey finding states that, in order to save money, time and due to lockdown most of the participants were doing self-medications to cure fever, aches and pains. These self -medications may be the major threat to vital organs like liver, kidneys, heart. However, many of respondents cannot deny the benefits of ethnomedicinal plants. 131 respondents out of 150 still believe the importance of medicinal plants for curing various ailments. Usage of leaves, rhizomes, roots, seeds, flower leaves, barks are common in few houses. Leaves juices, herbal tea etc are popular among residents of forest area. In many ancient literatures the usage and importance of medicinal plants are mentioned. All the medicinal plants studied shows positive and effective results with zero side effects. Deforestation, Overgrazing, should be checked time and again, more emphasise should be given to promote tree plantations drives, conservation of wild-life centuries and flora-fauna should be encouraged. More usage of ethnomedicinal plants and conventional knowledge should be promoted to minimize the toxicity produced by synthetic drugs.

Conclusion

Health is the greatest wealth. All the ethnomedicinal plants are having important bioactive compounds and they have immense potential to overcome Paracetamol toxicity because they have significant biological compounds for manufacturing

medicines. People living in forests and rural areas are using these plant parts for their medications. In order to overcome the long term consequences and to minimise the toxicity of synthetic drugs we must conserve and use our forests judiciously. Sustainable developmental approach can help us to encounter the challenges. Let's together create more awareness to save mother nature and recognise the importance of health and nutrition.

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Conflict of statement

There is no conflict of interest for the present research article.

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