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# Evaluation of Plant Derived Homeopathic Remedies against Hepatitis B Infection

Md. Tanvir Morshed, Nazmul Hasan, Suvamoy Datta



## Abstract

Hepatitis B infection emerges with multiple drug resistant (MDR) strains that defeated available therapies. The treatment protocol in this study used homeopathic remedies which derived from naturally available shrub or herbs that include *Lycopodium clavatum*, *Carbo vegetabilis*, *Ceanothus americanus*, *Cinchona officinalis* and *Chelidonium majus* against hundred Hepatitis B cases that failed conventional therapies. Patients were followed with monthly measurements of relevant biomarkers of liver disease. A total of 82% patients developed anti-HBs after taking potentized homeopathic medicines for twelve month after complete termination of conventional treatment. 100% patients shown significantly improved serum glutamic pyruvic transaminase (SGPT) or ALT, serum glutamic oxaloacetic transaminase (SGOT) or AST and serum bilirubin level and living their normal life. Extensive study is necessary of these homeopathic remedies to explore the molecular interaction to produce anti-HBs.

**Key Words:** Hepatitis B, MDR, homeopathy, biomarkers, liver disease, potentized medicines.

## Introduction

MDR strains of Hepatitis B has drawn a great attention to public health research where conventional therapy failed<sup>1,2</sup>. Again, some HBV-negative subjects may harbor HBV DNA and transfusion of their blood may cause HBV infection in recipients<sup>3</sup>. Homeopathic medicines has its historical claim for successful therapeutic interventions against viral infection without little or no side effects<sup>4</sup>

## Materials & Methods

The current study involves five different homeopathic remedies produced from five medicinal plants which were administered to five groups each containing twenty Hepatitis B positive patients received acyclovir, interferon- $\alpha$  2b, lamivudine therapy earlier. Patient group modeled according to their resemblance in symptoms.



Figure 1: *Ceanothus americanus*, *Chelidonium majus*, *Carbo vegetabilis* (left to right)

All patients were measured monthly till one year for their biochemical markers (SGOT, SGPT, serum bilirubin), serologic ELISA for anti-HBs.

Mother tinctures were produced by immersion of active plant substance with strong alcohol under standard procedure. These remedies were given with 3X and 6C, 5-7 soaked pills twice a day, before meal. Triturated *Natrum sulph* 3X and potentized HBAg +ve 3X were used with each remedies.

The treatment protocol used in this study established under supervision of extensively experienced physicians and public health researchers. Medicines and their respective doses has selected based on previous scientific evidence of having active moiety on related and/or similar cases.



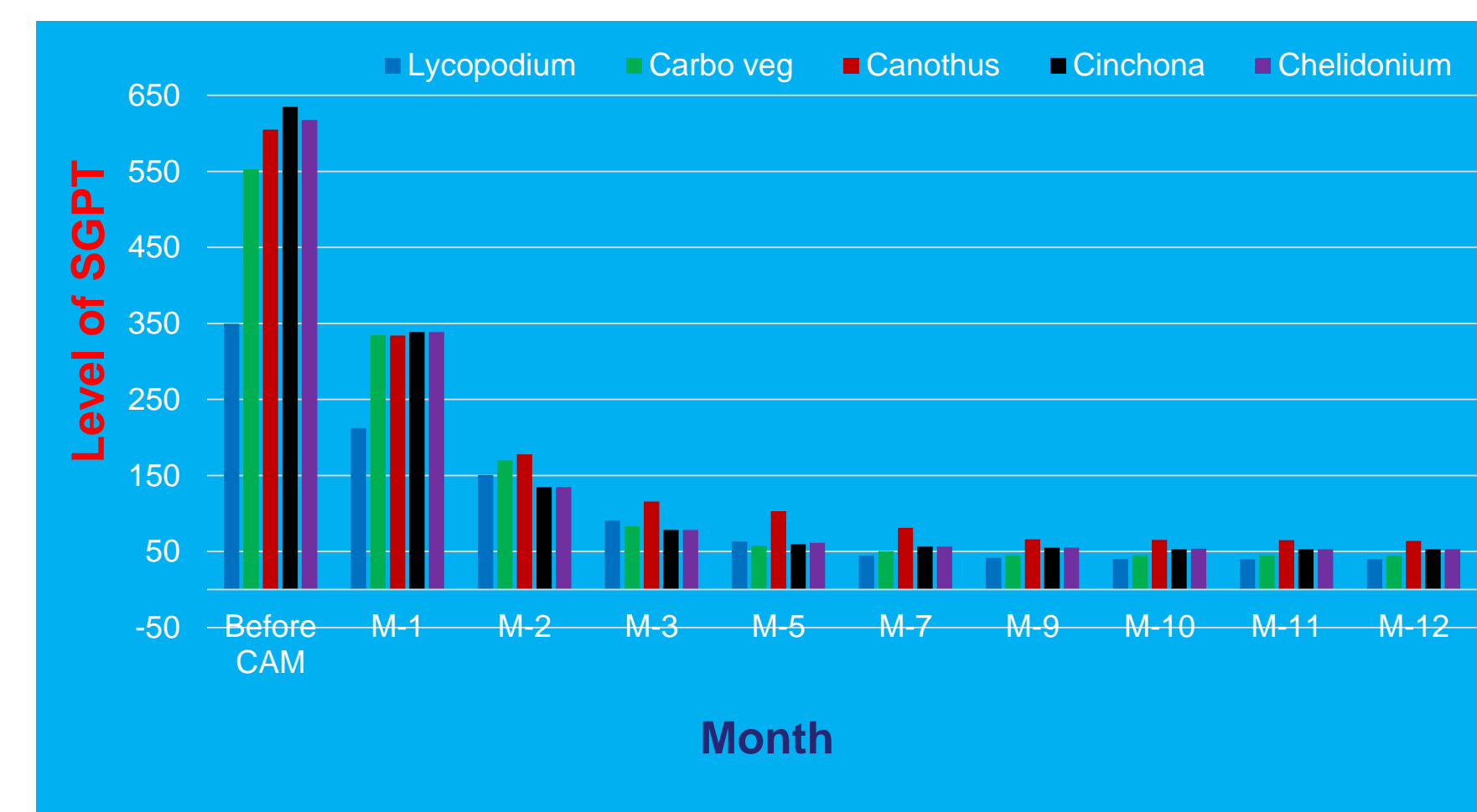
Figure 4: *Cinchona officinalis*, *Lycopodium clavatum* (left to right)

## Results & Discussion

*Lycopodium* has been believed and applied as anti-viral from ancient days and is used as the first-line agent for treatment of edema or fluid retention of any kind<sup>5</sup>. Both in vivo and in-vitro studies revealed that apigenin, isolated from *Lycopodium* have antioxidative and the DNA protective potentials<sup>6</sup>.

Current study revealed significant reduction of SGPT (39.43%), SGOT (38.66%) and serum bilirubin (41.67%) only after one month therapy with *Lycopodium* and induced anti-HBs within three months. After twelve months it recovered normal level of SGOT and SGPT level down to 40.5 and 40 and normal bilirubin level.

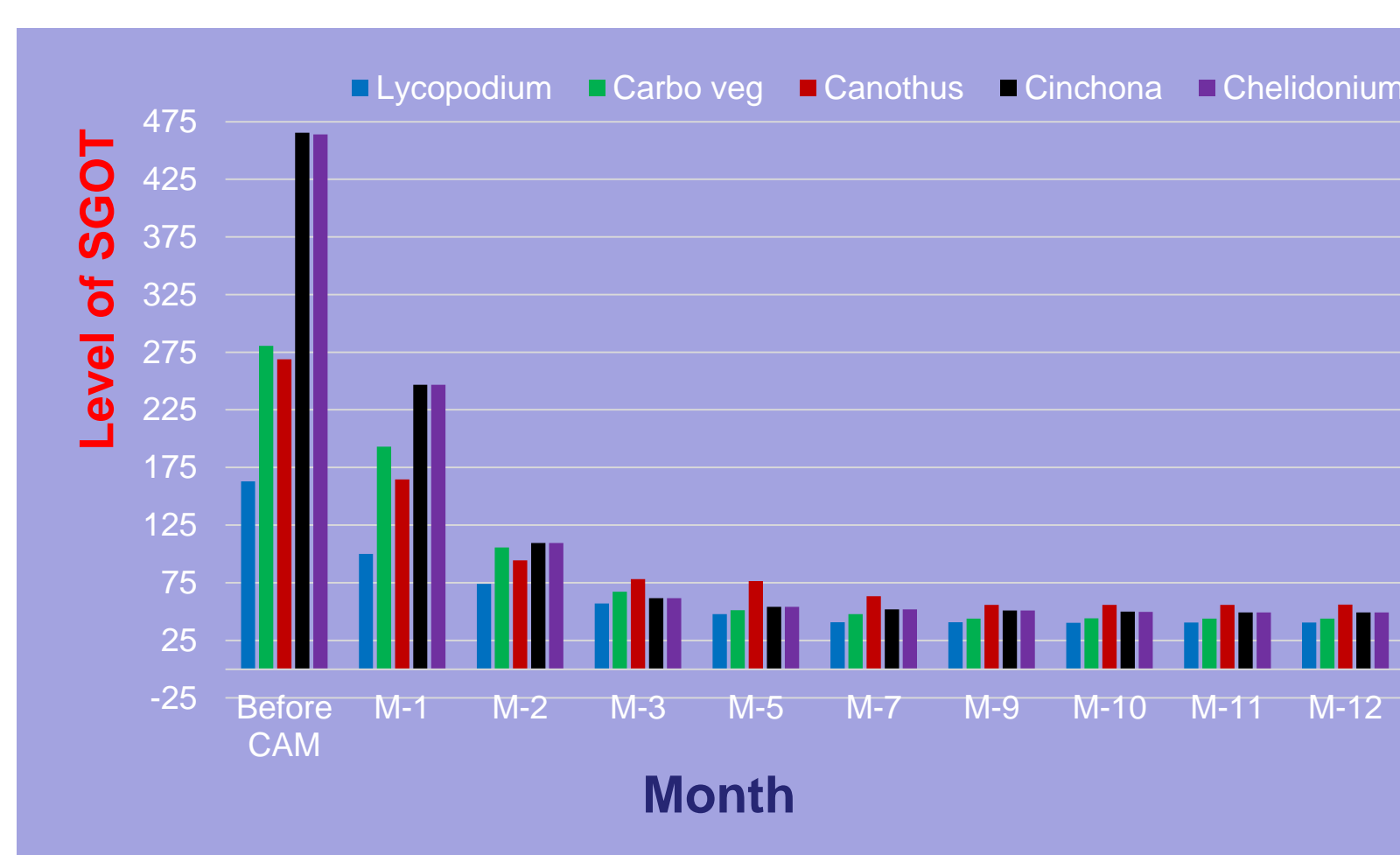
*Carbo vegetabilis* is well known detoxification agent and fight against diarrhea which reduced SGPT 39.43% after one month application but shown less active to reduce bilirubin (14.51%) and induced anti-HBs at the end of two months. Although it recovered normal level of bilirubin with five month therapy.



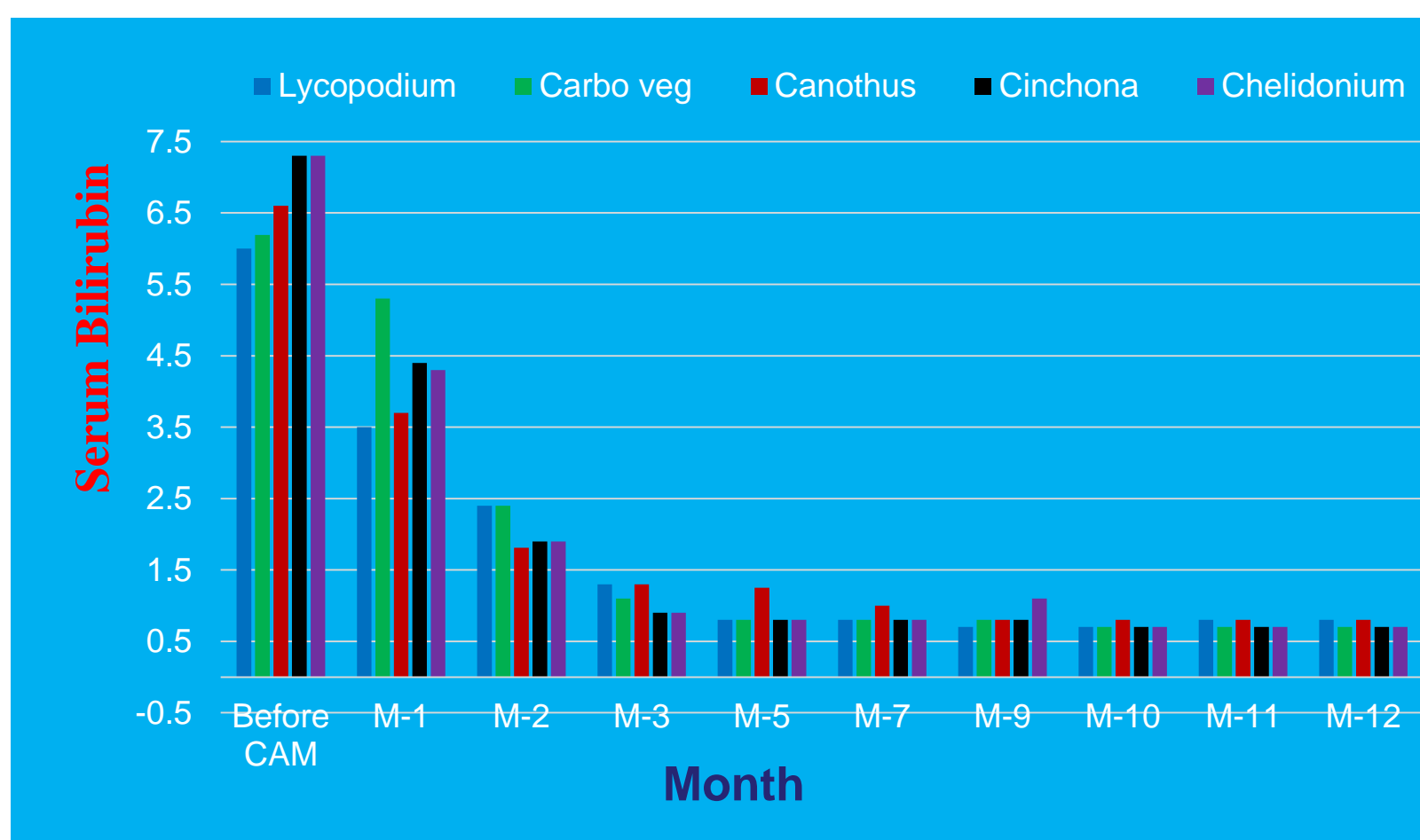
Graph 1: Average SGPT Level Improvement

Although *Ceanothus* did not improve the SGOT and SGPT level when administered to a thalassemic patient<sup>7</sup>, it improved SGOT (38.67%) and SGPT (44.80%) when given to HBV positive patients within one month. Serum bilirubin level is reduced significantly (43.94%) after one month and improved anti-HBs count up to 55.7%.

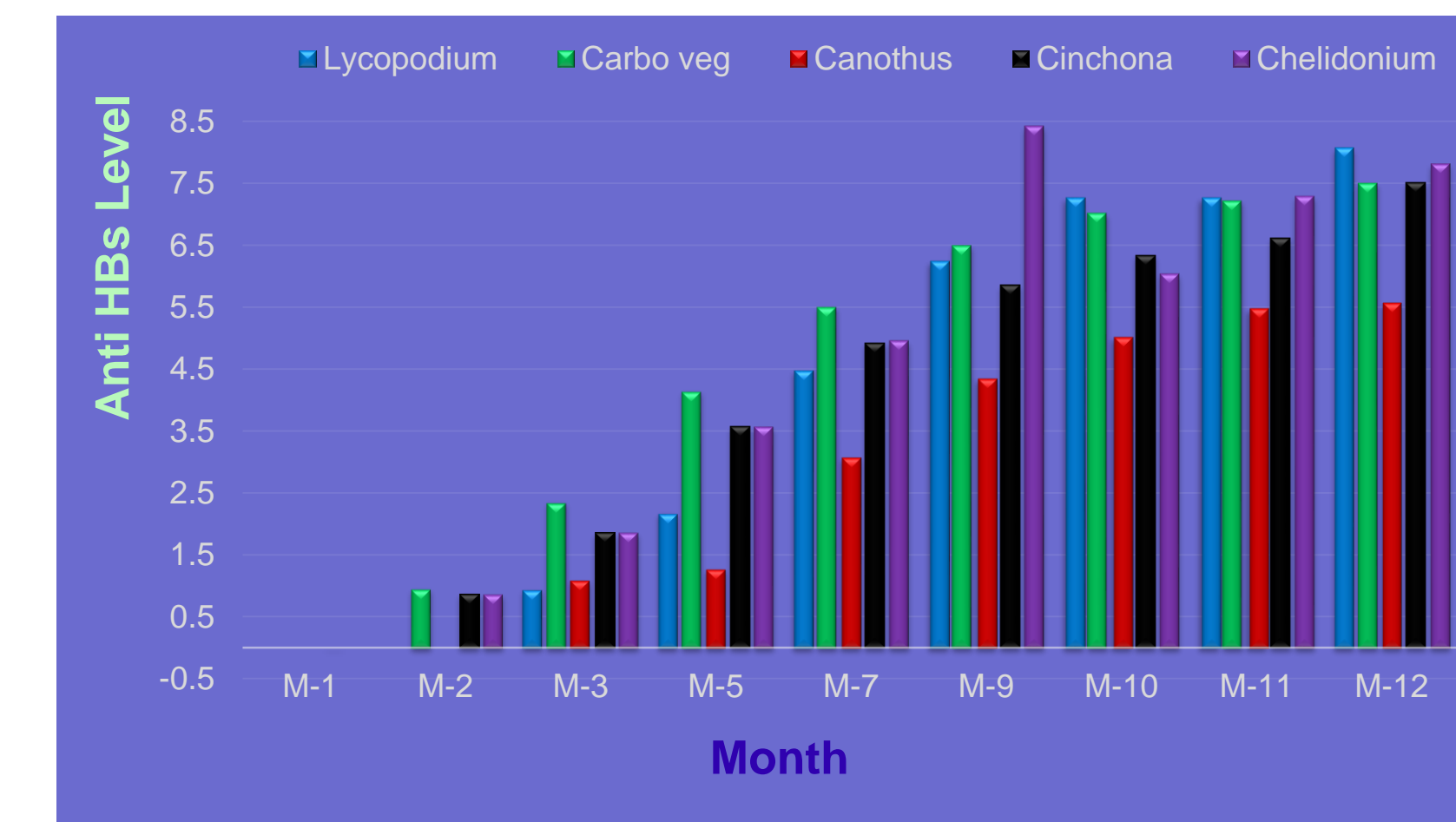
*Cinchona* revealed to be actively reduce SGOT (46.89%) and SGPT (46.62%) which is higher than other four remedies and induced anti-HBs count up to 0.87 within two months.



Graph 2: Average SGOT Level Improvement



Graph 3: Average Serum Billirubin level Improvement



Graph 4: Production of Anti HBs

*Chelidonium majus* has been shown to have immunostimulatory actions<sup>8</sup> and considered as the most effective alternative remedy against HBV. This study espoused this with anti-HBs count of 0.87 within two months. It also reduced SGPT (45.15%), SGOT (46.77%) and bilirubin (41%) at the end of one month.

## Conclusion

The advantages of the medicinal plant derived homeopathic remedies are manifold. They are inexpensive, easily available, taken in micro doses and without any known side-effects. The emerging disciplines of complexity, nanoscience, and materials science offer some hypotheses on how these ultradilute medicines may still maintain biological activity<sup>9</sup>. Therefore, the results of the present study are very encouraging and need further trial by other researchers independently to verify and confirm (or refute) our findings.

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