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Perinatal care of moderate and late preterm in Spain. Impact of the SARS-CoV-2 pandemic[☆]



Cuidados perinatales del prematuro moderado y tardío en España. Impacto de la pandemia por SARS-CoV-2

To the editor:

Moderate-late preterm (MLPT) infants amount to 80% of all infants born preterm. They exhibit a lesser degree of myelination and sulci development and a reduced cerebral volume^{1,2} compared to term infants, differences that are maintained compared to term infants of the same corrected age,³ suggesting that MLPT birth could be a cause of neurodevelopmental disorders in the short and long term.⁴

The evidence that has emerged on the increased vulnerability of MLPT infants in recent years has contributed to the application of

patient- and family-centred care in this subset of preterm infants. There are no current data on the subject in the Spanish population, and for most of Spain,⁵ it is also not known whether the SARS-CoV-2 pandemic has led to changes in this type of care.

We conducted a descriptive study by submitting an online questionnaire to the members of the Sociedad Española de Neonatología (Spanish Society of Neonatology, SENEo). We collected demographic data for the respondents and different aspects regarding the management of MLPT infants in the delivery room and the neonatal unit (Table 1).

If we received more than one response from a single facility, we only included the one received first in the study. We received 117 responses corresponding to 87 hospitals representing every autonomous community of Spain with the exception of the autonomous city of Melilla. Of all responses, 95.4% were submitted by neonatologists or paediatricians, 3.5% by nurses and 1.1% by paediatrics medical residents. In the delivery room, delayed cord clamping was practiced in all MLPT newborns that do not require resuscitation in 72.1% of facilities, while 11.6% of hospitals only practiced it in late preterm newborns, 5.8% practiced it in every case and 10.5% did not practice it yet. Kangaroo care practices did not change during the pandemic, with 50.6% of facilities practicing it in MLPT newborns that do not require resuscitation, 5.7% in

Table 1 Survey of perinatal care practices in moderate-late preterm infants in Spain before and during the SARS-CoV-2.

Demographic data	
Occupation	<input type="checkbox"/> Neonatologist /paediatrician <input type="checkbox"/> Paediatrics resident <input type="checkbox"/> Nurse <input type="checkbox"/> Nurse assistant
Level of care of the centre	<input type="checkbox"/> IIA <input type="checkbox"/> IIB <input type="checkbox"/> IIIA <input type="checkbox"/> IIIB <input type="checkbox"/> IIIC
Hospital	Autonomous community of hospital
Perinatal care	
1. Before the pandemic, did you practice delayed cord clamping in MPT and LPT newborns?	<input type="checkbox"/> Not practiced <input type="checkbox"/> Only in LPT newborns <input type="checkbox"/> In MPT and LPT newborns that did not require resuscitation <input type="checkbox"/> Always
2. Do you currently practice delayed cord clamping in MPT and LPT newborns?	<input type="checkbox"/> Not practiced <input type="checkbox"/> Only in LPT newborns <input type="checkbox"/> In MPT and LPT newborns that did not require resuscitation <input type="checkbox"/> Always
3. Before the pandemic, did you practice skin-to-skin contact in MPT and LPT newborns in the delivery room?	<input type="checkbox"/> Not practiced <input type="checkbox"/> Only in LPT newborns <input type="checkbox"/> In MPT and LPT newborns that did not require resuscitation <input type="checkbox"/> Always
4. Do you currently practice skin-to-skin contact in MPT and LPT newborns in the delivery room?	<input type="checkbox"/> Not practiced <input type="checkbox"/> Only in LPT newborns <input type="checkbox"/> In MPT and LPT newborns that did not require resuscitation <input type="checkbox"/> Always
5. Before the pandemic, did you allow access to the delivery room to the partner of the pregnant woman in MPT and LPT births?	<input type="checkbox"/> Not allowed <input type="checkbox"/> Only in vaginal deliveries <input type="checkbox"/> In every case <input type="checkbox"/> Other
6. Do you currently allow access to the delivery room to the partner of the pregnant woman in MPT and LPT births?	<input type="checkbox"/> Not allowed <input type="checkbox"/> Only in vaginal deliveries <input type="checkbox"/> In every case <input type="checkbox"/> Other
7. Before the pandemic, did you practice rooming-in with the mother in MPT and LPT infants?	<input type="checkbox"/> From 32-33 weeks of gestational age <input type="checkbox"/> From 34 weeks of gestational age <input type="checkbox"/> From 35 weeks of gestational age <input type="checkbox"/> From 36 weeks of gestational age <input type="checkbox"/> Other
8. Do you currently you practice rooming-in with the mother in MPT and LPT infants?	<input type="checkbox"/> From 32-33 weeks of gestational age <input type="checkbox"/> From 34 weeks of gestational age <input type="checkbox"/> From 35 weeks of gestational age <input type="checkbox"/> From 36 weeks of gestational age <input type="checkbox"/> Other
9. Before the pandemic, if the mother required admission to the ICU, if the clinical condition allowed, was contact of MPT and LPT infants with the mother allowed?	<input type="checkbox"/> Not during ICU stay <input type="checkbox"/> Only if the mother was severely ill <input type="checkbox"/> Occasionally <input type="checkbox"/> Regularly
10. At present, if the mother required admission to the ICU, if the clinical condition allowed, was contact of MPT and LPT infants with the mother allowed?	<input type="checkbox"/> Not during ICU stay <input type="checkbox"/> Only if the mother is severely ill <input type="checkbox"/> Occasionally <input type="checkbox"/> Regularly
11. Before the pandemic, if admission to the neonatal unit was required and the clinical condition of the infant allowed it, did you initiate feeding at the breast in MPT and LPT newborns?	<input type="checkbox"/> In all <input type="checkbox"/> From 33 weeks of gestational age <input type="checkbox"/> From 34 weeks of gestational age <input type="checkbox"/> From 35 weeks of gestational age
12. At present, if admission to the neonatal unit is required and the clinical condition of the infant allows it, do you initiate feeding at the breast in MPT and LPT newborns?	<input type="checkbox"/> In all <input type="checkbox"/> From 33 weeks of gestational age <input type="checkbox"/> From 34 weeks of gestational age <input type="checkbox"/> From 35 weeks of gestational age
13. Before the pandemic, if they were not admitted to the neonatal unit, was a post-discharge home care programme available for MPT and LPT infants?	<input type="checkbox"/> Not available <input type="checkbox"/> Available for infants born before 34 weeks of gestation <input type="checkbox"/> Available for infants born before 35 weeks of gestation <input type="checkbox"/> Available for MPT and LPT infants
14. Currently, if they are not admitted to the neonatal unit, is a post-discharge home care programme available for MPT and LPT infants?	<input type="checkbox"/> Not available <input type="checkbox"/> Available for infants born before 34 weeks of gestation <input type="checkbox"/> Available for infants born before 35 weeks of gestation <input type="checkbox"/> Available for MPT and LPT infants

MPT, moderately preterm; LPT, late preterm.

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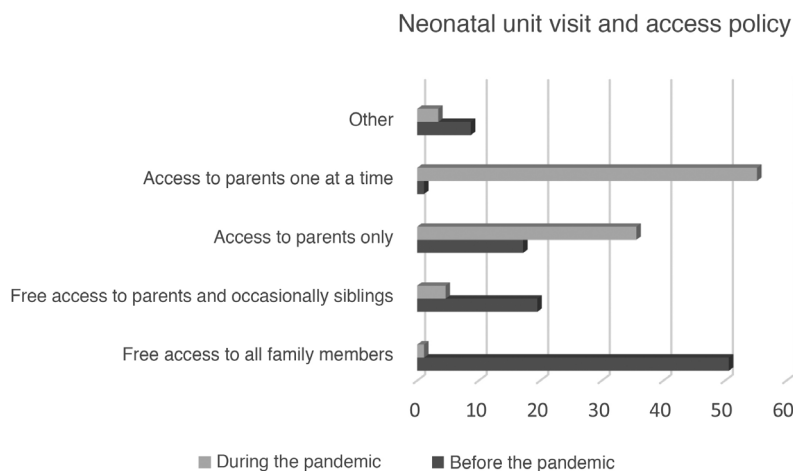


Figure 1 Neonatal unit visit and access policy before and after the start of the SARS-CoV-2 pandemic.

every case, 36.8% only in late preterm newborns and 6.9% not having introduced it yet. Some facilities restricted access to the delivery room to the partner of the mother, with the overall access (for all types of delivery) decreasing from 42.5% to 34.5% ($P = .27$), and the presence of the partner banned in every case in 5.7% of facilities, compared to only 1.1% before the pandemic ($P = .09$).

When it came to rooming-in, practices in MLPT newborns have not changed much, although the frequency of rooming-in has decreased from 50.6% to 47.1% ($P = .65$) in hospitals that practice rooming-in in newborns delivered at or after 35 weeks, while it remained stable in hospitals that practice it in every MLPT infant. If the mother required admission to the intensive care unit, 3.4% of hospitals allowed contact with the infant during the pandemic, compared to 11.5% before ($P = .04$). The percentage of hospitals that did not allow it increased by 6% during the pandemic to 65.5% ($P = .4$).

Initiation of feeding at the breast remained stable in MLPT infants; during the pandemic, 55.2% of hospitals practiced it all MLPT infants, 14.9% in those born at or after 33 weeks, 24.1% in those born at or after 34 weeks and 5.7% in infants born at or after 35 weeks.

When it came to post-discharge hospital-level care, 86.2% of facilities did not offer these services, 6% offered it to moderately preterm infants and 8% to MLPT infants.

Neonatal unit access policy changes during the pandemic resulted in a decrease in the units that allowed free access to all family members 50.6% to 1.1% ($P < .001$) and in the units that allowed free access to parents and occasionally siblings from 19.5% to 4.6% ($P = .002$) (Fig. 1). The hospitals that allowed 24-h access decreased from 93.1% to 82.7% ($P = .03$). Respondents did not report changes in the time of skin-to-skin contact (90.8%).

In conclusion, the perinatal care of MLPT infants includes practices associated with protective factors that lower neurodevelopmental risk and that promote parent-child bonding in most neonatal units in Spain. These care practices have been introduced due to the growing understanding and interest in the vulnerability of MLPT infants. We found changes in perinatal care practices in response to the SARS-CoV-2 pandemic, with restricted access to the delivery room and, in the case of hospital admission, decreased contact between infants and the family due to limited access to neonatal units, which could create additional emotional stress on parents and health care professionals; it is also likely that the decrease in the frequency of rooming-in, the lack of post-discharge home-based care programmes, the difficulty accessing primary care centres and the decrease in breastfeeding support groups had a negative impact on breastfeeding rates.

A greater effort in improving the specific care of MLPT infants according to the guidelines proposed by the SEN32-36 working group of the SENe for perinatal care in MLPT infants⁶ would contribute to making care practices more consistent throughout Spain.

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