Archives of Cardiovascular Disease (2019) 112, 363—364

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LETTER TO THE EDITOR

Letter in response to the article entitled ''Prognosis of severe congenital heart diseases: Do we overestimate the impact of prenatal diagnosis?'' by Vincenti et al.

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Keywords Prenatal diagnosis; Congenital heart disease; Care system; Mortality; Ultrasonography
Mots clés Diagnostic prénatal ; Maladie cardiaque congénitale ; Système de soins ; Mortalité ; Échographie

To the Editor,

We read with great interest the article by Vincenti et al. that was published recently in Archives of Cardiovascular Diseases [1]. In this single-centre retrospective study, the authors aimed to evaluate the impact of prenatal diagnosis (PND) of congenital heart disease (CHD). For this purpose, they analysed 224 live births with severe CHD, comparing a group diagnosed prenatally ($n = 102$) with a group diagnosed postnatally ($n = 122$). Because no difference was observed between the two groups in terms of the 1-year mortality rate, the authors concluded that PND does not improve prognosis among the population of live births with severe CHD. However, Vincenti et al. appropriately highlighted the major limitation of their study: the extreme heterogeneity of cardiac malformations encountered, with a wide spectrum of clinical presentation. For example, neonates with aortic coarctation may have different evolutions depending on many factors (association with other CHDs, small weight for gestational age, severity of stenosis, etc.). Consequently, postnatal management can differ greatly (some will have early intervention whereas others may wait for several months). Furthermore, each CHD was weakly represented, and a case-control analysis was not feasible. As emphasized by the authors, multicentre studies are needed to overcome these pitfalls.

Notwithstanding these limitations, this study has the merit of highlighting several points. First, a rationalized PND care system allows an accurate diagnosis to be made (80%), and enables detection of the majority of severe CHDs (62%) [1]. PND also offers the possibility to investigate chromosomal disorders/syndromes, making parental information as complete as possible.

Second, mortality is probably not a relevant endpoint for the assessment of CHD perinatal management [2]. Indeed, in all centres nowadays, care of these newborns is provided by specially trained teams (even if units are not totally dedicated to this activity, which appeared to be the case in the study by Vincenti et al.). Variables assessing morbidity seem to be more appropriate; a recent study showed reduction of preoperative mechanical ventilation duration, inotropic support, renal dysfunction and acidosis in prenatally diagnosed complex CHDs [3]. We believe that CHD PND allows specific neonatal management to be planned. For instance, neonates with transposition of the great arteries may require a balloon atrial septostomy in the first hours of life. Balloon atrial septostomy performed ''out-of-hours'' is associated with a higher complication rate, illustrating the need for anticipated care [4]. Ideally, specific care should be delivered from birth in a dedicated cardiac intensive care unit rather than in a neonatal intensive care unit [2]. In our opinion, in-depth understanding of CHD haemodynamics is essential for this difficult management task [5].

Third, we need a tool to quickly detect neonates who are not diagnosed prenatally. In this context, systematic neonatal pulse oximetry screening, a non-invasive technique now widely recommended, seems to be very promising [6].

In conclusion, PND is an inseparable part of the CHD care system, the organization of which varies between centres. Estimating its impact separately appears challenging. In any case, we think it is always preferable to anticipate a difficult clinical situation rather than to be confronted with it unexpectedly.

Sources of funding

This study received financial support from the French Government as part of the ''Investments of the Future'' programme managed by the National Research Agency (Agence nationale de la recherche [ANR]): Grant reference ANR-10-IAHU-04.

DOI of original article:
https://doi.org/10.1016/j.acvd.2018.11.013.

Abbreviations: CHD, Congenital heart disease; PND, prenatal diagnosis.

Disclosure of interest

The authors declare that they have no competing interest.

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Received 7 March 2019;
accepted 11 March 2019
Available online 9 April 2019

https://doi.org/10.1016/j.acvd.2019.03.002