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## The Contribution Of COVID 19 Seroprevalence To COVID 19 Convalescent Plasma collection

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### PURPOSE / OBJECTIVES

Many individuals for various reasons either could miss viral examinations for COVID 19 or could obtain negative results due to delayed testing. The aim of this study was to determine the seroprevalence of COVID 19 in correlation with RT-PCR test, between men and women, to collect appropriate donors for convalescent plasma (CP), and to serve as register of individuals that were infected with COVID -19 and recovered.

### MATERIALS & METHODS

This study was conducted in Tirana during 21 to 28 December 2020 and included 817 individuals. Anti – S1 protein of SARS – COV – 2 IgG antibodies (anti - IgG) were measured with EUROIMMUN, ELISA method.

### RESULTS

Subjects' age ranged from 20 to 70 years and 63.8% (521) of them were females. Of all 393 anti - IgG positive patients, 11.8 % (89) were RT-PCR positive ( $p = 0.00001$ ). The prevalence rate of anti - IgG was 48.1%. (95% CI: 44.8% - 51.7%). Anti – IgG ratio < 3.5 was 39.4 % (155) and ratio > 3.5 was 60.6% (238).

**The aim of this study was to determine the seroprevalence of COVID 19 in correlation with RT-PCR between men and women.**

**Based on FDA data, Euroimmun was acceptable for use in Manufacture of high titer COVID 19 Convalescent Plasma. So this study served as register for eligible donors for CP with titer of Anti - IgG > 3.5, also based on criteria from Central Blood Bank of Tirana.**

**Keywords: Anti – S1 protein of SARS – COV – 2 IgG antibodies, Convalescent Plasma**

### RESULTS

In negative RT – PCR (304), the anti – IgG ratio <3.5 was 43.4% (132) compared to ratio > 3.5 that was 56.6% (172). In positive RT – PCR the anti – IgG > 3.5 was 74.2 % (66) compared to 25.8 % (23) referred to ratio < 3.5 ( $p = 0.003$ ). Of all 393 positive patients, 61.3% (241) were females. 62.1 % (82/132) of males and 61.0 % (159/261) of females resulted with anti – IgG ratio > 3.5. 61 from all individuals were real donors for CP, based on criteria from Central Blood Bank of Tirana (Donors 20 – 60 years old, donors without a history of blood transfusion, female donors who have never been pregnant, the anti – IgG ratio > 3.5).

### SUMMARY/CONCLUSION

The seroprevalence was the main indicator test for natural infection of COVID 19. The percentage of anti – IgG ratio > 3.5 was higher than ratio < 3.5. Females were infected more often than males. Males and females with anti – IgG ratio > 3.5 were approximately the same in %. This means they could confirm almost the same moderate and severe illness. Our data served us to collect 61 eligible donors for CP.