**Supplementary Table (1). Genotype frequencies of *ADRB2* polymorphisms in patients and controls stratified by cardiovascular risk factors.**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Potential confounder** | **Strata** | **Status** | **Arg16Gly** | | | **P value** | **Gln27Glu** | | | **P value** |
|  |  | **Arg/Arg** | **Arg/Gly** | **Gly/Gly** | **Gln/Gln** | **Gln/Glu** | **Glu/Glu** |
| Gender | Male | Patients | 7 | 22 | 16 | 0.413 | 20 | 18 | 7 | 0.107 |
|  |  | Controls | 4 | 26 | 23 |  | 13 | 27 | 13 |  |
|  | Female | Patients | 3 | 8 | 12 | 0.056 | 14 | 5 | 4 | 0.136 |
|  |  | Controls | 4 | 14 | 4 |  | 9 | 11 | 2 |  |
| Smoking | Smoker | Patients | 4 | 20 | 13 | 0.698 | 18 | 15 | 4 | 0.656 |
|  |  | Controls | 1 | 10 | 4 |  | 6 | 6 | 3 |  |
|  | Not | Patients | 6 | 10 | 15 | 0.246 | 16 | 8 | 7 | **0.027\*** |
|  |  | Controls | 7 | 30 | 23 |  | 16 | 32 | 12 |  |
| Obesity | Yes | Patients | 7 | 12 | 5 | 0.199 | 15 | 6 | 3 | 0.105 |
|  |  | Controls | 2 | 4 | 6 |  | 3 | 6 | 3 |  |
|  | Not | Patients | 3 | 18 | 23 | 0.147 | 19 | 17 | 8 | 0.353 |
|  |  | Controls | 6 | 36 | 21 |  | 19 | 32 | 12 |  |
| FH | Yes | Patients | 7 | 16 | 12 | 0.091 | 21 | 10 | 4 | 0.441 |
|  |  | Controls | 0 | 12 | 5 |  | 7 | 7 | 3 |  |
|  | Not | Patients | 3 | 14 | 16 | 0.576 | 13 | 13 | 7 | 0.348 |
|  |  | Controls | 8 | 28 | 22 |  | 15 | 31 | 12 |  |
| HL | Yes | Patients | 10 | 28 | 24 | 0.870 | 31 | 20 | 11 | 0.152 |
|  |  | Controls | 5 | 19 | 14 |  | 12 | 19 | 7 |  |
|  | Not | Patients | 0 | 2 | 4 | 0.314 | 3 | 3 | 0 | 0.333 |
|  |  | Controls | 3 | 21 | 13 |  | 10 | 19 | 8 |  |
| HT | Yes | Patients | 10 | 20 | 18 | 0.227 | 32 | 12 | 4 | NA |
|  |  | Controls |  |  |  |  |  |  |  |  |
|  | Not | Patients | 0 | 10 | 10 | 0.514 | 2 | 11 | 7 | 0.140 |
|  |  | Controls | 8 | 40 | 27 |  | 20 | 27 | 8 |  |
| DM | Yes | Patients | 2 | 10 | 20 | NA | 14 | 11 | 7 | NA |
|  |  | Controls |  |  |  |  |  |  |  |  |
|  | Not | Patients | 8 | 20 | 8 | 0.154 | 20 | 12 | 4 | **0.028\*** |
|  |  | Controls | 8 | 40 | 27 |  | 22 | 38 | 15 |  |
| Values are shown as number. NA; not applicable, FH; family history of cardiovascular disease, HL; hyperlipidemia, HT; hypertension, DM; diabetes mellitus. Chi square test was used. *P*-values <0.05 are statistically significant. | | | | | | | | | | |

**Supplementary Table (2). Adjusted odds ratio (95% confidence intervals) for the association between *ADRB2* genotypes and MI risk within strata of cardiovascular risk factors.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Confounding variables** | **Stratum-specific OR (95% CI)** | | **Crude OR (95% CI)** | **Adjusted OR (95% CI)** | **Mantel-Haenszel** | **P value** |
| **GENDER** | **Female** | **Male** |  |  |  |  |
| *Arg16Gly polymorphism* |  |  |  |  |  |  |
| Arg/Arg | 0.67 (0.13-3.43) | 2.25 (0.61-8.27) | 1.44 (0.53-3.90) | 1.41 (0.52-3.79) | 0.192 | 0.662 |
| Arg/Gly | 0.30 (0.09-1.03) | 0.99 (0.44-2.19) | 0.69 (0.35-1.33) | 0.69 (0.36-1.33) | 0.860 | 0.354 |
| Gly/Gly | 4.90 (1.26-19.1) | 0.72 (0.31-1.62) | 1.24 (0.63-2.44) | 1.24 (0.64-2.42) | 0.235 | 0.628 |
| *Gln27Glyu polymorphism* |  |  |  |  |  |  |
| Gln/Gln | 2.24 (0.68-7.40) | 2.46 (1.04-5.80) | 2.40 (1.21-4.79) | 2.38 (1.18-4.79) | 5.194 | **0.023\*** |
| Gln/Glu | 0.27 (0.07-1.01) | 0.70 (0.31-1.56) | 0.53 (0.27-1.04) | 0.54 (0.27-1.06) | 2.631 | 0.105 |
| Glu/Glu | 2.10 (0.34-12.8) | 0.56 (0.20-1.57) | 0.77 (0.32-1.82) | 0.78 (0.33-1.86) | 0.106 | 0.745 |
| **SMOKING STATUS** | **Non-smoker** | **Smoker** |  |  |  |  |
| *Arg16Gly polymorphism* |  |  |  |  |  |  |
| Arg/Arg | 1.81 (0.55-5.97) | 1.69 (0.17-16.5) | 1.44 (0.53-3.90) | 1.78 (0.62-5.15) | 0.659 | 0.417 |
| Arg/Gly | 0.47 (0.19-1.18) | 0.58 (0.16-2.06) | 0.69 (0.35-1.33) | 0.51 (0.24-1.06) | 2.582 | 0.108 |
| Gly/Gly | 1.50 (0.62-3.61) | 1.49 (0.39-5.62) | 1.24 (0.63-2.44) | 1.50 (0.72-3.12) | 0.815 | 0.367 |
| *Gln27Glyu polymorphism* |  |  |  |  |  |  |
| Gln/Gln | 2.93 (1.18-7.26) | 1.42 (0.42-4.80) | 2.40 (1.21-4.79) | 2.24 (1.08-4.64) | 4.112 | **0.043\*** |
| Gln/Glu | 0.35 (0.14-0.90) | 1.02 (0.30-3.47) | 0.53 (0.27-1.04) | 0.52 (0.25-1.07) | 2.513 | 0.113 |
| Glu/Glu | 1.16 (0.40-3.34) | 0.48 (0.09-2.49) | 0.77 (0.32-1.82) | 0.91 (0.37-2.22) | 000 | 0.983 |
| **OBESITY** | **Non-obese** | **Obese** |  |  |  |  |
| *Arg16Gly polymorphism* |  |  |  |  |  |  |
| Arg/Arg | 0.69 (0.16-2.94) | 2.05 (0.35-11.9) | 1.44 (0.53-3.90) | 1.09 (0.37-3.16) | 0.011 | 0.915 |
| Arg/Gly | 0.51 (0.23-1.13) | 2.00 (0.47-8.46) | 0.69 (0.35-1.33) | 0.71 (0.36-1.39) | 0.657 | 0.418 |
| Gly/Gly | 2.19 (0.99-4.82) | 0.26 (0.05-1.18) | 1.24 (0.63-2.44) | 1.35 (0.69-2.65) | 0.532 | 0.466 |
| *Gln27Glyu polymorphism* |  |  |  |  |  |  |
| Gln/Gln | 1.76 (0.78-3.93) | 5.00 (1.06-23.4) | 2.40 (1.21-14.79) | 2.22 (1.10-4.49) | 4.288 | **0.038\*** |
| Gln/Glu | 0.67 (0.30-1.46) | 0.33 (0.07-1.43) | 0.53 (0.27-1.04) | 0.57 (0.29-1.14) | 1.978 | 0.160 |
| Glu/Glu | 0.94 (0.35-2.54) | 0.42 (0.07-2.54) | 0.77 (0.32-1.82) | 0.78 (0.33-1.87) | 0.103 | 0.749 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **DIABETES** | **Non-diabetic** | **Diabetic** |  |  |  |  |
| *Arg16Gly polymorphism* |  |  |  |  |  |  |
| Arg/Arg | 2.39 (0.81-7.0) | NA | 1.44 (0.53-3.90) | 2.39 (0.81-7.00) | 1.763 | 0.184 |
| Arg/Gly | 1.09 (0.49-2.43) | NA | 0.69 (0.35-1.33) | 1.09 (0.49-2.43) | 0.000 | 0.987 |
| Gly/Gly | 0.50 (0.20-1.27) | NA | 1.24 (0.63-2.44) | 0.50 (0.20-1.27) | 1.534 | 0.215 |
| *Gln27Glyu polymorphism* |  |  |  |  |  |  |
| Gln/Gln | 3.01 (1.32-6.86) | NA | 2.40 (1.21-4.79) | 3.01 (1.32-6.86) | 5.985 | **0.014\*** |
| Gln/Glu | 0.55 (0.24-1.24) | NA | 0.53 (0.27-1.04) | 0.55 (0.24-1.24) | 1.517 | 0.218 |
| Glu/Glu | 0.50 (0.15-1.63) | NA | 0.77 (0.32-1.82) | 0.50 (0.15-1.63) | 0.793 | 0.373 |
| **HYPERTENSION** | **Normotensive** | **Hypertensive** |  |  |  |  |
| *Arg16Gly polymorphism* |  |  |  |  |  |  |
| Arg/Arg | 0.89 (0.82-0.96) | NA | 1.44 (0.53-3.90) |  | 1.140 | 0.286 |
| Arg/Gly | 0.87 (0.32-2.34) | NA | 0.69 (0.35-1.33) | 0.887 (0.32-2.34) | 0.000 | 0.989 |
| Gly/Gly | 1.77 (0.65-4.81) | NA | 1.24 (0.63-2.44) | 1.77 (0.65-4.81) | 0.771 | 0.380 |
| *Gln27Glyu polymorphism* |  |  |  |  |  |  |
| Gln/Gln | 0.26 (0.05-1.25) | NA | 2.40 (1.21-4.79) | 0.26 (0.05-1.25) | 2.163 | 0.141 |
| Gln/Glu | 1.46 (0.53-3.98) | NA | 0.53 (0.27-1.04) | 1.46 (0.53-3.98) | 0.238 | 0.625 |
| Glu/Glu | 2.15 (0.73-6.33) | NA | 0.77 (0.32-1.82) | 2.15 (0.73-6.33) | 1.229 | 0.268 |
| **HYPERLIPIDEMIA** | **Normal profile** | **Abnormal profile** |  |  |  |  |
| *Arg16Gly polymorphism* |  |  |  |  |  |  |
| Arg/Arg | 0.91 (0.83-1.01) | 1.26 (0.39-4.04) | 1.44 (0.53-3.90) | 1.09 (0.36-3.30) | 0.014 | 0.905 |
| Arg/Gly | 0.38 (0.06-2.34) | 0.82 (0.36-1.84) | 0.69 (0.35-1.33) | 0.72 (0.34-1.50) | 0.472 | 0.492 |
| Gly/Gly | 3.69 (0.59-22.94) | 1.08 (0.47-2.49) | 1.24 (0.63-2.44) | 1.34 (0.63-2.85) | 0.358 | 0.550 |
| *Gln27Glyu polymorphism* |  |  |  |  |  |  |
| Gln/Gln | 2.70 (0.46-15.6) | 2.16 (0.93-5.04) | 2.40 (1.21-4.79) | 2.25 (1.04-4.83) | 3.636 | 0.057 |
| Gln/Glu | 0.94 (0.16-5.31) | 0.51 (0.22-1.16) | 0.53 (0.27-1.04) | 0.57 (0.27-1.20) | 1.615 | 0.204 |
| Glu/Glu | 0.78 (0.66-0.92) | 0.95 (0.33-2.72) | 0.77 (0.32-1.82) | 0.72 (0.27-1.93) | 0.140 | 0.709 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **FAMILY HISTORY** | **Negative** | **Positive** |  |  |  |  |
| *Arg16Gly polymorphism* |  |  |  |  |  |  |
| Arg/Arg | 0.62 (0.15-2.54) | 1.25 (1.05-1.47) | 1.44 (0.53-3.90) | 1.49 (0.50-4.45) | 0.177 | 0.674 |
| Arg/Gly | 0.78 (0.33-1.86) | 0.35 (0.10-1.20) | 0.69 (035-1.33) | 0.60 (0.29-1.21) | 1.563 | 0.211 |
| Gly/Gly | 1.54 (0.64-3.65) | 1.25 (0.35-4.39) | 1.24 (0.63-2.44) | 1.43 (0.70-2.93) | 0.670 | 0.413 |
| *Gln27Glyu polymorphism* |  |  |  |  |  |  |
| Gln/Gln | 1.86 (0.74-4.64) | 2.14 (0.65-6.96) | 2.40 (1.21-4.79) | 1.96 (0.95-4.04) | 2.726 | 0.099 |
| Gln/Glu | 0.64 (0.27-1.51) | 0.57 (0.17-1.92) | 0.53 (0.27-1.04) | 0.61 (0.30-1.24) | 1.349 | 0.245 |
| Glu/Glu | 1.03 (0.36-2.94) | 0.60 (0.11-3.05) | 0.77 (0.32-1.82) | 0.88 (0.36-2.14) | 0.002 | 0.963 |
| *P*-values <0.05 are statistically significant. NA; not applicable (there was no diabetic or hypertensive controls). | | | | | | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Supplementary Table (3). Genotype frequencies of *ADRB2* gene polymorphisms in MI patients with and without hypertension (n=68).** | | | | | | | | | | |  |
|  | **Genotype frequencies** | **MI patients with HT**  **(n=48)** | | **MI patients without HT**  **(n=20)** | | **χ2** | **P value** | **Crude**  **OR** **(95% CI)** | | **Adjusted &**  **OR (95% CI)** | |  |
|  | **Arg16Gly polymorphism** | | | | | | | | | | |  |
|  | **Arg16/Arg16** | 10 | (20.9) | 0 | (0) | 3.162 | 0.075 | 1.00 |  | 1.0 |  |  |
|  | **Arg16/Gly16** | 20 | (41.6) | 10 | (50) |  |  | 0.09 | (0.0-1.7) |  |  |  |
|  | **Gly16/Gly16** | 18 | (37.5) | 10 | (50) |  |  | 0.08 | (0.0-1.5) | 0.4 | (0.15-1.39) |  |
|  | **Gln27Glu polymorphism** | | | | | | | | | | |  |
|  | **Gln27/Gln27** | 32 | (66.7) | 2 | (10) | 17.648 | **<0.001\*** | 1.0 |  | 1.0 |  |  |
|  | **Gln27/Glu27** | 12 | (25.0) | 11 | (55) |  |  | **0.06** | **(0.01-0.3)\*** | **0.05** | **(0.007-0.4)\*** |  |
|  | **Glu27/Glu27** | 4 | (8.30) | 7 | (35) |  |  | **0.03** | **(0.01-0.2)\*** | **0.002** | **(0.00-0.09)\*** |  |
|  | Values are shown as number (%). MI; myocardial infarction, HT; hypertension. Chi square (χ2) for trend was used. OR (95% CI), odds ratio and confidence interval. (&) adjusted for confounding factors. (\*) statistically significant at p<0.05. | | | | | | | | | | |  |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Supplementary Table (4). Genotype frequencies of *ADRB2* gene polymorphisms in MI patients with and without diabetes (n=68).** | | | | | | | | | | |  |
|  | **Variables** | **MI patients with DM**  **(n=32)** | | **MI patients without DM**  **(n=36)** | | **χ2** | **P value** | **Crude**  **OR** **(95% CI)** | | **Adjusted &**  **OR (95% CI)** | |  |
|  | **Arg16Gly polymorphism** | | | | | | | | | | |  |
|  | **Arg16/Arg16** | 2 | (6.20) | 8 | (22.2) | 10.80 | **0.001\*** | 1.0 |  | 1.0 |  |  |
|  | **Arg16/Gly16** | 10 | (31.3) | 20 | (55.6) |  |  | 2.0 | (0.35-11.2) | 1.5 | (0.2-11.03) |  |
|  | **Gly16/Gly16** | 20 | (62.5) | 8 | (22.2) |  |  | **10** | **(1.7-57.7)\*** | **8.2** | **(1.07-63.7)\*** |  |
|  | **Gln27Glu polymorphism** | | | | | | | | | | |  |
|  | **Gln27/Gln27** | 14 | (43.7) | 20 | (55.6) | 1.553 | 0.213 | 1.0 |  | 1.0 |  |  |
|  | **Gln27/Glu27** | 11 | (34.4) | 12 | (33.3) |  |  | 1.3 | (0.45-3.8) | 1.0 | (0.27-3.81) |  |
|  | **Glu27/Glu27** | 7 | (21.9) | 4 | (11.1) |  |  | 2.5 | (0.6-10.1) | 4.3 | (0.76-24.5) |  |
|  | Values are shown as number (%). MI; myocardial infarction, DM; diabetes mellitus. Chi square (χ2) for trend was used. OR (95% CI), odds ratio and confidence interval. (&) adjusted for confounding factors. (\*) statistically significant at p<0.05. | | | | | | | | | | |  |