Umbilical cord blood

Apgar et al. (1958) reported that they clamped the cord within the first minute after birth, and that the 1-minute Apgar score represented the time of most severe depression [1]. At that same point in time, many obstetricians were already speaking out against the practice of clamping the umbilical cord so soon after birth.

Duckman et al. (1953) measured weight gain in infants held at different levels above and below the outlet of the birth canal, and they summarized the research of similar investigations carried out during the first half of the 20th century [2-7]. They compared the loss of blood to that of adult blood donors – if healthy a donor can safely give 750cc of blood, but the anemic or weakened adult could not. They asked, “Then why expect the average infant to do so when that is what immediate clamping of the cord constitutes?”

Duckman et al. further commented:

“It may be supposed that when Nature’s plan was evolved and women had their babies in an upright, squatting position, they were not expected to have a busy obstetrician or practitioner deliver the human infants in lithotomy position and a reasonable time was intended to elapse before the placenta was separated from the infant. It is true that many advances have been made in medicine in the past one hundred years but immediate clamping of the cord is certainly not one of them.” [2, p1222]

Gunther (1957) also measured weight gain following birth, also acknowledging the work of earlier investigators [8]. Gunther’s report in The Lancet was quickly responded to in a letter to the editor from Mahaffey and Rossdale (1957) describing respiratory problems they observed in newborn thoroughbred foals delivered with human interventions that included early clamping of the umbilical cord [9]. Mahaffey and Rossdale published a fuller report two years later [10]. Palmer and Rossdale (1975, 1976) published reports of neuropathology in foals delivered with human assistance, which was found similar to that of monkeys subjected to asphyxia at birth [11, 12].

Despite many subsequent research studies pointing out the dangers of preventing the normal postnatal transfer of blood from placenta to the newborn, use of the obstetric clamp continued with growing enthusiasm. Montgomery (1958) noted:

“It is possible that the uniting of gynecology with obstetrics has fostered a freer use of surgery on the assumption the ‘accouchemen naturelle’ is an old-fashioned business and nees ‘modernizing’ to keep in line with the general progress of medicine.” [13, p706]
References

2. Duckman S et al. (1953) The importance of gravity in delayed ligation of the umbilical cord.
5. Windle WF (1941) Round table discussion on anemias of infancy.