continuous variable-predictor. Achieved LDL-C level at 3 months among all TNT patients was predictive of benefit in the risk reduction in major CV events. This association held true when on-treatment LDL-C was co-varied for or stratified by randomized treatment, and when LDL-C values in individual treatment groups were analyzed separately. Drug dose effect on major CV events, however, was lost when adjusted for 3-month LDL-C level. The reverse was true for eGFR, i.e., drug dose effect was apparent and unaffected by achieved LDL (Table). Thus the statin benefits on eGFR, perhaps representing small vessel effects, appear to be independent of the LDL effects of atorvastatin. This suggests that the search for clinically important non-LDL effects of statins might be usefully directed to diseases involving blood vessels smaller than those affected by atherosclerosis.

EFFECT OF DOSE OF ATORVASTATIN ON eGFR

	Hazard ratio (95% CI)	P-value
Atorvastatin dose (80 mg vs 10 mg)	1.68 (1.28, 2.07)	<0.0001
Atorvastatin dose covarying for 3-month LDL	1.62 (1.15, 2.09)	<0.0001

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Unravelling Hidden Renal Dysfunction. An unrecognized major problem.

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Renal dysfunction is a major contributor to cardiovascular morbidity and mortality. Certain medical procedures may jeopardize patients with undiagnosed renal dysfunction. **Aim:** To assess the proportion of hidden renal failure (HRF) in patients undergoing coronary angiography. **Method:** We enrolled 128 patients, undergoing coronary angiography (both diagnostic and therapeutic procedures) during 2006. Patients with known renal dysfunction and or baseline serum creatinine over 1.5 mg/dl, a cut point value credited for discriminative power, were excluded from the analysis. Demography data showed a mean age of 60.5+/-13 years, 100 patients (78%) were males, 70 patients (55%) had hypertension, 45 patients (35%) diabetes, 55 patients (43%) were current smokers and 55 patients (43%) had dyslipidemia. The mean body mass index was 29 + 6 Kg/m2 and ejection fraction was 44% + 24 on average. Baseline serum creatinine was determined, besides creatinine clearance and glomerullar filtration rates were estimated according to Cockcroft-Gault (CoCG) and MDRD-4 equations respectively. **Results:** According to the current cardiovascular stratifying criteria, renal dysfunction (RD) assessed considering serum creatinine above $\geq$ 1.3, only 16% of our cases met RD criteria. CoCG equation applies to patients without renal dysfunction while MDRD-4 is used in patients with renal impairment. But when we consider the estimates of creatinine clearance and glomerullar filtration rate, the results were quite different and are shown in the following table. Our model depicted diabetes (p 0.001), hypertension (p 0.03), body mass index (p 0.012), admission glycemia (p 0.04); whereas age and ejection fraction showed a trend (p 0.06) **Conclusion:** Our results show that renal dysfunction assessed by means of serum creatinine underestimates the high prevalence renal dysfunction. Cardiovascular risk factors such as diabetes, hypertension and overweight appear as major risk factors for further renal failure.

glomerullar filtration rate	normal	mild RD	moderate-severe RD
ml/m	$>$ over 90	60–89	under 60
Cockcroft (%)	43.8	37.5	18.8
MDRD-4 (%)	18.8	59.4	21.9

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Pituitary-adrenal axis hormone adjustment following cardiac surgery

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Stress response to surgery is modulated by different factors such as the magnitude of the injury, the type of procedure and anesthesia. Stressful experiences induce important hormonal changes in the cardiovascular system and hypothalamic-pituitary-adrenal axis, reflecting a close and bidirectional relationship. **Aim:** To study hormonal changes induced by cardiac surgery. Steroid hormones glucocorticoids (ACTH – cortisol), mineralocorticoids (aldosterone), androgens (dehydroepiandrosterone or DHEA) and renine were determined in cardiac surgery patients. **Method:** We enrolled in the study a total of 50 patients without evidence of adrenal disease, undergoing programmed cardiac surgery. The mean age was 59 + 11 years old, the body mass index was 26 +3, ejection fraction was 58 + 11. Average surgery duration was divided in subsets: anesthesia 240 minutes, cardiopulmonary bypass 66 minutes and myocardial ischaemia 111 minutes. The mean time to extubation was 14 hours and the ICU stay was 3.4 + 1.2 days on average. Data were compared at baseline (48 hours before surgery), in the first 24 hours following surgery and by the 5th day. Significant and early changes in cortisol, aldosterone and renine levels were found attributable to surgical stress, volume depletion and hydroelectrolyte imbalance. **Conclusion:** our data show an early and swift activation of the hypothalamic-pituitary-adrenal axis responding to stress and volume or hydroelectrolyte imbalance.

SEQUENCE OF HOMONE LEVELS CHANGES FOLLOWING CARDIAC SURGERY

	Baseline	First 24 h	5th day
Cortisol μg/dl	19.23	53.5 ($p<0.005$)	37.6 ($p<0.005$)
ACTH pg/ml	13.93	16.14	11.65
DHEA μg/dl	948.66	1270	1367 ($p<0.005$)
Aldosterone ng/dl	97.34	163.98 ($p<0.005$)	140.87
Renine ng/dl	12.48	19.68 ($p<0.005$)	14.10

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Determinant factors for temporary hormone changes in cardiac surgery

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It is well known that thyroid and growth factor hormone levels change in response to stress, fear or emotions. But little is known of the magnitude and duration of this response. **Aim:** To evaluate the changes in the thyroid axis, growth hormone and growth factor insulin type I (IGF-I) following cardiac surgery, their timing and the possible causes, we studied 50 patients, without thyroid disease. All patient underwent programmed cardiac surgery (PCS), half were coronary artery bypass graft surgery and half valvular. Hormones were determined in the previous 48h, in the first 24 hours following the procedure and by the 5th day. **Method:** Up to 70% of our cases were males, with a mean age of 59.6 years old, the body mass index was 26,2 and ejection fraction 56 + 16 on average. The total surgery duration was divided in subsets: anesthesia 240 minutes, cardiopulmonary bypass 66 minutes, myocardial ischaemia 111 minutes on average. The mean time to extubation was 14 hours and the ICU stay was 3.4 + 1.2 days. Intra aortic balloon was used in 4%. **Results:** GH increased significantly in the first 24 hours, decreasing to baseline values by the 5th day. On the other hand IGF-I remained unchanged. None of the studied parameters showed statistic significance regarding hormonal differences, only cardiopulmonary bypass duration showed a statistic trend. **Conclusions:** A temporary hormonal downfall of thyroid hormones occurs following cardiac surgery; functional hypothyroidism could be related to protection mechanisms responding to surgical injury. Growth hormone responds to cardiac surgery as a stress hormone, whereas IGF-I remains unchanged even though it's expression is mediated by GH.

HORMONE LEVELS BEFORE AND AFTER CARDIAC SURGERY

Variable	Baseline	24 hours	5th day
TSH (μ/ml)	2.24	1.12 ($p < 0.05$)	2.56
T3 (ng/dl)	0.85	0.45 ($p < 0.05$)	0.70
Free T3 (ng/dl)	4.88	3.95 ($p < 0.05$)	4.44 ($p < 0.05$)
Inverse T3 (ng/dl)	30.51	55.29 ($p < 0.05$)	37.18 ($p < 0.05$)
T4 (μ/dl)	83.60	63.12 ($p < 0.05$)	79.09
Free T4 (ng/dl)	1.34	1.13 ($p < 0.05$)	1.33
GH (ng/ml)	1.64	7.8 ($p < 0.05$)	2.5
IGF1 (ng/ml)	189.87	180.60	167.0

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Plasmatic levels of apolipoprotein in young subjects without cardiovascular disease. Effects of age, gender and body mass index.

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Background: Cardiovascular risk scores have low sensibility to stratify young people. Plasmatic levels of apolipoproteins (AL) could increase this sensibility. The distribution of AL levels is unknown in subjects less than 50 years old in our region. **Objective:** Establish the distribution of AL levels according to age, gender and body weight in a healthy population $<$50 years old. **Methods:** The apolipoprotein A1 (A) and apolipoprotein B (B) levels were determinated by kinetic nephelometry in samples obtained of blood givers less than 50 years old. The distribution according to sex, age (subgroups $<$30, 30–40, $>$40 years old) and body mass index (BMI) was analyzed. **Results:** 167 patients were recruited. Mean age$\pm$SD: 33$\pm$9 years, 68% men (M). Mean BMI$\pm$SD: 25.05$\pm$4.1. 56% of the population had BMI $<$25 (22.2$\pm$2) and 44% BMI $\geq$25 (28.6$\pm$3.2). The levels in the population (mean$\pm$SD) were: A 136$\pm$28mg/dL, B 89$\pm$24mg/dL, B/A ratio 0,67$\pm$21. The levels of A were higher in women (W) than in M in the global analysis (152$\pm$34mg/dL vs 128$\pm$21mg/dL,p$<$0.0001) and in the groups of age(less 30 years: 149$\pm$39mg/dL vs 123$\pm$18mg/dL, p$<$0.005; 30–40 years: 160$\pm$36mg/dL vs 132$\pm$24mg/dL, p=0.003; upper 40 years: 155$\pm$27mg/dL vs 133$\pm$20mg/dL, p=0.0001). The levels of B were lower in W than in M (global: 79$\pm$19mg/dL vs 93$\pm$24mg/dL, p=0.005; group $<$30 years: 75$\pm$22mg/dL vs 81$\pm$23mg/dL,p=0.3; group 30–40 years: 81$\pm$12mg/dL vs 101$\pm$19mg/dL, p$<$0,005; group $>$40 years: 89$\pm$21mg/dL vs 101$\pm$26mg/dL, p$<$0.005). The B/A ratio was higher in M than in W (0,73$\pm$0.21 vs 0,53$\pm$0.13, p$<$0,0001). Subjects with BMI $<$25 had higher A levels (140$\pm$33 vs 130$\pm$22mg/dL, p=0.02) and lower B levels than patients with a BMI $>$25 (83.2$\pm$23 vs 95.5$\pm$23mg/dL, p$<$0.005). **Conclusion:** In this population,W had lower levels of B, smaller B/A ratio, and higher concentrations of A levels than M, in all subgroups of age. The BMI affected the levels of apolipoproteins. These results could be used to improve the risk stratification in young people.

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Achievement of Treatment Targets of Cardiovascular Risk Factors in a Pilot Secondary Prevention Program In Chile

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Background: Secondary prevention programs have improved the achievement of treatment goals of cardiovascular risk factors (RF) and decreased cardiovascular events. However, scarce data are available about the global achievement of goals, considering all the RF together. **Objectives:** To determine the achievement of treatment goals for both individual RF as well as a combined endpoint of all the RF together in a pilot secondary prevention program. **Methods:** Prospective study in patients with definite atherosclerotic disease, followed in a university hospital's secondary prevention program between June 2006 and January 2007. One day before and 6 months after hospital discharge, cardiovascular RF data, pharmacological treatment, systolic and diastolic blood pressure, BMI, waist, lipid profile, glycemia and HbA1C