**Table 1. The age and gender characteristics of the patients with different adrenal tumors**

| **Parameter** | **Patient groups** | | | **p value** | |
| --- | --- | --- | --- | --- | --- |
| **PCC (n = 63) (1)** | **ACC (n = 30) (2)** | **NAA (n = 30) (3)** | **Multiple comparisons** | **Paired comparisons** |
| Age at diagnosis, years |  |  |  |  |  |
| Me [25Q; 75Q] | 51 [43.5; 59] | 50 [44; 61.5] | 59.5 [50.5; 70.8] | 0.015\* | 1–2: 0.801 1–3: 0.014 2–3: 0.055 |
| min-max | 22–81 | 28–68 | 27–79 |  |  |
| Gender, M/F, n (%) | 40/23 (63.5/36.5) | 23/7 (76.7/23.3) | 26/4 (86.7/13.3) | 0.054\*\* | 1–2: 0.603 1–3: 0.119 2–3: 0.603 |

ACC, adrenocortical carcinoma; F, female; M, male; NAA, hormonally non-functioning adrenal adenomas; PCC, pheochromocytoma

\* Kruskall-Wallis test

\*\* Chi-square test

**Table 2. Clinical manifestations in patients with adrenal tumors**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Frequencies, n (%)** | **Patient group** | | | **p value (Fischer’s exact test)** | |
| **PCC (n = 63) (1)** | **ACC (n = 30) (2)** | **NAA (n = 30) (3)** | **Multiple comparisons** | **Paired comparisons** |
| Headache | 36 (57.1) | 9 (30) | 3 (10) | < 0.001 | 1–2: 0.016 1–3: < 0.001 2–3: 0.062 |
| Low back pain | 12 (19) | 18 (60) | 22 (73.3) | < 0.001 | 1–2: < 0.001 1–3: < 0.001 2–3: 0.411 |
| Generalized weakness | 10 (15.9) | 19 (63.3) | 17 (56.7) | < 0.001 | 1–2: < 0.001 1–3: < 0.001 2–3: 0.792 |
| Increased palpitations | 21 (33.3) | 4 (13.3) | 3 (10) | 0.016 | 1–2: 0.048 1–3: 0.022 2–3: 1 |
| Cardiac pain | 3 (4.8) | 1 (3.3) | 2 (6.7) | 0.867 | – |
| Sweatiness | 12 (19) | 6 (20) | 3 (10) | 0.493 | – |
| Skin pallor / hyperemia | 6 (9.5) | 1 (3.3) | 0 | 0.205 | – |
| Dizziness | 6 (9.5) | 1 (3.3) | 0 | 0.205 | – |
| Nausea / vomiting | 5 (7.9) | 3 (10) | 0 | 0.217 | – |
| Abdominal pain | 5 (7.9) | 2 (6.7) | 3 (10) | 0.913 | – |
| Constipation | 1 (1.6) | 1 (3.3) | 0 (0%) | 0.749 | – |
| Hand numbness | 2 (3.2) | 2 (6.7) | 0 | 0.563 | – |
| Body tremor | 3 (4.8) | 2 (6.7) | 1 (3.3) | 0.862 | – |
| Anxiety | 3 (4.8) | 2 (6.7) | 0 | 0.424 | – |
| Muscle weakness | 5 (7.9) | 5 (16.7) | 3 (10) | 0.427 | – |
| Hot flushes | 6 (9.5) | 0 | 2 (6.7) | 0.274 | – |
| Chills | 3 (4.8) | 0 | 0 | 0.424 | – |
| Increased body temperature | 0 (0) | 1 (3.3) | 0 (0) | 0.483 | – |

ACC, adrenocortical carcinoma; NAA, hormonally non-functioning adrenal adenomas; PCC, pheochromocytoma

**Table 3. Concomitant disorders in patients with adrenal tumors**

| **Frequencies, n (%)** | **Patient group** | | | **P value (Fischer’s exact test)** | |
| --- | --- | --- | --- | --- | --- |
| **PCC (n = 63) (1)** | **ACC (n = 30) (2)** | **NAA (n = 30) (3)** | **Multiple comparisons** | **Paired comparisons** |
| Disorders of carbohydrate metabolism | 12 (19) | 9 (30) | 7 (23.3) | 0.499 | – |
| Nodular goiter | 13 (20.6) | 5 (16.7) | 7 (23.3) | 0.423 | – |
| Primary hyperparathyroidism | 3 (4.8) | 0 | 0 | 0.232 | – |
| Neuroendocrine tumors | 2 (3.2) | 0 | 0 | 0.498 | – |
| Medullary thyroid cancer | 1 (1.6) | 0 | 0 | 1 | – |
| Pituitary tumors | 0 | 1 (3.3) | 0 | 0.493 | – |
| Gastric and duodenal ulcers | 16 (25.4) | 2 (6.7) | 2 (6.7) | 0.020 | 1–2: 0.048 1–3: 0.048 2–3: 1 |
| Cholelithiasis | 3 (4.8) | 4 (13.3) | 1 (3.3) | 0.381 | – |
| Nephrolithiasis / chronic pyelonephritis | 5 (7.9) | 4 (13.3) | 3 (10) | 0.667 | – |
| Chronic heart failure | 2 (3.2) | 1 (3.3) | 0 | 1 | – |
| Cerebrovascular disorders | 3 (4.8) | 0 | 2 (6.7) | 0.441 | – |
| Respiratory system disorders | 2 (3.2) | 2 (6.7) | 1 (3.3) | 0.833 | – |
| Cancer | 9 (14.3) | 2 (6.7) | 2 (6.7) | 0.535 | – |
| Autoimmune disorders | 1 (1.6) | 2 (6.7) | 1 (3.3) | 0.357 | – |
| Chronic infections | 1 (1.6) | 1 (3.3) | 0 | 0.746 | – |

ACC, adrenocortical carcinoma; NAA, hormonally non-functioning adrenal adenomas; PCC, pheochromocytoma