Hubungan antara rasio lingkar pinggang-pinggul dengan kadar kolesterol orang dewasa di Kota Surakarta tahun 1996

Sugeng Wiyono, author

Abstrak

Saat ini Indonesia tengah mengalami transisi demografi dan transisi epidemiologi. Beberapa cirinya antara lain di satu sisi terjadi penurunan angka kematian bayi dan anak karena penyakit infeksi, namun dipihak lain karena kemajuan bidang ekonomi dan meningkatnya pelayanan kesehatan maka terjadi peningkatan jumlah populasi penduduk tua.

Hasil studi indeks massa tubuh di dua belas kota besar di Indonesia (1996) bahwa prevalensi overweight mencapai 16-22.5% dan 4% diantaranya menderita obesitas. Obesitas mencerminkan kandungan lemak tubuh. Lemak tubuh yang berhubungan dengan penyakit jantung koroner adalah lemak tubuh yang spesifik terdapat didalam rongga perut. Selain obesitas, untuk deteksi penyakit jantung- koroner sering diukur melalui kadar kolesterol. Gambaran kadar kolesterol dapat dilihat dari beberapa temuan, antara lain oleh penelitian Tim Monica Jawa Tengah (1996) yakni rata-rata Kolesterol Total sebesar 204.0 mg/dl. Sementara penelitian di Yogyakarta (1996) diperoleh rata-rata kadar Kolesterol Total sebesar 201.9 mg/dl, rata-rata kadar Kolesteol LDL sebesar 128.1 mg/dl dan rata-rata kadar Kolesterol HDL sebesar 52.6 mg/dl.

Untuk mengetahui kandungan lemak secara spesifik yang terdapat didalam rongga perut dapat dilihat dari nilai rasio lingkar pinggang-lingkar pinggul/waist to hip ratio. Selanjutnya oleh penulis berasumsi bahwa lemak yang terkandung didalam rongga perut berhubungan dengan kadar kolesterol.

Dalam penelitian ini diperoleh nilai rata-rata rasio lingkar pinggang-pinggul (RLPP) sebesar 0.86 dengan standar deviasi 0.06. Jika dikelompokkan berdasarkan Bray, maka 8.5% responden laki-laki termasuk kategori RLPP risiko (>0.95) dan 64.3% responden perempuan termasuk kategori RLPP risiko (0.80).

Responden memiliki rata rata Kolesterol Total sebesar 208.37 mg/dl, dan rata-rata Kolesterol LDL sebesar 136.48 mg/dl dengan standar deviasi sebesar 37.52 mg/dl, serta rata-rata Kolesterol HDL sebesar 44.80 dengan standar deviasi 10.42 mg/dl.

Rasio lingkar pinggang pinggul secara bermakna berhubungan dengan Kolesterol Total. Kadar Kolesterol Total meningkat sejalan dengan meningkatnya nilai RLPP setelah dikontrol oleh IMT dan Umur. RLPP, IMT dan Umur secara bermakna berkontribusi sebesar 11.00% tehadap kadar Kolesterol Total. Kontribusi RLPP sebagai variabel independen utama dalam persamaan terhadap Kolesterol Total sebesar 29.0%.

Rasio lingkar pinggang pinggul secara bermakna berhubungan dengan Kolesterol LDL. Kadar Kolesterol LDL meningkat sejalan dengan meningkatnya nilai RLPP setelah dikontrol oleh IMT dan Umur. RLPP, IMT dan Umur secara bermakna berkontribusi sebesar 6.10% tehadap kadar Kolesterol LDL. Kontribusi

RLPP sebagai variabel independen utama dalam persamaan terhadap Kolesterol LDL sebesar 26.2%.

Rasio lingkar pinggang pinggul secara bermakna berhubungan dengan Kolesterol HDL. Kadar Kolesterol HDL menurun sejalan dengan meningkatnya nilai RLPP setelah dikontrol oleh umur dan merokok . RLPP, umur dan merokok secara bermakna berkontribusi sebesar 11.00% tehadap kadar Kolesterol HDL. Kontribusi RLPP sebagai variabel independen utama dalam persamaan terhadap Kolesterol HDL sebesar 46.0%.

Peningkatan 1 unit RLPP meningkatkan 51.0 mg/dl Kolesterol Total, peningkatan 1 unit IMT meningkatkan 2.49 mg/dl Kolesterol Total, peningkatan 1 unit Umur meningkatkan 0.72 mg/dl Kolesterol Total. Peningkatan 1 unit RLPP meningkatkan 16.95 mg/dl Kolesterol LDL, peningkatan 1 unit IMT meningkatkan 1.65 mg/dl Kolesterol LDL, peningkatan 1 unit Umur meingkatkan 0.61 mg/dl Kolesterol LDL. Peningkatan 1 unit RLPP menurunkan 17.75 mg/dl Kolesterol HDL, dan merokok dapat menurunkan 5.80 mg/dl Kolesterol HDL.

Berdasarkan temuan tersebut selanjutnya direkomendasikan untuk dilakukan pemasaran sosial sebagai wahana kampanye untuk skrining lemak dalam rongga perut melalui pengukuran lingkar pinggang dan lingkar pinggul. Penyuluhan menurunkan berat badan bagi individu yang mengalami kegemukan dan penyuluhan berhenti merokok serta mencegah merokok. Juga perlu dilakukan penelitian lanjutan secara analitik dengan rancangan kasus kontrol khusus bagi penderita kegemukan.
.....The Relationship between Waist to Hip Ratio and Cholesterol Levels among Adult Population in Surakarta City 1996Now days, Indonesia has been in transition period both in demography and epidemiology. Several signs are identified, for example in one hand, among children, the infant mortality rate and infections diseases decrease but in another hand the prospect to have a long life in the old population improve because of better economics and health services.

The results of body mass index studies from twelve big cities in Indonesia (1996) show that the prevalence of overweight was ranged 16-22.5% and 4% for obesity. Obesity reflects the body fat contained in the body. The body fat that related to coronary heart diseases is body fat, specifically found in stomach hollow. Besides obesity, the blood cholesterol level is commonly used for early detecting of coronary heart diseases.

The study in cholesterol levels has been reported in several areas, e.g. MONICA research team 1996 found that the average total cholesterol in Central lava was 204.0 mg/dl and in Yogjakarta (1996) was 201.9 mg/dl whereas the average of LDL cholesterol and HDL cholesterol were 128.1 mg/dl and 52.6 mg/dl, respectively in Yogjakarta area.

The ratio of waist to hip specifically describes the fat level in stomach hollow. This study is aimed to evaluate the relationship between fat in stomach hallow and the level of cholesterol using total cholesterol, LDL cholesterol and HDL cholesterol.

This study found that the average of waist and hip ratio (RLPP) among the population aged 25-64 years was 0.86 ± 0.06. The result also shows that based on Bray's classification, 8.5% was categorized as population at

risk in man (more than 0.95) and for women was 64.3% (more than 0.80). In addition, the total cholesterol level was208.37 ± 40.67mg/dl, LDL cholesterol was 136.48 + 37.52 mg/dl and HDL cholesterol was 44.80 ± 10.42mg/dl.

The relationship between RLPP and Total cholesterol is statistically significant. Increasing total cholesterol is likely increases RLPP controlled by BMI and age. The contribution of RLPP, BMI and age to total cholesterol are 11.0%. Independently, RLPP as a main variable contributes 29.0% to total cholesterol.

RLPP is significant correlated to the LDL cholesterol. Increasing LDL cholesterol is likely increases RLPP controlled by BMI and age. The contribution of RLPP, BMI and age to LDL cholesterol are 6.1%. RLPP as a main variable contributes 25.2% to LDL cholesterol, independently.

In HDL cholesterol found that HDL is statistically significant to RLPP. Increasing LDL is likely increases RLPP controlled by age and smoking status. The contribution of RLPP, age, and smoking status to HDL cholesterol are 11.0%. RLPP as a main variable contributes 46.0% to HDL cholesterol, independently.

Interestingly, this study suggested that the increase of 1 unit RLPP would increase 51.0 mg/dl of total cholesterol. The increase of 1 unit of IMT would increase 2.49 mg/dl of total cholesterol and the improvement of 1 unit of age would increase 0.72 mg/dl of total cholesterol. For LDL cholesterol, 1 unit RLPP would increase 16.95 mg/dl of LDL cholesterol. The increase of 1 unit of IMT would increase 1.65 mg/dl of LDL cholesterol and the improvement of 1 unit of age would increase 0.61 mg/dl of LDL cholesterol. For HDL, 1 unit RLPP would decrease 17.75 mg/dl of HDL cholesterol. The increase of 1 unit of smoking status would decrease 5.8mg/d1 of HDL Cholesterol.

In conclusion, maintaining an ideal body weight, decreasing the rate of fat stomach hollow development and not smoking are the best way for preventing the increase of LDL cholesterol and the- decrease of HDL cholesterol. It can be recommended that routine assessment of waist and hip in normal population may be socialized as indices to control fat stomach hollow levels. In addition, non-formal education in relation to normal body weight and stop smoking as well as prevent smoking would be prioritized. Furthermore, it is recommended for further investigation using case-control with the same topic in regard to RLPP and cholesterol.