



Case Report

## Would the End of COVID-19 Infection as a Chronic Disease?

Mario G Balzanelli<sup>1</sup>, Pietro Distratis<sup>1</sup>, Rita Lazzaro<sup>1</sup>, Angelo Cefalo<sup>1</sup>, Giuseppe D'angela<sup>1</sup>, Orazio Catucci<sup>1</sup>, Davide Palazzo<sup>1</sup>, Felice Amatulli<sup>1</sup>, Diego Tomassone<sup>2</sup>, Van H Pham<sup>3</sup>, Sergey Aityan<sup>4</sup>, Ciro Isacco Gargiulo<sup>5</sup> and Kieu C D Nguyen<sup>6\*</sup>

<sup>1</sup>SET-118, Department of Pre-hospital and Emergency - Saint Giuseppe Moscati Hospital, Taranto City, 74100, Italy

<sup>2</sup>Nutri Therapy Research Center, Urbino City, 10098, Italy

<sup>3</sup>International Gene and Immunology Institute and Nam-KhoaBiotek, Ho Chi Minh City, 50000, Vietnam

<sup>4</sup>Department of Multidisciplinary Research Centre, Lincoln University, Oakland CA, 94612, USA

<sup>5</sup>Aldo Moro University, Bari City, 70125, Italy

<sup>6</sup>American Stem Cell Hospital JSC & Euro Stem Cell, Vietnam

### Abstract

Although highly transmissible due to its highly infectious nature, since a large proportion of cases are asymptomatic or mild, self-awareness which promotes the spread of the disease worldwide. The public health manages against Corona virus should reduce the numbers of people infected with influenza virus to avoid the two viruses infections will be interacted. The successful combination of using antiretroviral therapy and antibiotics in several inflammation in multi organs with supportive therapies in this case report in region Puglia ASL Taranto, PPI 118- emergency department and pneumonia department in SaintGiuseppe Moscati hospital, Taranto - Italy to develop a chronic disease care model for "POST-COVID-19" and taking epidemic preventing action for the winter season 2020 is coming.

**Keywords:** ASL Taranto; Arterial Blood Gas (ABG); COVID-19, Chronic Disease; SG Moscati Hospital; Sars-CoV-2; 118 Pre-Hospital Medical System-Emergency Department

\*Corresponding author: Kieu C D Nguyen, American Stem Cell Hospital JSC & Euro Stem Cell, Vietnam, E-mail: drkieukaren@gmail.com

**Citation:** Balzanelli MG, Distratis P, Lazzaro R, Cefalo A, D'angela G, et al. (2020) Would the End of COVID-19 Infection as a Chronic Disease? J Stem Cell Res Dev Ther 6: 057.

**Received:** October 16, 2020; **Accepted:** December 08, 2020; **Published:** December 15, 2020

**Copyright:** © 2020 Balzanelli MG, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

### The First Admission

In March 16<sup>th</sup> 2020, an 86 years old Italian man living in Taranto with his wife were found positive to COVID-19 when he was admitted to Department of Emergency 118, PPI S. G. Moscati hospital in Taranto, Italy. His medical history with diabetes, cardiovascular disease. Symptoms at the admission time were mild dyspnea, respiratory distress, high fever (39°C), dry cough, general malaise, the ABG analysis showed a pH alkaline 7.52 with a PaO<sub>2</sub> low 45 mmHg (normal range 75-100), low PaCO<sub>2</sub> 33 mmHg (normal range 35-100). He experienced a sudden deterioration accompanied by headache, and heavy fatigue.

In 118 Emergency Department, the both tampon throat swab buffers (oral - nasal-pharynx by RT-PCR) and CT - scan were suggestive for positive for SARS -CoV-2 infection. The increased level of C-reactive protein 116 mg /L (normal range 3.5). ESR 86 mm/H (normal range up to 10). Alfa 1 Antitripsina 202 mg/dl (normal at 90-200). Electroforesi Sieroproteica : Low Albumine at 51.4% (normal at 54.70 - 69.66). High Alfa 1 at 7.4% (normal at 2.63 - 5.03) ; Alfa 2 at the limit high 12.7% (4.87 -12.40). The symptoms associated with acute respiratory failure was confirmed by X-Ray and lung CT scan positive with bilateral ground glass opacity that showed a significant increase in alveolar capillary permeability and subsequent interstitial edema. It was confirmed pulmonary embolism located with a chronic diffuse bronchopathy with emphysematous configurations. It was observed in the right lung the presence of extensive areas of parenchymal consolidation, irregularly distributed, mainly affecting the lower lobe and the apical and dorsal segments of the upper lobe. There were ground glass opacity areas of the pulmonary parenchyma surrounding the consolidations both apical-dorsal and lower lobe showed interstitial engagements. Circumscribed and consolidated outbreaks, also surrounded by ground glass opacity formations, were observed in the anterior part of the upper lobe of the right lung. In the left lung at the level of lower lobe it was observed a pseudo-nodular consolidation (23 mm) surrounded by ground glass opacities (Figure 1 & 2).

The CBC and laboratory analysis confirmed a general state of deterioration with high level of both inflammation and infectious markers suggestive of a multi-organ deterioration and infectious - inflammatory patterns especially referred to lungs, heart and kidneys. It was observed important high level D-Dimero 3.80 mg/L (normal range up to 0.5 mg/L FEU). Fibrinogen 754 mg/dl (normal range 200-400). High G.neutrofile 89.8% (normal range 35.0-75.0) and low lymphopenia 8.0% (normal range 20.0-55.0). VES 86 mm/h (normal range 1-10). Anti Chlamidia pn IgG 2,3 (index up to 1.1). Mycoplasma pnIgG 13,7 (index up to 9). Moderate -severe disfunctioned kidney with low level of eGFR Filter Glomerular Stimulate (Eq. CKD-EPI) 32.46 ml/min (normal range over 90). Low level of Albumine 2744 mg/dL (3500-5200) High Creatinine 1.84 mg/dl (normal 0.6-1.3). Urea at 87 8 mg/dl (normal range 10-50). Urine proteuria 50 mg/dl (normal range up 25) and Ph 5.0 (normal 5.5-6.5). Glucose 190 mg/dL (normal adult 74-100). Clo 97 mEq/L (normal 98-108) Osmolalityplasmatic

322 mOsm/Lt (normal 290-300). Low Lipase 58 U/L (73-393). Significant high NT-pro BNP 354 pg/mL (normal range up to 130). Hb Glicata 6.9 % (4.0-6.4). This patient was transferred to pneumonia department and hospitalized with treatment by combined therapy following the S.G. Moscati hospital anti-COVID-19 protocol. This therapy strategy consisted on targeting viral and bacterial infection, associated with anti-thrombolytic drugs in order to arrest the worsening of the disease [1,2].

## The Second Admission

In May 11<sup>th</sup> 2020 this patient was hospitalized for the second time with worse condition as fever 38°C, dyspnea, dry cough, fatigue, exhaustion and respiratory distress with mild hyperventilation [3,4]. The ABG showed a pH of 7.373 (normal range 7.35-7.45) with a pO<sub>2</sub> at 59.4 mmHg (normal range 75-100), high PaCO<sub>2</sub> 48.3 mmHg (normal range 35-45).

His blood count (CBC) performed at the second time showed the degenerative process. The severe disfunctioned kidney was confirmed by low level of eGFR Filter Glomerular Stimulate (Eq. CKD-EPI) 29.34 ml/min (normal range over 90). Creatinine at 2.0 mg/dl (normal range 0.6-1.83). High level of Urea at 63 mg/dl (normal range 10-50). Glucose 249mg/dL (normal adult 74-100). High level of inflammatory features such as low level of 25OH-vitaminD 10.7 ng/ml (normal range 50-100) and severe high level of Troponine T hs Alta sensib 65.08 ng/L (normal range 14); high Interleukin 6 at 56.8 pg/mL (normal range under 7); high D-Dimer 46.84 mg/L (normal range 0.5); high white blood cell total count (WBC) at 13.17 of 10<sup>3</sup>/mm<sup>3</sup> (normal range 3.50-10.00) revealing an important disparity in neutrophils-lymphocyte; low Hemoglobin 10.8 g/dL (12.0-18.0); low Hematocrit 32.4% (36.0 -54.0); low Lymphopenia 11.4% (normal range 20.0 -55.0); high G.neutrophopenia 8.87 of 10<sup>3</sup>/µL (normal range 1.8-7.5), high Eosinophilia 12.5% (normal range up to 7%) and high level of Fibrinogen 722 mg/dl (normal range 200 - 400). High C Reactive Protein-CRP 166 mg/L (normal range 3.5). High VES/ESR 117 mm/H (normal range 1-10).

The CT scan revealed a worsening of lung condition [5]. The image showed the presence of multiple artifacts concomitant to incorrect respiratory apnea with a general worsening of lung functionality compared to the previous evaluation.

## The third admission

In June 25, 2020 this patient was hospitalized third time in 118 Emergency Department with high fever (39°C), dyspnoea and severe respiratory distress [3,4]. The ABG analysis showed a pH 7.423 (normal range 7.35-7.45) with pO<sub>2</sub> 38.5 mmHg (normal range 75-100) and PaCO<sub>2</sub> at 51.7 (normal range 35-45).

The blood count (CBC) and laboratory analysis showed a progressive deteriorating with multi-organ involvement. Chronic severe kidney dysfunction remained substantially unvaried with low level of eGFR Filter Glomerular Stimulate (Eq. CKD-EPI) 33.55ml/ min (normal range over 90); Creatinine at 1.79 mg/dl (normal range 0.6-1.3); high level of Urea 63 mg/dl (normal range 10-50); low Creatine Phospho-kinase (CPK) 15 U/L (normal range 39-308); Glucose 176 mg/dL (normal adult 74-100). High level of inflammatory state characterized by low level of 25OH-vitaminD 9.1 ng/ml (normal range 50-100) ; high C Reativa Proteinae-

CRP 146.0 mg/L (normal range 3.5); High ESR/VES 126 mm/H (normal range 1-10); high D-Dimer at 60.80 mg/L (normal range 0.5 mg/L FEU) ; high level of Fibrinogen 694 mg/dl (normal range 200 - 400); severe high level of Troponine T hs Alta sensib 51.340 ng/L (normal range 14); low level of 25OH-vitaminD 9.1 ng/ml (normal range 50-100) ; high Interleukin 6 at 61.9 pg/mL (normal range under 7). The CBC revealed a mild anemia profile confirmed by low level of Red Blood Cells (RBC) at 3.23 of 10<sup>6</sup>/mm<sup>3</sup> (normal range 4.00-6.00); low Hemoglobin 9.8 g/dL (normal 12.0-18.0) ; low level of Hematocrit 30.1% (normal range 36.0% -64.0%). In addition, the total white blood cell total count (WBC) was elevated at 15.79 of 10<sup>3</sup>/mm<sup>3</sup> (normal range 3.50-10.00) and revealing an important disparity in neutrophils-lymphocyte; low Linfociti 13.4% (normal rang 20.0% -55.0%); high G.neutrofili 10.36 of 10<sup>3</sup>/µL (normal range 1.8-7.5); Eosinophilia 10.6% (normal range up to 7%).

The CT scan confirmed a worsening of lung condition with multiple respiratory artifacts from incorrect respiratory apnea and multiple bilateral parenchymal consolidations with contextual air Broncho gram images next to adjacent areas with ground glass opacities, the major consolidations were reported at the RSL, LIL levels and lingual [5].

## Medication

The treatment was based on the use of azithromycin, ceftriaxone, ketoprofen, enoxaparin sodium, methylprednisone, acetylcysteine, hydroxychloroquine, clarithromycin and high flow oxygen therapy and high restrictive fluid management.

## Conclusion

With the promptly admission into 118 Emergency Department in Saint Giuseppe Moscati hospital, Taranto- Italy, he recovered after six weeks with other ten patients.

## Declaration of Interests

The authors declare no conflict of interests in this case report.

## References

1. Shi H, Han X, Jiang N, Cao Y, Alwalid O, et al. (2020) Radiological findings from 81 patients with COVID-19 pneumonia in Wuhan, China: a descriptive study. *Lancet Infect Dis* 20: 425-434.
2. Wang Y, Dong C, Hu Y, Li C, Ren Q, et al. (2020) Temporal changes of CT findings in 90 patients with COVID-19 pneumonia: a longitudinal study. *Radiology* 296: 55-64.
3. Wu X, Dong D, Ma D (2016) Thin-section computed tomography manifestations during convalescence and long-term follow-up of patients with severe acute respiratory syndrome (SARS). *Med Sci Monit* 22: 2793-2799.
4. Kruser JM, Prescott HC (2016) Dysphagia after Acute Respiratory Distress Syndrome: Another Lasting Legacy of Critical Illness. *Ann Am Thorac Soc* 14: 307-308.
5. Inui S, Fujikawa A, Jitsu M, Kunishima N, Watanabe S, et al. (2020) Chest CT Findings in Cases from the Cruise Ship "Diamond Princess" with Coronavirus Disease 2019 (COVID-19). *Radiol Cardiothorac Imaging* 2: 200110.



- Advances In Industrial Biotechnology | ISSN: 2639-5665
- Advances In Microbiology Research | ISSN: 2689-694X
- Archives Of Surgery And Surgical Education | ISSN: 2689-3126
- Archives Of Urology
- Archives Of Zoological Studies | ISSN: 2640-7779
- Current Trends Medical And Biological Engineering
- International Journal Of Case Reports And Therapeutic Studies | ISSN: 2689-310X
- Journal Of Addiction & Addictive Disorders | ISSN: 2578-7276
- Journal Of Agronomy & Agricultural Science | ISSN: 2689-8292
- Journal Of AIDS Clinical Research & STDs | ISSN: 2572-7370
- Journal Of Alcoholism Drug Abuse & Substance Dependence | ISSN: 2572-9594
- Journal Of Allergy Disorders & Therapy | ISSN: 2470-749X
- Journal Of Alternative Complementary & Integrative Medicine | ISSN: 2470-7562
- Journal Of Alzheimers & Neurodegenerative Diseases | ISSN: 2572-9608
- Journal Of Anesthesia & Clinical Care | ISSN: 2378-8879
- Journal Of Angiology & Vascular Surgery | ISSN: 2572-7397
- Journal Of Animal Research & Veterinary Science | ISSN: 2639-3751
- Journal Of Aquaculture & Fisheries | ISSN: 2576-5523
- Journal Of Atmospheric & Earth Sciences | ISSN: 2689-8780
- Journal Of Biotech Research & Biochemistry
- Journal Of Brain & Neuroscience Research
- Journal Of Cancer Biology & Treatment | ISSN: 2470-7546
- Journal Of Cardiology Study & Research | ISSN: 2640-768X
- Journal Of Cell Biology & Cell Metabolism | ISSN: 2381-1943
- Journal Of Clinical Dermatology & Therapy | ISSN: 2378-8771
- Journal Of Clinical Immunology & Immunotherapy | ISSN: 2378-8844
- Journal Of Clinical Studies & Medical Case Reports | ISSN: 2378-8801
- Journal Of Community Medicine & Public Health Care | ISSN: 2381-1978
- Journal Of Cytology & Tissue Biology | ISSN: 2378-9107
- Journal Of Dairy Research & Technology | ISSN: 2688-9315
- Journal Of Dentistry Oral Health & Cosmesis | ISSN: 2473-6783
- Journal Of Diabetes & Metabolic Disorders | ISSN: 2381-201X
- Journal Of Emergency Medicine Trauma & Surgical Care | ISSN: 2378-8798
- Journal Of Environmental Science Current Research | ISSN: 2643-5020
- Journal Of Food Science & Nutrition | ISSN: 2470-1076
- Journal Of Forensic Legal & Investigative Sciences | ISSN: 2473-733X
- Journal Of Gastroenterology & Hepatology Research | ISSN: 2574-2566
- Journal Of Genetics & Genomic Sciences | ISSN: 2574-2485
- Journal Of Gerontology & Geriatric Medicine | ISSN: 2381-8662
- Journal Of Hematology Blood Transfusion & Disorders | ISSN: 2572-2999
- Journal Of Hospice & Palliative Medical Care
- Journal Of Human Endocrinology | ISSN: 2572-9640
- Journal Of Infectious & Non Infectious Diseases | ISSN: 2381-8654
- Journal Of Internal Medicine & Primary Healthcare | ISSN: 2574-2493
- Journal Of Light & Laser Current Trends
- Journal Of Medicine Study & Research | ISSN: 2639-5657
- Journal Of Modern Chemical Sciences
- Journal Of Nanotechnology Nanomedicine & Nanobiotechnology | ISSN: 2381-2044
- Journal Of Neonatology & Clinical Pediatrics | ISSN: 2378-878X
- Journal Of Nephrology & Renal Therapy | ISSN: 2473-7313
- Journal Of Non Invasive Vascular Investigation | ISSN: 2572-7400
- Journal Of Nuclear Medicine Radiology & Radiation Therapy | ISSN: 2572-7419
- Journal Of Obesity & Weight Loss | ISSN: 2473-7372
- Journal Of Ophthalmology & Clinical Research | ISSN: 2378-8887
- Journal Of Orthopedic Research & Physiotherapy | ISSN: 2381-2052
- Journal Of Otolaryngology Head & Neck Surgery | ISSN: 2573-010X
- Journal Of Pathology Clinical & Medical Research
- Journal Of Pharmacology Pharmaceutics & Pharmacovigilance | ISSN: 2639-5649
- Journal Of Physical Medicine Rehabilitation & Disabilities | ISSN: 2381-8670
- Journal Of Plant Science Current Research | ISSN: 2639-3743
- Journal Of Practical & Professional Nursing | ISSN: 2639-5681
- Journal Of Protein Research & Bioinformatics
- Journal Of Psychiatry Depression & Anxiety | ISSN: 2573-0150
- Journal Of Pulmonary Medicine & Respiratory Research | ISSN: 2573-0177
- Journal Of Reproductive Medicine Gynaecology & Obstetrics | ISSN: 2574-2574
- Journal Of Stem Cells Research Development & Therapy | ISSN: 2381-2060
- Journal Of Surgery Current Trends & Innovations | ISSN: 2578-7284
- Journal Of Toxicology Current Research | ISSN: 2639-3735
- Journal Of Translational Science And Research
- Journal Of Vaccines Research & Vaccination | ISSN: 2573-0193
- Journal Of Virology & Antivirals
- Sports Medicine And Injury Care Journal | ISSN: 2689-8829
- Trends In Anatomy & Physiology | ISSN: 2640-7752

Submit Your Manuscript: <https://www.heraldopenaccess.us/submit-manuscript>