Perinatal lessons from the past

Dr John Burns (1774–1850) and neonatal jaundice

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John Burns, the son of a minister, qualified in medicine in Glasgow. Becoming a surgeon's clerk at the Royal Infirmary on its opening in 1792, he studied and lectured on anatomy and midwifery, and published his first work *The Anatomy of the Gravid Uterus* in 1799 when he was 25. The following year he was appointed surgeon to the Royal Infirmary and in 1815 succeeded to the Chair of Surgery in the University of Glasgow. He was a most popular teacher, his lectures often being attended by 200 students, and he acquired a large private practice. Of the several books he wrote, his main treatise was *The Principles of Midwifery* published in 1809.¹ This work rapidly became famous and was reprinted many times both in the United Kingdom and in America. Like most of the physician-accoucheurs of the 18th and 19th centuries, Burns was a paediatrician as well as an obstetrician and Book IV of his treatise had the title *Of the Management and Diseases of Children*. The text abounds with descriptions and insights that confirm him to have been a man of rare perception and originality. The extract on neonatal jaundice, reprinted below, is remarkable in that it distinguishes between the obstructive and non-obstructive varieties and draws attention to the danger of convulsions and death. Burns also hints at what would now be termed the enterohepatic circulation of bilirubin.

'The jaundice of infants is a disease attended with great danger, especially if it appears very soon after birth, and the stools evince a deficiency of bile; for we have then reason to apprehend some incurable state of the biliary apparatus. I conceive that there are two species of this disease, which are very opposite in their nature. In the first, there is an obstacle to the passage of the bile into the intestine, the child is costive, and the meconium is paler than usual, and after it is removed, the stools become light-coloured; the skin, very early after birth, becomes of a deep yellow colour, which extends to

Figure Professor John Burns of Glasgow, 1774–1850.

the eyes. The child sucks very little, has occasionally a difficulty in swallowing, is languid, becomes emaciated, moans much, is troubled with flatulence, sometimes with cough and phlegm in the trachea, or vomiting, convulsions, colic, and fever, occasionally supervene. In some cases, the liver is felt enlarged, and the hypochondrium is tumid. The water is very high-coloured. This disease often proves fatal in a week, but it has been known to continue in variable degrees of violence for a considerable time, and at

last to disappear, though such children continue long delicate. With regard to the cause of this disease, we find, that sometimes it consists of obstruction of the hepatic duct or ductus communis, either by thickening of the coats, or pressure, in consequence of enlargement of some part in the vicinity of the duct; or it may consist in imperforation of the duct. Sometimes it proceeds from temporary obstruction in the duct, owing to viscosity of the bile. Now some of these cases are irremovable, others are not; but as we cannot *a priori* say what the cause may be, in any particular instance, we must use the means of cure in every case. The most likely remedies for removing this disease, are gentle emetics, given very early and followed by the exhibition of half a grain of calomel, morning and evening, till the bowels are acted on; or we may give this medicine even three times a-day, in some cases; but we must be cautious not to induce much purging, or push the mercury far, lest we bring on fits.

The second species differs from the first, in the stools being dark-coloured or green, showing that there is no obstruction, or at least no permanent

obstruction, to the passage of the bile. Like the first species it appears soon after birth, and is accompanied with great oppression, moaning, colic, and convulsive affections. It is attended with much danger, and frequently carries off the infant in a few days. The early use of calomel would appear to be the most proper practice, and the strength must be supported in all those cases by the breast milk, given with the spoon, if the child won't suck, and small doses of white wine whey.

Jaundice, appearing at a considerable period after birth, does not require a separate consideration here, nor is it a very common occurrence.'

Professor Burns was deeply involved with parliamentary and other business connected with the university. In 1850 he was drowned when the steamer *Orion*, on which he was returning to Glasgow, was wrecked near Portpatrick. He was 76.

Reference

- ¹ Burns J. *The principles of midwifery; including the diseases of women and children*. London: Longman, 1817:602.