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Editorial

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Cardio Vascular Disease and its Prevention

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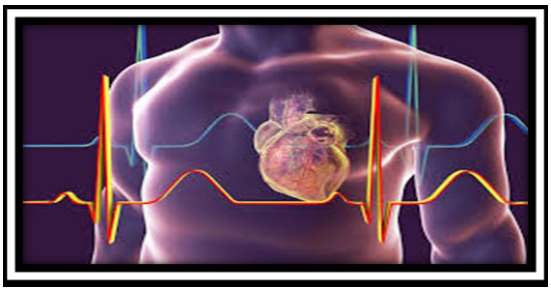


Types of CVD

- CORONARY ARTERY DISEASE
- BLOOD PRESSURE
- CARDIAC ARREST
- CONGESTIVE HEART FAILURE
- CONGENITAL HEART DISEASE
- PERIPHERAL ARTERY DISEASE
- ARRHYTHMIA

Cause of CVD

- **The major cause of coronary artery disease , cardiac arrest , congestive heart failure and peripheral artery disease is**

THE BLOCKAGE OR OBSTRUCTION IN THE ARTERY WHICH IS CAUSE BY PLAQUE

- **THIS PLAQUE MAINLY OCCUR DUE TO LDL I .e low density lipo protein**

Dissolve the Plaque (Method)

- Now we should dissolve the plaque in such a way so it should not form again.
- And should be dissolved with more effect and very less side effect
- If the medicine taken by the patient for long time then also it should have less side effect

Commiphora Wightii

Method

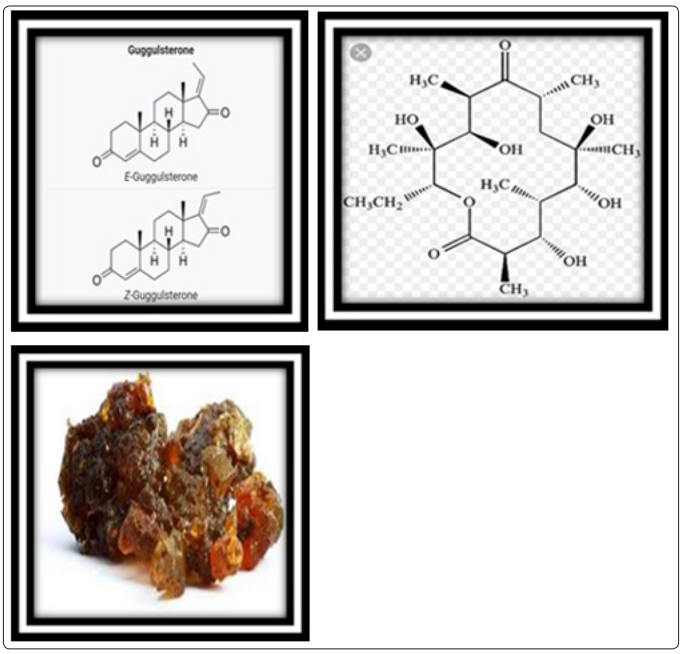
- Commiphora wightii in Hindi is known as guggul
- In this Guggul there is a compound called Guggulsterone is present
- This compound is Phytosteroid in nature
- This compound is having two stereoisomers E AND Z

In this E sterio isomers is very effective

- As it boost or we can say it will catalyze an enzyme called cytochrome p 450 heme enzyme. which is a protein enzyme and heme as co factor and term p 450 explain that the peak level of absorption of wavelength is 450 nm for this enzyme
- This enzyme is primarily present in inner membrane of mitochondria and in endoplasmic reticulum.
- Now this enzyme convert cholesterol in to 7- alpha – hydroxyl cholesterol in such a prominent way or we could say that in such a way that farnesoid X receptor we not able to suppress it.
- And it stops the negative feedback pathway that is establish generally in the human body
- As above stated that this Guggulsterone has two Sterio isomers in which the E sterio isomers is very effective then Z sterio isomer because this E sterio isomer is very stable then Z sterio isomer because of steric effect
- This stability results in the reaction as this compound is reacts and make whole reaction stable in which overall effect we can see that it lowers the level of LDL in body

Observation

- This E sterio isomers is antagonist to farnesoid X receptor function . As it is a key transcriptional regulator of cholesterol BUT it fully not work on it or we can say that it alone can not dissolve the obstruction
- A new compound is there called an AGLYCONE which is remain after Glycosyl group on glycoside replaced by hydrogen atom
- This aglycone is effective but it can not directly absorb by fanesoid X receptor .
- Now if we add the E sterioisomer of guggalsterone with aglycone then the efficency of drug become great as E sterioisomer of Guggalsterone act as transpoter to farnesoid X receptor and it will easily absorb by the receptor and aglycone will easily do work
- Now a question arise that which compound is more effective E sterio isomer of guggual sterone or aglycone?
- The answer is both compound is very effective as the function of E sterio isomer of guggualsterone is not only as a transporter but also a catalyst as stated above as it stability and structural composition make it a transporter which is a bonus point for us And this aglycone will increase the efficiency of drug.



Guggul

Result

- The mixture of E Steiroisomers of Gugal Sterone and Aglycone will lead to decrease the risk of obstruction in the Artery and help the people to fight against this type of diseases.

For BP

- This E stereoisomer is very effective as we can see that the secondary hypertension or hypotension is due to disease and cvd is major cause of it so I think this combination will be very helpful
- If we add Mg in the drug then the efficiency of drug is also increase as we all know Mg is play major role in **nerve function** and reduce the frequency and intensity of lower seizures
- Mg play major role in decrease in LDL.
- **so if we add Mg in the drug it also help to decrease the bad cholesterol and increase the drug efficiency**

It will help in case of arrhythmia also

- Mg play a major role in decrease the condition of arrhythmia as Mg increase the nerve conduction so for arrhythmia person in this drug is we increase Mg level I THINK IT WILL BE HELPFULL TO PATIENT

For Congestive Heart Failure

- THE major cause congestive heart failure is hypertension coronary artery disease and valve defect
- the above causes can be cure by this drug combination

Conclusion

- The e sterioisomer of guggalsterone is very effective as it reduce ldl level in the body and the composition is also effective in prediactic cardiology
- This composition is does not cause any type of major side effect
- And this composition is highly biocompatible

Sources

- The Guggal source are Commiphora wightii tree grows in Rajasthan Gujarat
- For aglycone we have

1. Chia Seed
2. Fenugreek
3. kalongi or Black Seed

References

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2. Canadian heart association
3. European heart association and its councils
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