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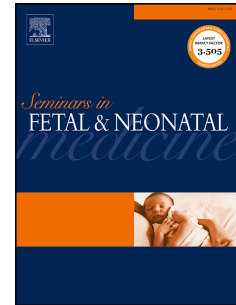
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Prophylactic and early targeted treatment of patent ductus arteriosus

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SUMMARY

Treatment of a haemodynamically significant patent ductus arteriosus (PDA) in the very preterm infant has been an accepted approach for several decades. However, the rationale for closure of PDA has recently been challenged due to reports of success with conservative approaches and the lack of evidence for longer-term benefits from treatment. In this article, we address an approach to assess treatment of those babies most likely to benefit.

Keywords:

Preterm

Patent ductus arteriosus

Early targeted treatment

Prophylactic treatment

Ibuprofen

Indomethacin

1. Introduction

An understanding of perinatal cardiovascular ductal anatomy and physiology is essential if subsequent interventions are to be logical rather than merely treating “numbers”, as still occurs in neonatal intensive care. The patent ductus arteriosus (PDA) seems to be a continuum of transitional physiology and pathophysiology affected primarily by gestational age and severity of surfactant-deficient lung disease. Several other perinatal factors may lead to persistence of the ductus arteriosus, then called PDA. As the initial closure of the ductus arteriosus is functional rather than structural, neonatal disease states such as infection and haemodynamic disturbances may cause a functionally closed ductus to reopen.

A PDA in term babies persisting after the first week of life is usually pathological and often associated with congenital heart disease. In these cases, the direction of ductal shunting

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