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RESEARCH ARTICLE
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NATURAL IMMUNE RESPONSE AGAINST COVID-19 IN FIRST LINE CORONA WARRIORS AT DHANBAD AND THEIR ADJOINING DISTRICTS OF JHARKHAND: A PROSPECTIVE STUDY.

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Background:-
A study was required at the initial phase of continued nobel Covid-19 pandemic to know the impact of infection and to set a guideline for treatment. In the correct knowledge IgG develops four weeks following infection after SARS-COV-2 Virus. IgG as a reliable antibody develops in 99% of individuals who are immunocompetent.
A robust immunity is needed to handle disease caused by viruses and bacteria new to the community. Primary immunity depends on multiple factors. An intact immune system empowered by B&T cells, proper activation of complements & immunoglobins are all that needed for the faster healing of the disease. During the continued pandemic numerous mutations happened in Covid-19 viruses which threats to the community at the detection level of virus.
In my study IgG was chosen as a reliable marker of sero conversion & it's may be helpful in deciding immunity status of an individual.
This study is expected to assure following parameter whether a particular age or sex is more immune to disease? Whether in particular titre is beneficial & whether it is helpful in recovery from mild to moderate disease in hospitalized patients.

Method:-
A SOP has been made in the department of blood centre for proper evaluation of donors eligibility. Detailed clinical examination, donors nasal swab was taken their blood samples will be collected for CBC, total protein and IgG (anti-covid-19 anti body). Properly filled consent paper will be collected with all safety measures keeping ethical issues in my study. All donors asked to submit RT-PCR reports. All healthy individuals will be choosen and their IgG titers will be measured, analyzed & compaired with the available data on globally accessible sites available digitally. Manual charts & tables will be prepared for study based on age & sex of participants. A control value was set-up. Less than one is negative & more than 1 was taken positive on the basis of CLIA method. Age-wise comparisons were considered in both groups.

Keywords:- Primary immunity, B&T cells, Nobel Covid-19 virus, Anti IgG antibody, Sero-convertion, RT-PCR

Results:-

DATA-1:- Age & Sex specific analysis of participants (152 males Vs 27 females) aged 20-70 years.

AGE	MALE	FEMALE
20-29	35	13
30-40	39	08
41-50	23	02
>50	10	00

DATA-2:- Antibody titres obtained by CLIA method from all participants (152 males Vs 27 females) aged 20-70 years.Anti-Covid-19 antibody IgG were categorized as mild,moderate & high.

AGE GROUP	MILD 1-10		MODERATE 11-20		HIGH 20-30	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
20-29	23	10	05	03	03	00
30-40	26	06	06	00	02	01
41-50	14	01	04	01	00	00
>50	16	01	08	00	04	00

Conclusions:- 74% cases were asymptomatic females. IgG was only mildly elevated. The infected females were largely pre-menopausal age group.
Sero-conversion rates were higher in females as compared to males (86% vs 70%). These shows robust immune response in females in comparision to males.

Discussions:- Pre-menopausal adult women generally have stronger immune response than children, men or female during post-menopausal period. These are due to multiple reasons for those differences are like genetic factors, life style practices, co-morbidities, hormonal factors, immunity & ageing.

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Interests of Conflicts:- There is no interest of conflict.

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