Non-fasting Non-HDL Lipoproteins

Non-fasting lipid levels predict CAD events better than fasting lipid levels.

Non-HDL cholesterol level is a better predictor of CAD risk than LDL-cholesterol.

Enhanced lipoprotein-proteoglycan interactions may promote non-HDL retention.

Research Method

Human macrophages

Human SMCS

Aggregated lipoproteins (100 μg/ml cholesterol, 24 hrs)

Amplex Red intracellular cholesterol quantification

Cellular Lipoprotein Uptake

Macrofage Lipoprotein Uptake (100 μg/ml cholesterol)

SMC Lipoprotein Uptake (100 μg/ml cholesterol)

Limitation and Future Direction

Monoculture data might not represent foam cell development in vivo.

Future work will evaluate fasting and non-fasting lipoproteins on cholesterol uptake in macrophage-SMC cocultures.

Conclusion

First in vitro comparisons of various lipoproteins in foam cell development.

Non-HDL is more atherogenic compared to LDL in human macrophages.

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Evaluation of Fasting and Non-fasting Lipoproteins in Cellular Cholesterol Uptake

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