**Table 1. Clinical characteristics of the patients with post-COVID intestinal involvement (N = 72)**

|  |  |  |
| --- | --- | --- |
| **Characteristics** | **Frequency, N (%)** | **Mean (CI)** |
| Gender, M/F, N | 24/48 |  |
| Age, min.–max., years | 18–85 | 54.6 (51.08–58.12) |
| Loss of body weight, kg | 35 (48.6) | 12 (10.04–13.96) |
| Abdominal pain, N | 59 (81.9) |  |
| Fever, °С | 29 (40.3) | 38.0 (37.7–38.2) |
| Moderately severe condition, N | 43 (59.7) |  |
| Severe condition, N | 29 (40.3) |  |
| Diarrhea characteristics | | |
| Mean stool frequency, min.–max., times/daily | 7–20 | 6.8 (5.61–7.99) |
| Mean daily stool volume, mL | ≥ 800 |  |
| Stool description | Watery, loose |  |
| Blood in stool, N | 19 (26.4) |  |
| Intestinal bleeding, N | 2 (2.8) |  |

CI, confidence interval; N, patient numbers

**Table 2. Laboratory parameters in the patients with post-COVID intestinal involvement at admittance to the Department of Gastroenterology (N = 72)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter** | **Frequency of increased/decreased parameter, N (%)** | **Mean value (CI)** | **Reference range** |
| Total protein, g/L | 21 (29.2) | 55.82 (48.79–62.85) | 65–81 |
| Albumin, g/L | 12 (16.7) | 28 (25.87–30.13) | 35–52 |
| CRP, mg/L |  |  |  |
| 5–25 | 19 (26.4) | 9.9 (7.6–12.2) | 1–5 |
| > 25 | 9 (12.5) | 99.3 (54.5–144.1) |
| Fibrinogen, g/L | 8 (11.1) | 5.27 (4.73–5.81) | 2.8–4.4 |
| Hemoglobin, g/L | 32 (44.4) | 103 (99.76–106.24) | 120–171 |
| Hematocrit, l/L | 19 (26.4) | 0.33 (0.32–0.34) | 0.35–0.45 |
| White blood cell count, 1٠9/L | 11 (15.3) | 16.78 (12.87–20.69) | 4.5–11 |
| Lymphocytes, % | 19 (26.4) | 43.8 (41.51–46.09) | 19–37 |
| Platelets > 4٠٠ / 1٠9/L | 4 (5.6) | 324 (81.5–566.5) | 150–400 |
| ESR, mm/H | 32 (44.4) | 32.8 (27.37–38.23) | 2–15 |
| C. difficile А/В or А+В toxins | 28 (38.9) |  |  |
| Fecal calprotectin, mcg/G | 16 (22.2) | 230–1800 | < 50 |
| Serum iron, mcmol/L | 19 (26.4) | 6.2 (4.83–7.57) | 11.6–31.3 |

CI, confidence interval; CRP, C-reactive protein; ESR, erythrocyte sedimentation rate

**Table 3. Medical treatment during the coronavirus infection (N = 72)**

|  |  |  |
| --- | --- | --- |
| **Agent** | **Patient numbers, N** | **Proportion of patients, %** |
| Antibiotics | 57 | 79.2 |
| Hydroxychloroquine | 15 | 20.8 |
| Ritonavir + lopinavir | 4 | 5.6 |
| Favipiravir | 4 | 5.6 |

**Table 4. The association of clinical and endoscopic signs with antibiotic treatment and presence of Clostridioides difficile toxins**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Intestinal involvement** | **Antibiotic treatment, N**  **(N = 57)** | |  | **No antibiotic treatment, N**  **(N = 15)** | |
| **Toxins +**  **(N = 23)** | **Toxins -**  **(N = 34)** | | **Toxins +**  **(N = 5)** | **Toxins -**  **(N = 10)** |
| Pseudomembranous colitis | 12 | 0 | | 0 | 0 |
| Ulcerative colitis | 2 | 0 | | 0 | 0 |
| Diarrhea with various endoscopic abnormalities | 6 | 24 | | 5 | 10 |
| Focal hemorrhagic colitis | 2 | 9 | | 0 | 0 |
| Bleeding | 1 | 0 | | 0 | 0 |

N, patient numbers; “Toxin +”, C. difficile identified; “Toxin -”, C. difficile not identified

**Table 5. Clinical outcomes of the intestinal involvement after the coronavirus infection (N = 72)**

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Patient numbers, N** | **Proportion of patients, %** |
| Emergency colectomy | 3 | 4.2 |
| Death | 2 | 2.8 |
| Improved | 41 | 56.9 |
| Recovered | 20 | 27.8 |
| Prolonged course without substantial changes | 6 | 8.3 |

**Table 6. Clinical symptoms of the gastrointestinal tract involvement in acute phase and/or after the COVID-19 infection**

|  |  |  |  |
| --- | --- | --- | --- |
| **Authors [reference]** | **Patient numbers, N** | **Symptom/syndrome** | **Frequency, N (%)** |
| A. Rizvi et al. [3] | 788 | Gastroenteritis | 414 (52.5) |
| Gastrointestinal bleedings | 161 (20.4) |
| Weight loss | 181 (23) |
| Pancreatitis | 4 (0.5) |
| S.K. Park et al. [4] | 16 | Diarrhea | 7 (43.8) |
| Abdominal pain | 5 (31.3) |
| Dyspepsia | 5 (31.3) |
| Nausea | 1 (6.3) |
| L. Pan et al. [5] | 103 | Loss of appetite | 81 (78.6) |
| Diarrhea | 35 (34) |
| Vomiting | 4 (3.9) |
| Abdominal pain | 2 (1.9) |
| G. Marasco et al. [6] | 343 | Diarrhea | 130 (37.9) |
| Vomiting | 97 (28.2) |
| Soft stools | 93 (27.4) |