

# Effect of COVID 19 Pandemic on the Number of Diagnostic Testing of Non COVID Viral Diseases in PMCH, Patna, Bihar

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## Abstract :-

**Aim :-** To see the effect of SARS – virus COVID 19 pandemic on the number of patients suffering from other illness and their diagnosis in the largest medical college and hospital of Bihar.

**Methodology :-** By comparing the data of various diagnostic tests performed at the Viral Research Diagnostic Lab (VRDL) from the year 2019 with current pandemic hit year of 2020.

**Result :-** There is drastic change in the numbers of different types of viral diagnostic testing because of the pandemic of COVID 19. This is remarkable as the number of testing for other viral diseases has decreased to a greater extent.

**Conclusion :-** The pandemic of COVID 19 had a great impact not only on social life and economy of people but it has also shown a great impact on the medical field. It has greatly masked other illness whether it is a normal seasonal diseases as well as chronic diseases.

**Key Words:** - COVID 19, Pandemic, Viral Disease, VRDL

**Introduction:** - Corona virus disease 2019 (COVID 19) is an ongoing global health problem, caused by severe acute respiratory syndrome coronavirus 2 (SARS – COV-2) which causes lower respiratory tract infection. WHO has declared it as a global health emergency.[2]. Since the emergence of COVID 19 in December 2019 from the city of Wuhan in the Hubai Province of China after which it has spread to the entire world, whose impact and consequences can be seen on various aspects of life. It has not only affected the social and economic life of people but its effect can also be seen on medical field too. It has greatly affected patients suffering from chronic diseases to mild illness.

**Methodology :-**The study is comprised of comparing the data of the total tests done of 23 different viruses from the last year with the total test done in the year 2020 till 15<sup>th</sup> September came to the virology lab which is established in Microbiology department of Patna Medical College, Patna, Bihar. The lab receives Blood and/or CSF samples from different departments of PMCH and other referral hospitals of Patna and nearby places by clinicians for different ELISA based test for multiple viral etiology through a requisition slip issued by the hospital. All the non COVID viral tests are done by Enzyme Linked Immunosorbant Assay method (ELISA) whereas the COVID testing is done by RT-PCR technique.

**Result :-** As a Viral Research Diagnostic Lab (VRDL) situated in the Microbiology department of PMCH is dedicated to do the viral testing, 23 different types of viral testing are done here. All the 23 viral tests are done free of cost in the lab on the regular basis which is a very big relief for the patients. Because PMCH is the oldest as well as the largest government hospital of Bihar so the load of the patient for treatment is more than its capacity. Entire state is benefitted by treatment of efficient and capable doctors of PMCH. So, as the rush in OPD is more and more as a result pathological labs situated in the hospital has also huge burden of patients to do the testing. As the treatment in PMCH is almost free of cost or very less amount is paid by the patients and efficient treatment is done by efficient doctors, so the burden of diagnostic testing is also very huge. By comparing the data of various diagnostic testing of last year to the current year, we analyzed the result.

But after the emergence of the Pandemic SARS COVID 19 and subsequent nationwide lockdown where people were let confined to their home for almost three months and no movement were allowed interstate or even inter district led to significant rather drastic decrease in the number of non- COVID patients in the hospital as well as the laboratory due to the enforced restriction. Table 1 and table 2 showing the month wise test details for both the

years of 2019, from January to December and the year 2020 from January to September performed in VRD lab apart from COVID 19 testing. We can see the huge difference in the test done in two years which is remarkable to study on it.

In the year 2019 the total test done till September is 4931 but in the year 2020 it is 1680 only out of which 1058 tests were done till the month of March. It shows the huge effect of COVID 19 on the non COVID viral diagnostic tests.

Test	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
JE IgM	16	20	31	23	21	71	107	93	88	58	35	26
Den NS1	4	0	0	0	0	0	72	120	368	1963	728	81
Chik IgM	2	2	5	1	0	1	22	36	53	156	94	10
Deng IgM	6	3	4	3	10	16	158	223	625	2677	1448	878
HBsAg	4	26	20	20	10	6	9	19	12	4	0	16
HBeAg	ss3	15	17	8	0	0	3	10	7	1	0	16
Anti HBeAb	3	15	17	8	0	0	3	11	7	1	0	16
Anti HBcAb	3	14	16	8	0	0	3	9	7	1	0	16
Anti HBc IgM	3	14	16	8	0	0	4	10	7	1	0	16
Anti HCV	2	4	3	6	5	5	3	7	7	0	0	1
Anti HAV IgM	1	4	8	8	7	5	22	20	32	12	0	5
Anti HEV IgM	1	4	8	7	7	5	22	19	31	12	0	5
Rub IgM	2	6	5	22	8	10	18	27	35	5	0	9
Rub IgG	2	6	5	24	8	10	17	27	35	5	0	9
CMV IgG	2	6	9	22	10	8	17	30	35	6	0	11
CMV IgM	2	6	9	23	10	8	17	30	35	6	0	11
HSV I IgG	2	10	11	21	17	15	43	59	12	7	0	16
HSV I IgM	2	10	11	28	17	15	44	59	14	7	0	16
HSV II IgG	2	10	11	27	17	15	44	59	14	7	0	16
HSV II IgM	2	10	11	28	17	15	43	59	16	7	0	16
VZV IgM	5	12	70	75	106	17	8	4	0	0	0	1
Measles IgG	2	1	0	2	4	15	22	20	41	8	0	4
Mumps IgM	0	0	0	8	3	17	16	21	31	8	0	6
<b>Total</b>	75	210	301	424	295	270	743	1026	1587	4962	2305	1219

**Table 1 :- Total Tests Done in year 2019 apart from Covid 19 in VRDL**

Test	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept
JE IgM	00	21	24	28	12	20	29	33	17
Den NS1	00	00	00	00	00	00	00	08	21
Chik IgM	02	02	00	00	00	00	00	00	00
Den IgM	09	05	04	00	00	00	00	02	12
HBsAg	12	29	19	10	03	01	01	03	04
HBeAg	12	23	17	08	03	01	01	03	04
Anti HBeAb	12	23	17	08	03	01	01	03	04
Anti HBcAb	12	23	17	08	03	01	01	03	04
Anti HBc M	12	23	17	08	03	01	01	03	04
Anti HCV	00	01	01	00	00	01	00	00	00
Anti HAV	08	20	25	06	02	02	05	07	05
Anti HEV M	08	15	25	06	02	02	05	07	05
Rub IgG	05	21	20	06	03	02	05	07	05
Rub IgM	06	21	20	07	03	02	06	07	05
CMV IgG	08	20	19	06	03	02	05	06	06
CMV IgM	09	20	21	07	03	02	06	07	06
HSV I IgG	10	33	41	13	04	03	08	05	08
HSV I IgM	12	32	41	13	04	03	08	08	08
HSV II IgG	10	33	42	13	04	03	08	07	07
HSV II IgM	12	32	42	13	04	03	08	08	08
Anti VZV M	00	17	15	02	00	00	00	00	00
Measles IgG	03	03	14	02	00	00	02	02	03
Mumps IgM	02	03	14	02	00	00	00	00	00
<b>Total</b>	185	421	452	123	57	59	124	129	130

**Table 2 :- Tests Done in year 2020 apart from COVID 19 in VRDL**

**Discussion :-** As the pandemic of Corona virus has dragged the focus of medical fraternity towards the screening, diagnosis and treatment of COVID 19 affected people and protecting others from getting infection of COVID 19, knowingly or unknowingly patients suffering from other disease has greatly been affected in their diagnosis and treatment. [1]. Corona pandemic has left a huge burden to fight with this disease and medical health workers are fighting with it with great effort. But there are other diseases also that is equally dangerous, infectious and life threatening which cannot be ignored behind this pandemic. If these diseases will be ignored in fight against Corona, there is high risk of even greater disaster. It is remarkable that people are ignoring visiting hospital for their regular check-up rather they are visiting hospitals only in case of life threatening conditions, or if it is unbearable and this delay or avoiding treatment is making the condition even worst. Thus COVID 19 has affected routine OPD, inpatients of hospitals, emergency OPD and even surgeries. The fear of this pandemic has affected to such an extent that even a very urgent health issues or surgeries are being ignored from patient sides and even medical health worker's sides as well. The doctors, nurses and other medical staffs whose life is in risk because they are fighting on the front line and are afraid for their families because the risk facing by them can affect their family directly or indirectly. Many patients showing no symptoms, mild symptoms or unspecific symptoms are difficult to identify and quarantine. [2]. The disease is highly contagious which is spreading very fast with an increasing number of illness from one person to another or to protect the healthy people from getting infection. [3]. A number of steps were taken by the government which affected the life of a person in a positive as well as negative ways too. Major precautionary, informative, financial and medical steps were taken by the government to stop it from spreading among community and to fight against Coronavirus in our country. Several stringent actions were taken along with to detect, treat and reduce the transmission of the virus. A complete lockdown was announced by our Prime Minister for the entire

nation, banning people to move out of their houses to restrict the community spread of the virus. All public places such as community halls, all schools, clubs, hotels, gyms, malls etc. were shut. Mandatory screening and quarantine for the international travelers or the person in direct contact with the confirmed or suspected COVID cases. All cross-national borders, state borders or even districts borders were sealed. Railway operations and other public transports were suspended. As an informative step, various authentic information were provided by the government on the virus, its spread, preventions, active cases, guidelines and helpline numbers on the Ministry of Health's official website. As a medical step various centres were designed for the diagnosis and treatment of COVID 19. As a financial step, government issued various relief packages, open shelter homes and provided various securities. In this pandemic more or less these types of preventive measures were taken in the entire world to stop the Corona virus from spreading. To prevent infection in hospital, all entrance door of the hospital buildings were closed as much as possible. And a quarantine centre were established in front of the entrance.[4]. Every person visiting the hospital was checked and their history was to be taken which included travel history or contact with any confirmed or suspected case of COVID 19.

All the above mentioned reasons collectively might be the cause of the less number of non COVID tests done in the hospital. Lack of public transport may be the biggest reason behind it as PMCH being the largest government hospital where the treatment is almost free of cost so the dependency of the economically backward population for their treatment is larger on this hospital. At the same time the patients get a class treatment by highly efficient doctors so it is very much reliable for any medical treatment.

**Conclusion :-** There is need of vigilance for common emergencies whether it is non COVID illness like patients suffering from chronic illness of liver, kidney, heart, cancer or any other vital problems like medical issues facing by a pregnant lady. There is need of the time to learn to live a normal life with this pandemic of COVID 19 and not ignoring any ill person who needs medical help in their treatment.

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