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Strategies for the prevention of neonatal herpes: just a matter of opinion?

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Abstract. Neonatal herpes is a devastating disease with, in most countries, a low incidence. Strategies for prevention differ widely and are usually based on 'expert opinion'. Caesarean delivery in case of a herpes recurrence during delivery and suppressive aciclovir during the last weeks of pregnancy probably only have a modest effect on reduction of transmission. Type-specific serology will most likely not become available on a large scale. Therefore, counseling on safe sex practices may be important. Establishing incidence rates of neonatal herpes on a regular basis should be pursued, especially in low incidence areas.

Keywords: Neonatal herpes; Prevention; Caesarean section; Type-specific serology; Aciclovir

1. Introduction

We seem to have come to a point, where strategies with regard to the prevention of neonatal herpes are increasingly showing divergence. All those working in the fields of obstetrics and genital herpes agree on the fact that neonatal herpes is a devastating disease, with a high morbidity and mortality that should be prevented wherever possible. However, there is great variability concerning measures considered necessary to reach this goal. In the Netherlands, since a consensus meeting in 1987, it was advised to no longer perform caesarean sections in women with a history of genital herpes or with recurrent herpes at delivery [1]. This advice apparently was well taken: the number of caesarean sections performed for 'genital herpes' decreased sharply, from 60 per year in the period 1981–1985, to 2 per year in the period 1992–1998. This change of obstetric policy did not lead to

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a rising number of neonatal herpes cases. The incidence has remained stable in the past two decades, with a rate of approximately 2–3 per 100,000 live births [2]. Given the serious nature of neonatal herpes, continued efforts to improve its prevention are warranted. However, at this point in time opinions on how to best prevent neonatal herpes (what to do and not to do?) seem to differ widely. This almost certainly has to do with, geographically determined, differences in disease burden [3].

In the present paper a brief overview is presented of the different strategies for prevention of neonatal herpes, especially focusing on US, UK and Dutch guidelines.

2. Prevention strategies

In discussing the different possibilities for prevention, the caesarean section will be dealt with first. From a historical point of view, this was the first preventive measure actively promoted. Since data from the Aciclovir in Pregnancy Registry showed that aciclovir can be safely prescribed to pregnant women, aciclovir suppression is actively promoted, especially in the US, and preferably on the basis of a known HSV serostatus (HSV type-specific serology). These two avenues for prevention will also be highlighted. Last but not least, behavioural aspects of prevention will be discussed.

2.1. Caesarean section

Some 10 years ago a decision analysis model was created to evaluate the impact of caesarean section for women with herpes lesions at delivery. According to this model, surgical delivery for all women with a history of prior genital HSV and active HSV lesions at delivery would cost US $2.5 million per case of neonatal HSV averted, and would result in 1580 excess caesarean sections [4]. Cost saving and neonatal morbidity reduction was, however, demonstrated if a caesarean section was performed on women with suspected primary herpes, which can be explained by the approximately tenfold higher risk of vertical transmission from maternal primary HSV infection.

Even with strict adherence to the recommendation of the American College of Obstetricians and Gynecologists (ACOG), to perform caesarean delivery in pregnant women with active genital herpes during labour [5], this surgical procedure does not prevent all cases of neonatal HSV infection. Twenty to thirty percent of neonatal HSV infections occur in neonates delivered by caesarean section before membrane rupture [6].

There appears to be broad consensus with regard to performing caesarean sections in case of a (suspected) primary genital herpes within 6 weeks of the expected date of delivery. A high degree of asymptomatic shedding after a primary episode, a high viral load in case of multiple lesions during labour and a not yet completed immune response (i.e. lack of neutralizing antibodies) are all important in this respect.

However, with regard to the need for caesarean delivery in case of recurrent herpes at term, controversy still exists. The ACOG recommends ‘to perform caesarean delivery in women with active genital lesions or symptoms of vulvar pain or burning which may indicate an impending outbreak’. In the Dutch guidelines, which were recently revised, it is still advised not to perform a caesarean section in case of recurrent genital herpes at delivery [7]. At this moment, given the low and stable incidence of neonatal herpes in the Netherlands, there does not seem to be an urgent reason to return to the ‘caesarean section