**Table 1. Factors related to the cervical cancer risk in the study groups**

|  |  |  |  |
| --- | --- | --- | --- |
| **Characteristics** | **Rate, N (%)** | | **р (χ2)** |
| **Cervical cancer (n = 320)** | **Control (n = 200)** |
| Smoking: |  |  |  |
| Yes | 42 (13.1) | 23 (11.5) | 0.586 |
| No | 278 (86.9) | 177 (88.5) |  |
| BMI: |  |  |  |
| < 25 | 179 (55.9) | 106 (53.0) | 0.513 |
| ≥ 25 | 141 (44.1) | 94 (47.0) |  |
| HPV: |  |  |  |
| Yes | 237 (74.1) | 23 (11.5) | < 0.001 |
| No | 83 (25.9) | 177 (88.5) |  |

BMI, body mass index (kg/m²); HPV, human papillomavirus

**Table 2. Distribution of genotypes and alleles of the *TNFα* gene *rs1800629* polymorphism and of the *TLR3 rs3775291* polymorphism and their association with cervical cancer**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Inheritance model** | **Frequency, N (%)** | | **χ2** | **р** | **OR [95% CI]** |
| **Cervical cancer (n = 320)** | **Control (n = 200)** |
| *rs1800629* of the *TNFα* gene | | | | | |
| Co-dominant | | | | | |
| *GG* | 197 (61.56) | 146 (73.0) | 8.33 | 0.016 | 0.592 [0.403–0.871] |
| *GA* | 101 (31.56) | 48 (24.0) | 1.46 [0.978–2.181] |
| *AA* | 22 (6.88) | 6 (3.0) | 2.387 [0.951–5.994] |
| Multiplicative | | | | | |
| *G* | 495 (77.3) | 340 (85.0) | 9.12 | 0.003 | 0.602 [0.433–0.839] |
| *А* | 145 (22.7) | 60 (15.0) | 1.66 [1.192–2.311] |
| Dominant | | | | | |
| *GG* | 197 (61.6) | 146 (73.0) | 7.17 | 0.008 | 0.592 [0.403–0.857] |
| *GA + AA* | 123 (38.4) | 54 (27.0) | 1.688 [1.149–2.481] |
| Recessive | | | | | |
| *GG + GA* | 298 (93.1) | 194 (97.0) | 3.63 | 0.058 | 0.419 [0.167–0.959] |
| *АА* | 22 (6.9) | 6 (3.0) | 2.387 [0.951–5.994] |
| *rs3775291* of the *TLR3* gene | | | | | |
| Co-dominant | | | | | |
| *СС* | 128 (40.0) | 104 (52.0) | 7.47 | 0.025 | 0.615 [0.431–0.879] |
| *СТ* | 159 (49.7) | 82 (41.0) | 1.421 [0.995–2.031] |
| *ТТ* | 33 (10.3) | 14 (7.0) | 1.528 [0.796–2.932] |
| Multiplicative | | | | | |
| *С* | 415 (64.8) | 290 (72.5) | 6.61 | 0.011 | 0.70 [0.533–0.919] |
| *Т* | 225 (35.2) | 110 (27.5) | 1.43 [1.088–1.878] |
| Dominant | | | | | |
| *СС* | 128 (40.0) | 104 (52.0) | 7.17 | 0.008 | 0.615 [0.431–0.891] |
| *СТ + ТТ* | 192 (60.0) | 96 (48.0) | 1.625 [1.138–2.321] |
| Recessive | | | | | |
| *СС + СТ* | 287 (89.7) | 186 (93.0) | 1.643 | 0.176 | 0.655 [0.341–1.154] |
| *ТТ* | 33 (10.3) | 14 (7.0) | 1.528 [0.796–2.932] |

χ2, Pearson’s chi-square test; CI, confidence interval; OR, odds ratio

**Table 3. Associations between the *TNFα rs1800629* and *TLR3 rs3775291* and factors related to the risk of cervical cancer**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Characteristics** | **Frequency, N (%)** | | | | | | | |
| ***rs1800629* of the *TNFα* gene** | | | **р (χ2)** | ***rs3775291* of the *TLR3* gene** | | | **р (χ2)** |
| ***GG* (n = 197)** | ***GA* (n = 101)** | ***AA* (n = 22)** | ***СС* (n = 128)** | ***СТ* (n = 159)** | ***ТТ* (n = 33)** |
| Age |  |  |  |  |  |  |  |  |
| ≤ 55 years | 96 (48.7) | 53 (52.5) | 12 (54.5) | 0.762 | 65 (50.8) | 78 (49.1) | 18 (54.5) | 0.84 |
| > 55 years | 101 (51.3) | 48 (47.5) | 10 (45.5) |  | 63 (49.2) | 81 (50.9) | 15 (45.5) |  |
| Smoking status: |  |  |  |  |  |  |  |  |
| Yes | 17 (8.6) | 14 (13.9) | 11 (50.0) | < 0.001 | 11 (8.6) | 14 (8.8) | 17 (51.5) | < 0.001 |
| No | 180 (91.4) | 87 (86.1) | 11 (50.0) |  | 117 (91.4) | 145 (91.2) | 16 (48.5) |  |
| BMI: |  |  |  |  |  |  |  |  |
| < 25 | 113 (57.4) | 47 (46.5) | 10 (45.5) | 0.157 | 75 (58.6) | 88 (55.3) | 16 (48.5) | 0.568 |
| ≥ 25 | 84 (42.6) | 54 (53.5) | 12 (54.5) |  | 53 (41.4) | 71 (44.7) | 17 (51.5) |  |
| HPV: |  |  |  |  |  |  |  |  |
| Yes | 155 (78.7) | 69 (68.3) | 13 (59.1) | 0.039 | 99 (77.3) | 121 (76.1) | 17 (51.5) | 0.007 |
| No | 42 (21.3) | 32 (31.7) | 9 (40.9) |  | 29 (22.7) | 38 (23.9) | 16 (48.5) |  |

χ2, Pearson’s chi-square test; BMI, body mass index (kg/m2); HPV, human papillomavirus