ISSN: 2634-9221
European Journal of Applied Sciences; Vol. 14 No. 02 (2026) (533-536)
https://doi.org/10.14738/aivp.1402.20270

Multi-Biomedical Effect of The Shell Calcite_Exploration of Multi-Functional Calcium

Jin-Ichi Sasaki[1], Tetsunei Someya[2], Keita Shudo[2], Takayuki Nishizuka[3]

1. Hirosaki University, School of Medice, Health Sciences Hirosaki 036-8564, Japan
2. Neo Circle Co., Ltd 4-8-8, Akasaka, Minatoku, Tokyo 107-0052, Japan
3. Takayuki NISHIZUJ|KA, MYTO, Co, Ltd., 50-13, Sabishiro, Namioka, Aomori, 038-1311, Japan

Keyword: Multi,-Biofunction, Corbicula japonica Shell Calcite, Liver disorder, Diabetes

INTRODUCTION

The Bivalve *Corbicula japonica* meat has been traditionally used a long time in Japan as a folk medicine for the liver disorder, and shell meat is often served as a side dish in the meal time as a healthy food.

In the fishery company, mass shell remained as a useless waist to be solved after using meat, and the fishery company consult us, whether there is any way to solve it and then they introduced us the village legend. Briefly, the priest in village cured the villager's liver disease by the fired shell powder. When this legend is correct scientifically, the local government immediately start a new business as a revitalization of the village. Then we initiated the dream researches.

MATERIALS AND METHDS

Bivalve *Corbicula japonica* Shell Calcite powder was prepared by heating at 105 to 900 C for 2 hrs by the programmed temperature control machine (AT-E 58, Isuzu, Co, Ltd., Japan) the heated samples were milled to powder, and filtrated by mesh with 45 um pore size, and then analyzed by the X-ray diffraction apparatus (XD-610, Shimazu, Japan) . Shell fish *Ruditapes philippnarum* and *Mizuhopecten yessoensis* were respectively used as a reference (1).

- Step2-1; LEC Rats Model for Anti-Hepatitis Potency Test of Shell Powder

  The calcite prepared from the above three type of shell fish was tested in bioactivity for detailed analysis

- Step 2-2; To ensure LEC rat results, the human volunteers case study was planned.

  All six volunteers had examined liver function value, and lipid, cholesterol, glucose, uric acid were not all, but we could know the wide bio-activity of calcite from them.

- Step 2-3; One person who cooperated to this project was diagnosed as a Faty liver by the Echo Examination.

RESULTS

Representative Chemical Constituents of the *Corbicula japonica* Shell Calcite

Carbohydrate, protein, lipid 0%, Heavy metal, AS, <3pm, Pb,<10 ppm, Cu, 0.21 mg/100g. Others were traces safety level cl by ingestion (1)

Calcite Ingested Voluntaries Data was listed in Table 1 All Voluntaries Positively Reacted with no Adverse Effect

Table 1: Calcite ingested Volunteers health check data *Corbicula japonica* Shell Calcite

Name	Items	Value	Before	After
MR	rGTP		168	72
	Lipid		173	118
	Tc		233	206
	UA		93	69
SK	rGTP		485	108
	Blood sugar		124	110
	A1C		6.5	6.4
EO	rGTP		80	36
	GOT		68	25
	Lipid		240	110
	TC		220	96
HY	rGTP		207	61
	Lipid		400	141
	UA		7.7	
TK	rGTP		100	45
	Lipid		200	130
				6.1
SR	rGTP		142	28
	AST		74	23
	Lipid		320	112
	TC		168	86
				86

ALT and GOT, and others elements as Uric acid, g glucose, lipid and cholesterol are also decreased in blood level. These data indicate that we developed shell calcite possessed the malt-biological l functions.

Clinical Report of The Shell Calcite Therapy against The Fatty Liver

Patient; 74 Y, Male; Medical History

2004; Lipid Value, 330, Clinical Fatty Liver

2005; Lipid Value, 228, Fatty Liver

2012; Initiation of Calcite Ingestion

2015; Lipid value 78, and the Normalized liver by the Echo Medical Examination.

DISCUSSION

In the 20 Century the medical researchers worked to develop early diagnosis of cancer for early effective therapy. Iin the 21centuary they devoted themselves to control new types of infectious diseases by the vaccination. I also had started the cancer vaccine development at sing BCG HSP (heat shock protein) that was also expressed on the tumor cells as the shared antigens, but this idea was not accepted by the cancer workers. Because the Vaccine is infection word and not a word in cancer field. But cancer researchers are presently using this word Cancer Vaccine. It is my New Old Story.

In 2018, the NCI in USA had launched the Designer Food Program and created a ranking of the anti-cancer foods based on the scientific reports. In those days, I wasrequired the research to explore the new utility of the ***Corbicula japonica*** shell waste from the local government. In the fishing village there was a legend that the priest had cured the villager with the liver problem by using with the fired shell powder. This is the origin of our calcite research to answer the government requirement.

The unexpected results were obtained in both the LEC rat animal model (1), and in the human volunteer examination as shown in Table 1. In the human volunteer studies, all volunteers liver function markers had improved, accompanying with Uric acid, glucose, lipid and cholesterol values decreased Table 1.

Further on the clinical study of the fatty liver, in it became normalized by the calcite ingestion (Echo examination). 3-3). Considering together with lipid, glucose, cholesterol, uric acid value lowering in serum, the shell calcite appeared having the prominent multi-biofunction activity.

Since the glucose value in No.2 volunteer (Table 1), lowered, the new experiment was down by the diabetes mouse model, and surely could confirmed glucose lowering potency in animal test too. (3). We are now planning to extend these results to assist liver problem person.

CONCLUISIVE CONSIDERATION

Bivalve *Corbicula japonica* shell calcite appears to have multi bioactivity as like, the liver function improvement, glucose, lipid, cholesterol, ureic acid (UA) lowering effect in the blood. These kinds of natural products have superiority compared to the artificial drugs with a narrow spectrum in activity. Multi-functional product search in nature is lately increasing to find the new substances contributing to both animals and human being as an international program.

This research was financially supported by the MYUTO Col Ltd research fund, and I also express thanks to all of the staffs to complete this work.

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