

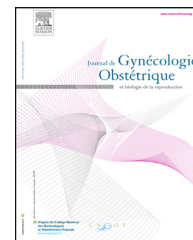


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ORIGINAL ARTICLE

Practice of pathological examinations in stillbirths: A 10-year retrospective study

Pratique des examens anatomo-pathologiques en cas de morts fœtales in utero : une étude rétrospective sur 10 ans

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KEYWORDS

Stillbirth;
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Fetal autopsy

Summary

Objectives. – To describe the practice of fetal and placental pathological examinations in a large series of spontaneous stillbirths over 10 years.

Materials and methods. – Inclusion of cases recorded by the Lower Normandy Regional Fetal-Infant Mortality Observatory (*observatoire régional de mortalité fœto-infantile*) from January 1, 2005 to December 31, 2014. The possible cause of death was coded in accordance with the ReCoDe classification system.

Results. – Seven hundred and forty-four cases were recorded. The placental examinations were conducted in 93.7% of cases (CI_{95%}[91.7–95.3]), increasing over the study period, and an autopsy was proposed in 87.2% of cases (CI_{95%}[84.8–89.6]). Autopsy was conducted less frequently during the most recent period, with parental refusal increasing over time. In multivariate analysis, no factor was associated with a higher frequency of placental examinations, while autopsy was proposed more often under certain circumstances: less than 4 pregnancies ($P < 10^{-2}$), birth weight from 1000 to 1500 grams ($P = 0.05$), singleton ($P < 10^{-2}$), clinical context not suggesting a cause ($P < 10^{-3}$), type 1 or 2 maternity ward ($P < 10^{-2}$), antepartum death ($P < 10^{-3}$).

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MOTS CLÉS

MFIU ;
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Examen anatomo-
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placenta ;
Autopsie fœtale

Conclusion. — Placental analysis was almost systematically realized, as suggested by international guidelines. Fetal autopsy was often performed, however only in some specific circumstances. New practice guidance to realize customized fetal autopsies appear to be necessary.

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Résumé

But. — Décrire la pratique des examens anatomo-pathologiques fœto-placentaires dans une large série de mort fœtale in utero (MFIU) spontanées sur 10 ans.

Matériels et méthodes. — Inclusion des cas recensés par l'observatoire régional de mortalité fœto-infantile de Basse-Normandie du 01/01/2005 au 31/12/2014. La cause possible du décès était codée selon le système ReCoDe.

Résultats. — Sept cent quarante-quatre cas étaient recensés. Les examens placentaires étaient réalisés dans 93,7 % des cas (IC₉₅ % [91,7–95,3]), en augmentation pendant la période d'étude, et l'autopsie proposée dans 87,2 % (IC₉₅ % [84,8–89,6]). Elle était moins souvent réalisée pendant la période la plus récente, et les refus parentaux augmentaient avec le temps. En analyse multivariée, aucun facteur n'était associé avec une réalisation plus fréquente de l'examen placentaire, alors que l'autopsie était plus souvent proposée dans certaines circonstances : moins de 4 grossesses ($p < 0,01$), poids de naissance de 1000 à 1500 grammes ($p = 0,05$), singleton ($p < 0,01$), contexte clinique non évocateur d'une cause ($p < 0,001$), maternité de type 1 ou 2 ($p < 0,01$), décès antepartum ($p < 0,001$).

Conclusion. — L'analyse du placenta était quasi-systématique, en lien avec les recommandations internationales. L'autopsie était fréquemment réalisée, mais réservée à certaines circonstances. De nouvelles recommandations pour un usage ciblé des autopsies nous paraissent nécessaires.

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Introduction

According to the World Health Organization (WHO) definition, stillbirth designates death occurring after the viability threshold of 22 weeks' pregnancy and/or when the birth weight is greater than 500 grams [1]. The associated indicator is the stillbirth rate, which is the number of stillbirths divided by the total number of births. In France, the stillbirth rate was 9.2% in 2010 [2], i.e. the highest in Europe.

While diagnosis of stillbirth is easy to confirm using ultrasound, its etiological diagnosis proves more difficult. Although there are numerous stillbirth etiologies with a predominance of causes related to acute (retroplacental hematoma) or chronic (preeclampsia, intrauterine growth restriction) placental abnormalities, the causes related to fetal abnormalities are more rare. A recent study found 65.2% of placental causes and only 4.8% of fetal causes, while the unexplained stillbirths represented 23.2% of cases [3]. The proportion of unexplained stillbirths may even reach up to 60% depending on the series [4–7]). It is nevertheless essential to identify the cause of fetal death so that the parents can mourn the loss of their child and to take preventive actions for future pregnancies.

Since there are currently no professional guidelines, a complete non-specific investigation is generally conducted to investigate all known stillbirth causes. Amongst these examinations, pathological analysis of fetal and placental tissues seems to play a major role in the diagnosis [3,8]). This examination is expensive, however, and must be carried

out by skilled professionals in order to guarantee reliable results. A stillbirth is a devastating event for unprepared and mourning parents, who may refuse to grant permission to perform a fetopathological examination, even though this type of investigation often yields valuable information.

The main objective of this observational study was to describe the practices of placental and fetal pathological examinations in the event of spontaneous stillbirth in a large series of cases over a 10-year period. The other objectives were to describe the circumstances under which these examinations were conducted more frequently and to describe the main causes of stillbirth.

Methods

Study

Since January 1, 2005, the Lower Normandy regional fetal-infant mortality observatory (ORMI) has recorded prospectively the cases of stillbirth and postnatal deaths in the Lower Normandy region of France. We included in this study the cases of spontaneous stillbirths between January 1, 2005 and December 31, 2014 in our region, occurring at over 22 weeks of amenorrhoea (WA) and/or when the fetal weight exceeded 500 grams. Perpartum deaths were included. Medical terminations of pregnancy were excluded, irrespective of the number of WA.

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