



THE IMPACT OF COVID-19 PANDEMIC ON HUMAN MILK BANK AT A TERTIARY HEALTH CARE CENTER.

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ABSTRACT

The COVID-19 pandemic has presented a range of challenges to Human Milk Banks worldwide. According to World Health Organization, if maternal milk is unavailable, the first alternative should be pasteurised donor human milk (DHM)¹. It is understandable that owing to the covid 19 pandemic, availability of donor human milk in the milk banks might have suffered thus leading to insufficient collection, storage and disbursal of pasteurized donor milk to the needy neonates. But in developing countries, predominant donors are mothers of hospitalised neonates who have a relatively long period of hospital stay. This longer maternal hospital stay enhances the feasibility of milk donation by providing mothers with required assistance from paramedical staff as well as access to breast pumps to express their milk. Any excess milk a mother expresses which is above the needs of their own infant can be voluntarily donated. Also the physical proximity of milk banks to donors has helped continuation of human milk donation in developing nations even during this pandemic.² Strict protocols were followed regarding breast feeding practices and milk donation as per standard guidelines and recommendations to ensure the microbiological quality of the milk collected and consider steps to mitigate potential consequences related to the possibility of the donor being an asymptomatic carrier of COVID-19. Here, We present the statistics and trend of our human milk bank 'Project Yashoda' situated at SMIMER hospital and functioning well since last 12 years during this global pandemic. We observed that by proper counselling regarding breast feeding and explaining adequate precautionary measures to lactating mothers, we were successfully able to receive milk donations from mothers which in turn helped in maintaining reserve of milk needed to supply DHM to our NICU babies thus preventing the use of any formula feeds or supplements even amidst covid 19 pandemic.

KEYWORDS : Human Milk bank, Covid pandemic, Donor Human milk.

INTRODUCTION

The COVID-19 pandemic has presented a range of challenges to Human Milk Banks worldwide. According to World Health Organization, if maternal milk is unavailable, the first alternative should be pasteurised donor human milk (DHM).¹ It is understandable that owing to the covid- 19 pandemic, availability of donor human milk in the milk banks might have suffered thus leading to insufficient collection, storage and disbursal of pasteurized donor milk to the needy neonates.² But in developing countries like INDIA, predominant donors are mothers of hospitalised neonates who have a relatively long period of hospital stay. This longer maternal hospital stay enhances the feasibility of milk donation by providing mothers with required assistance as well as access to breast pumps to express their milk.² Any excess milk a mother expresses which is above the needs of their own infant can be voluntarily donated. In addition to this, physical proximity of milk banks to donors has helped continuation of human milk donation in developing nations even during this pandemic. It was obvious that during worldwide covid pandemic, the pregnant and lactating mothers were in immense amount of stress regarding safety of themselves as well as the newly born babies.

So during this crucial period , the faculty, residents and social workers at our institute emphasized to a greater extent on the counselling as well as adequate precautionary measures to be taken, regarding breastfeeding as well as proper handling of the babies. It is a known fact that breastfeeding is the best feeding and considering this we had taken multiple session to counsel the mothers about the importance of breastfeeding , expressing milk and donating the extra milk amidst the covid pandemic with all due precautionary measures. This has helped in reserving the human milk donated from the lactating mothers , which was needed to supply NICU babies thus at the end preventing the use of any formula feeds or supplements even during covid 19 pandemic.

MATERIALS AND METHODS

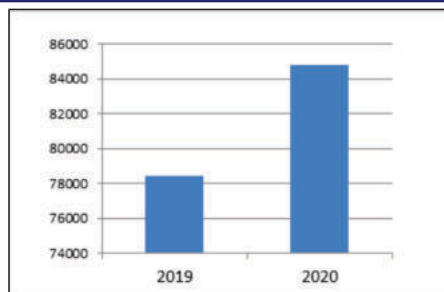
This is a retrospective hospital based observational study of Human milk bank "Project Yashoda" functioning in SMIMER reflecting the effect of covid-19 pandemic in last two years. Procedure followed at birth : At birth, baby was given to mother for breast feeding after providing her with facemask and its appropriate use and teaching her hand hygiene along with cleansing of her breasts.

Baby was allowed rooming in with mothers who can feed the baby as and when required, provided she maintained all necessary precautions mentioned earlier. The donation of all mothers fulfilling the inclusion criteria were accepted. Mothers were screened for history of flu like illness, especially signs and symptoms of covid, and if found suspicious the milk donation of these mothers were refrained temporarily. After proper evaluation with the help of clinical examination, covid RDT and radiological examination if mother was found negative, then, donation was accepted.

ALL MOTHERS HAD TO FOLLOW COVID APPROPRIATE BEHAVIOUR. These efforts were continuously encouraged with the help of our staff, posters, pamphlets and videos regarding the precaution to be taken amidst this pandemic. Mothers expressed excess milk manually or breast pumps under supervision. This excess expressed milk underwent the exact procedure as per the SOP of the milk bank. All screening and consent forms were filled as per the standard protocol.

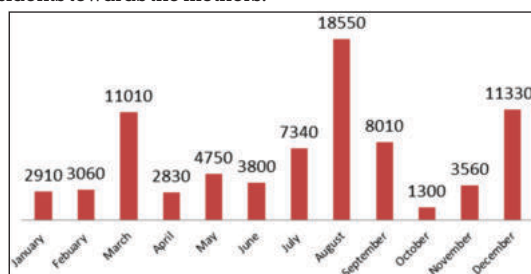
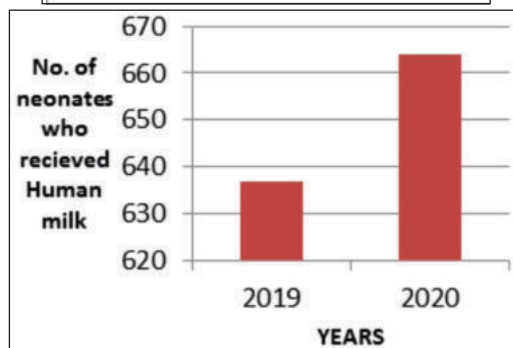
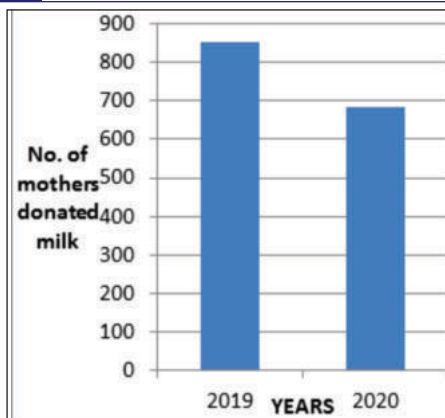
Statistics

Year	Total milk collected	Total milk disbursed	Total mothers who donated	Total babies who received
2019	78450 ml	78960 ml	851	637
2020	84810 ml	81434 ml	683	664

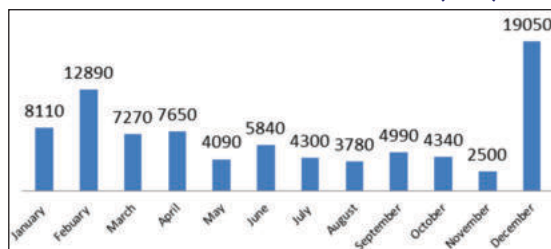


Total Collection Of Milk (ml)

This graph shows the comparison of total collection of Human milk in last 2 years at SMIMER hospital in our Human milk bank under "Project YASHODA" whereby in 2019 it was 78450 ml and in 2020 the amount was 84810 ml. From this graph it is clear that covid-19 pandemic has not affected collection of Human milk at our hospital and infact it has increased which was attributed to dedication as well as motivation of staff and residents towards the mothers.

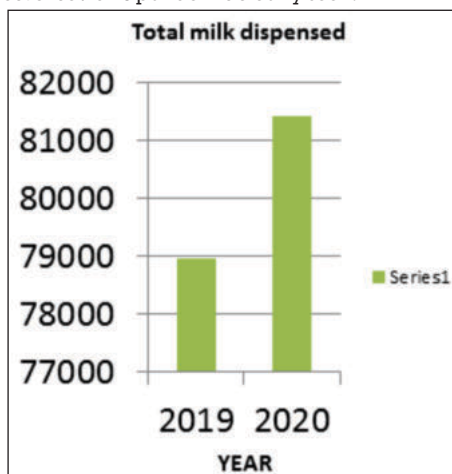


TOTAL MONTHLY MILK COLLECTION IN 2019 (in ml)



TOTAL MONTHLY MILK COLLECTION IN 2020

The effect of covid 19 pandemic clearly seen.



This graph shows the amount of donated milk dispensed to the needy neonates in our NICU under the "Project Yashoda" at SMIMER hospital. In the year 2019 and 2020 which was 78,960 ml and 81,434 ml respectively. As our institute is a tertiary care hospital, it is clearly seen from the graph that the delivery, admission and the use of donated milk was not hampered during the covid pandemic.

CONCLUSION

Studies by developed as well as developing countries have shown that ongoing pandemic had impacted the functioning of human milk banks. Contrary to these studies, we feel overwhelmed to express that the functioning of the Human milk bank/CLMC at our institute has not suffered and in fact has tremendously increased in terms of donation as well as disbursement of human milk. This clearly proved that there was absolutely no need to use any formula feeds or supplements even amidst the covid 19 pandemic times attributed only to the existence of human milk bank /CLMC at our premises. Thus would like to conclude that human milk banks are actually a boon to the society and they may act as a saviour for the needy newborns in any emergency / pandemic situations. Also it shows that sincere dedication, motivation, co-ordination and co-operation of the milk bank team (CLMC team) as well as the mothers plays a pivotal role in emphasizing the importance of breast feeding and milk donation amongst the mothers to help them fight against any adverse circumstances.

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