EDITORIAL

Moderately and late preterms have problem recognizing faces after birth ☆,☆☆

Prematuros moderados e tardios apresentam problemas em reconhecer rostos após o nascimento

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Humans communicate more with our faces than any other creature.

The face is an extremely complex system regulating affective responses. According to Heise,[1] affective responses formed into feelings are the everyday basis for generating cultural events. Thus, the face can be considered as a key element in socialization.

The ability to recognize faces is important for the human social life and attachment behavior, not only as adults but also as a newborn child. This gift is somewhat present already at birth, when infants express a strong interest in face-like figures and can differentiate between facial and non-facial images.

Children born preterm may suffer from different neurodevelopmental problems and neuropsychological disorders than children born full term.[2,3] Prosopagnosia, the inability to recognize faces, also called ''face blindness'', can be a part of prematurity-related neurodevelopmental disorder spectrum, but also an isolated event. Preterm infants are more likely to suffer from prosopagnosia.[4] It can have a profound impact of a child's life, as it is a great social handicap, leading to difficulties in making friends and participating in social activities in school, as well as increased levels of anxiety. Thus, it is of great interest to investigate this area of social development, especially among preterm infants.

The article from Pereira et al.[5] is an original study addressing facial preferences during the first two days of life and comparing the reaction of preterm and term newborn infants to the exposure to natural and distorted faces. Although the predilection to orientate oneself to a natural face had been previously shown in term infants both shortly after birth[6] and around three month postnatally,[7] in this study Pereira et al.[5] focused on a group of late preterm (gestational age 33–36 weeks, mean 35 ± 1.11). An important aspect of the Pereira's study[5] is its focus on a particular group of subjects, such as the moderately and late preterms, who account for approximately 10% of all births.[8]

The ability to orientate to an image resembling the face of its own species is common among large variety of vertebrates, including humans, showing similar domain-relevant predispositions shortly after birth.[9]

The relevance and originality of the study presented by Pereira et al. is mainly related to the fact that one group was composed by preterm newborns. The study showed that the ability to distinguish a natural face from an unnatural face is significantly diminished in preterm infants when compared with term infants during the first 48 h.

The authors discussed possible reasons for these findings. The CONSPEC and CONLERN process theories for face recognition were briefly reviewed.[10] An alteration of the CONSPEC, possibly related to a shorter period for haptic exploration by the baby that in turn may influence brain maturation during the last trimester of gestation, may be a possible explanation.[11,12]

Other possible explanations may be found in a delayed or eventually impaired development of crucial areas that are responsible for the processing of the information coming from the visual areas in the occipital cortex. These areas include, for example, the gray matter involving the left fusiform, amygdala, and temporal cortex.[13] These regions are touched by the so-called ventral stream, which is thought to be responsible for object, face, and scene recognition.[14]

The study presented by Pereira et al.[5] adds new insights to the understanding of prematurity-related developmental disorders, which include prosopagnosia.

Conflicts of interest

The author declares no conflicts of interest.

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