Phospholipids (PL) and free cholesterol. Fatty acid components of TG and PLs are: Saturated fatty acids (29%), Monounsaturated fatty acids (44%), Polyunsaturated fatty acids (11%)\(^3\). Egg contains proportionately less saturated fat which is a strong dietary determinant of elevated LDL-C and increased risk for CVD\(^4\).

The nutrient density of eggs makes them a valuable contributor to the overall nutritional balance of the diet and an economical source of high quality protein, an important component in the diets of the elderly, low-income families, growing children
Informed written consent was taken from each of the patients and ethical approval was obtained from the Institutional Ethical Committee of Sylhet M.A.G Osmani Medical College, Sylhet before the commencement of the study.

Body weight and height were measured with standard procedure and BMI was calculated as Weight in Kilogram / Height in meters$^2$. Blood Pressure was measured in supine position.

After an overnight fasting of 10-12 hours, 5 ml of venous blood were collected with the help of a disposable syringe between 7.00 am and 8.00 am at the beginning and 4 week after study period. Serum was separated and different fractions of lipid were estimated along with glucose.

Data were analyzed with the help of SPSS. Unpaired & paired 't' test and Chi-square ($\chi^2$) test were done as necessary. A probability value (p) of less than 0.05 was considered statistically significant.

Results

The demographic and clinical parameters are presented in table-I. There was no significant difference of age, sex, BMI and BP parameters between the study groups.

Table 1: Demographic and clinical parameters of study subjects

| Parameters       | Control Group          | Intervention Group       | P -value |
|------------------|------------------------|--------------------------|----------|
| Age (Years)      | 23.20 ± 4.18           | 21.95 ± 3.32             | 0.143*   |
| Sex              |                         |                          |          |
| Male             | 20 (50%)                | 21 (52.5%)               | 0.823**  |
| Female           | 20 (50%)                | 19 (47.5%)               |          |
| BMI ($Kg/m^2$)   | 22.30 ± 1.51            | 22.00 ± 2.11             | 0.455*   |
| BP               |                         |                          |          |
| Systolic (mmHg)  | 115.8.8 ± 6.69          | 113.75 ± 8.38            | 0.214*   |
| Diastolic (mmHg) | 77.12 ± 4.51            | 75.75 ± 5.01             | 0.201*   |

*Unpaired‘t’ test. ** Chi-square ($\chi^2$) test
Table-IV: Comparison of effect of egg on serum LDL-C between study groups (mg/dL)

| Study groups            | Baseline Mean ±SD | At the end of 4th week Mean ±SD | P-value*         |
|-------------------------|-------------------|---------------------------------|-----------------|
| Control Group (n=40)    | 99.95 ±19.33      | 100.55 ±19.97                  | 0.846           |
| Intervention Group (n=40)| 111.15 ±13.80    | 106.18 ±13.80                  | 0.001           |
| P-value**               | 0.002             | 0.155                          |                 |

*Paired’t’ test, **Unpaired’t’ test

Table-V: Comparison of effect of egg on serum HDL-C between study groups (mg/dL)

| Study groups            | Baseline Mean ±SD | At the end of 4th week Mean ±SD | P-value*         |
|-------------------------|-------------------|---------------------------------|-----------------|
| Control Group (n=40)    | 41.87 ±4.37       | 40.42 ±4.34                    | 0.006           |
| Intervention Group (n=40)| 42.27 ±2.03      | 41.10 ±4.34                    | 0.84            |
| P-value**               | 0.362             | 0.445                          |                 |

*Paired ’t’ test, **Unpaired ’t’ test

Discussion

Dietary guideline to prevent cardiovascular diseases emphasizes on reduction of dietary cholesterol intake <300 mg/d for healthy adults or <200 mg/d for persons with elevated cholesterol or heart disease\(^8\). Consumption of eggs is restricted due to its high cholesterol contents. In addition to cholesterol, egg yolk also contains predominantly unsaturated fatty acids that might have favorable influence in reducing serum cholesterol level. Though cholesterol and eggs should be matter of more concern among middle aged people due to high prevalence of cardiovascular diseases, yet young people are also discouraged for daily egg consumption by parents in spite of having nutrient rich contents. This study was aimed to evaluate effect of daily egg consumption on serum lipid profile in young adults.

In this study the age of the subjects of the Intervention group was 21.95±3.32 years and that of Control subjects was 23.20±4.18 years. There were 21 (52.5%) males and 19 (47.5%) females in the Intervention group; whereas 20 (50.0%) males...
This study showed that the serum HDL-C did not differ significantly between baseline and end of 4th week in the Intervention group (p=0.084), whereas serum HDL-C was significantly decreased from baseline to end of 4th week among controls (p=0.006). This result compares favorably with several other studies13,15,17. Probably eggs have no effect on HDL-C. Significantly reduced HDL-C among Controls may be inherently related to existing unhealthy food habits due to ignorance of nutritional facts that is not friendly to cardiovascular well being.

The results of this study show that consumption of one egg per day decreases TC and LDL-C but do not affect HDL-C and serum triglyceride levels among young healthy adults. It may be concluded that daily consumption of one egg does not unfavorably influence the lipid profile parameters among young healthy adults.

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