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CONTRADICTORY OPINION OF THE *TERMINALIA CHEBULA* LINN. -LITERATURE REVIEW

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ABSTRACT
Terminalia chebula is used as common and effective herb in traditional, Siddha & Ayurvedic medicine as Indian Medicine. In siddha medical system know as "Mother of Herb" is mentioned in manuscripts texts. In this research paper objected as enumerate the side effect or toxicity effect from Gall Nut or safe drug for all by searching the literatures in books and articles. Finally concluded by collected data results as; continuous drug period of intake for up to 3 months. And drug interactions reported as; Taking Terminalia along with diabetes medications might cause your blood sugar to go too low. In toxicity studies shows as; In the acute phase of the study, the safe dose was ≤5000 mg/kg for both extracts. In sub- acute phase, LD_{50} (95% CI) of *Terminalia chebula* extract 2754.436 (2438-3114) mg/kg. The highest dose of *T. chebula* extract induced few histopathological changes.

KEYWORDS: *Terminalia chebula*, Drug Interaction, LD_{50}.

INTRODUCTION

Terminalia is a tree. Three species of terminalia are used for medicine. These species are T*erminalia arjuna, Terminalia bellerica*, and *Terminalia chebula*. Terminalia bellerica and Terminalia chebula are both used for high cholesterol and digestive disorders, including both diarrhea and constipation, and indigestion. They have also been used for HIV infection. *Terminalia chebula* is used for dysentery. *Terminalia bellerica* and *Terminalia chebula* are used as a lotion for sore eyes. *Terminalia chebula* is also used topically as a mouthwash and gargle. Intravaginally, *Terminalia chebula* is used as a douche for treating vaginal infections. In traditional Siddha & Ayurvedic medicine, *Terminalia bellerica* has been used as a "health-harmonizer" in combination with *Terminalia chebula* and *Emblica officinalis*. This combination is also used to lower cholesterol and to prevent death of heart tissue.

Possibly Effective: Chest pain (angina). Some research shows that taking Terminalia by mouth with conventional medications improves symptoms in people experiencing chest pain after a heart attack.

- Congestive heart failure (CHF). Some research shows that taking Terminalia by mouth with conventional medications for 2 weeks improves symptoms in people with CHF.
- Irritable bowl syndrome people should avoid for 6 months to one year.

Insufficient evidence to rate effectiveness

- Earaches.
- HIV infection.
- Lung conditions.
- Severe diarrohea.
- Urinary problems.
- Water retention.
- Other conditions.

How Does Terminalia Work: Terminalia contains ingredients that help stimulate the heart. It might also help the heart by lowering cholesterol and blood pressure.

In this research, objectives were to collect evidences of side effect and toxicological effects of *Terminalia chebula*, to enumerate LD_{50} by toxicity study of *Terminalia chebula*. This research will help to give new alert of herbal medical seekers and create good awareness on it as safety and clinical value of mal practices.

MATERIALS AND METHODS

Research type: Literature Review
Research design: collection of data from authenticated text book and online access data and grouping with presentation the data.

RESULT

Dosing

The following doses have been studied in scientific research:

BY MOUTH: For chest pain (angina): 500 mg of the powdered bark of Terminalia arjuna has been taken three times per day along with conventional treatment for chest pain for up to 3 months.

SIDE EFFECTS AND SAFETY

When taken by mouth: The safety of *Terminalia bellerica* or *Terminalia chebula*. It's best to avoid use until more is **POSSIBLY SAFE** when taken by mouth for 3 months or less. But don't use *Terminalia chebula* without medical supervision.

Special Precautions and Warnings

Pregnancy: There is some evidence that *Terminalia chebula* is **POSSIBLY UNSAFE** during pregnancy. There isn't enough reliable information to know if the other two species are safe to use when pregnant. Stay on the safe side and avoid using any Terminalia species.

Breast-feeding: There isn't enough reliable information to know if Terminalia is safe to use when breast-feeding. Stay on the safe side and avoid use.

Bleeding disorders: Terminalia might slow blood clotting. This might increase the risk of bruising and bleeding in people with bleeding disorders.

Diabetes: Terminalia might lower blood sugar levels. Your diabetes medications might need to be adjusted by your healthcare provider.

Surgery: Terminalia might interfere with blood sugar control and increase the risk of bleeding during surgery. Stop taking Terminalia at least 2 weeks before a scheduled surgery.

Interactions With Medications

Medications for diabetes (Antidiabetes drugs) Interaction Rating: Moderate Be cautious with this combination.

Terminalia might lower blood sugar. Diabetes medications are also used to lower blood sugar. Taking Terminalia along with diabetes medications might cause your blood sugar to go too low. But more evidence is needed to know if this interaction is a big concern. Monitor your blood sugar closely.

Some medications used for diabetes; include glimepiride (Amaryl), glyburide (DiaBeta, GlynasePresTab, Micronase), insulin, pioglitazone (Actos), rosiglitazone (Avandia), chlorpropamide (Diabinese), glipizide (Glucotrol), tolbutamide (Orinase).

TOXICITY STUDY (LD_{50} evaluated)

This study examined the acute and sub-acute toxic effects of *Terminalia chebula* extract on the murine model. Methods: In both phases, mice were assigned to intervention and control groups. At the end of study, the liver, kidney, and heart tissues were collected for histopathological studies. Results: In the acute phase of the study, the safe dose was ≤5000 mg/kg for both extracts. In sub- acute phase, LD50 (95% CI) of *Terminalia chebula* extract 2754.436 (2438-3114) mg/kg. The highest dose of *T. chebula* extract induced few histopathological changes. Conclusion: It will be useful to gain information on the minimum lethal doses of *T. chebula* to adopt safe doses of the plant.

The study of chronic toxicity was determined by oral feeding both female and male rats (ten females, ten males) daily with the test substance at the dose of 300, 600 and 1,200 mg/kg body weight continuously for 270 days. The results of acute toxicity showed no signs of toxicity such as general behavior changes, mortality, changes on gross appearance or histophatological changes of the internal organs of rats. The examinations of signs of chronic toxicity showed no abnormalities in the test groups as compared to the controls. Hematological and blood chemical values in treated groups were normal in comparison with the control group. Non-toxicity effect of *T. chebula* was present as no changes in body weight, internal organ weight, and general behaviors. Macroscopic or microscopic of internal organs or tissues in treated rats showed no changes. Therefore, the water extract of *T. chebula* given orally to female and male rats did not produce both acute and chronic toxicities in rats.

DISCUSSION AND CONCLUSION

"Mother of Herb" – *Terminalia chebula* is used for many diseases by single and poly herbal medicines in Siddha, Ayurveda and Indian medicines so many years. Ancient scientist defined dose and dose period in respected way. Therefore prolong dose and over dose produced side effect, ADRs and toxicity to body in any age. In this research, to find-out the reported as Contradictory Opinion of the *Terminalia chebula* Linn. Finally concluded by collected data results as; continuous drug period of intake for up to 3 months. And drug interactions reported as; Taking Terminalia along with diabetes medications might cause your blood sugar to go too low. For examples were reported as Some medications used for diabetes; include glimepiride (Amaryl), glyburide (DiaBeta, GlynasePresTab, Micronase), insulin, pioglitazone (Actos), rosiglitazone (Avandia), chlorpropamide (Diabinese), glipizide (Glucotrol), tolbutamide (Orinase).

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CONFLICT OF INTEREST

Author declare that, No conflict of interest in this research paper.

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