

CHAPTER 8

Other *Direct* deaths

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Genital tract trauma: key recommendation

A consultant facing the prospect of carrying out hysterectomy for genital tract trauma should have support available from another consultant.

Bowel perforation: key recommendations

Women who have undergone caesarean section must be looked after by midwives appropriately trained in postoperative care.

Medical staff must check a woman's progress after caesarean section, as they would after any surgical procedure. This is particularly important during holiday periods and at times of staff changeover.

Fifty years ago...

The brevity of this chapter, with its single death from genital tract trauma, is a powerful illustration of how things have changed over 50 years. In 1952–54, the Enquiry's first Report listed 23 deaths after "delivery complicated by disproportion or malposition of the fetus", 63 deaths after "delivery complicated by prolonged labour of other origin", 55 after "delivery with other trauma", and 66 after "delivery with other complications of childbirth". These deaths were not discussed in detail.

The 1955–57 Report included a chapter on "uterine rupture". It discussed 33 deaths, five of which occurred after previous caesarean section and two after manual removal of the placenta. Most of the 33 cases were associated with obstructed labour or intrauterine manipulations. The eight cases of spontaneous rupture all occurred in multiparous women: "two were having their eleventh babies, and one each their tenth, ninth, eighth, sixth, fifth and fourth babies. Both the women having their eleventh and tenth babies had been allowed to make arrangements for their confinement to take place at home, surely a most unwise procedure".

A chapter on uterine rupture was included for 30 years, from 1955–57 to 1982–84. The early ones emphasised the risks of older, highly parous women being confined at home or in a maternity home. The 1964–66 Report, which included 30 cases, commented that "ruptured uterus due to obstructed labour or traumatic delivery ought not to occur under proper supervision, and yet it is far more common than rupture of a uterine scar". By this time, the Report was also commenting on "the importance of oxytocic drugs as a factor in causing rupture".

The 1967–69 Report included 19 deaths (nine traumatic, eight spontaneous and two scar ruptures) and commented that the symptoms may be masked by epidural block. The next Report criticised “failure to examine the uterine cavity or delay in performing laparotomy when uterine rupture is suspected because of bleeding or shock”. This lesson is still applicable today.

In 1973–75 the total fell to 11 deaths. High parity was no longer a factor but concerns were still being expressed over the use of oxytocic drugs. In 1979–81, with only four deaths, delays in performing caesarean section were criticised. The total continued at a low level until 1991–93, when a chapter on “genital tract trauma” appeared for the last time. The later Reports commented that some deaths were due to junior doctors having to perform procedures without adequate supervision.

A chapter “Other *Direct* Deaths” has been included since 1985–87, with no major trends developing over these 20 years. Deaths from liver disease have occurred at the rate of one or two a year. Bowel injury after caesarean section has been reported from time to time and it remains to be seen whether or not the increase in this complication in the present Report is a worrying new trend.

Summary of findings for 2000–02

Eight deaths are counted in this chapter, compared with seven in 1997–99 and in 1994–96 (Figure 8.1). The causes are the same as in the last Report. Acute fatty liver caused two deaths in late pregnancy and one after delivery. Genital tract trauma caused one death. The management of trauma requires urgent and skilled intervention and hospitals need to have a surgical team readily available. Bowel perforation caused four *Direct* deaths and one *Late* death, compared with one in 1997–99 and none in 1994–96. All five deaths from bowel perforation occurred after caesarean section and all involved

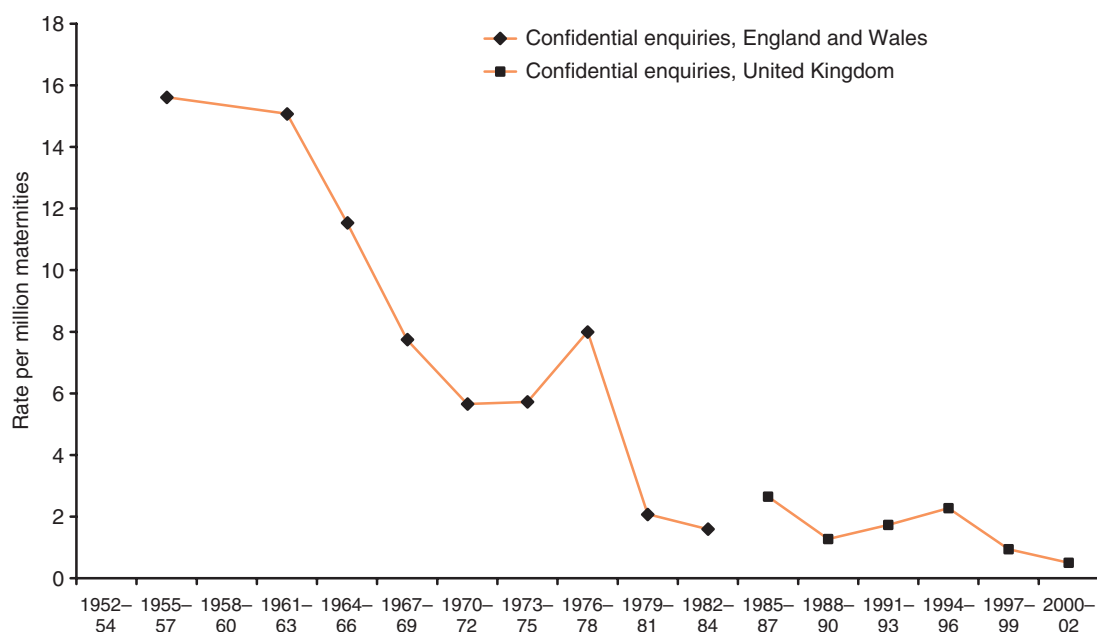


Figure 8.1 Maternal mortality from uterine rupture or genital tract trauma; England and Wales 1955–84, United Kingdom 1985–2002

substandard care. Signs of peritonism are difficult to detect in the puerperium and there is inadequate awareness that ileus after caesarean section may be fatal. Lessons about such rare complications can be learned only by aggregating experience in Reports like this.

Acute fatty liver

There were three deaths from this cause, compared with four in 1997–99 and two in 1994–96. One of the deaths occurred about 3 weeks after delivery but no other details are available. The other two occurred in late pregnancy and in each of these cases the woman presented with epigastric pain followed by deteriorating liver function tests. In both cases, delivery was by caesarean section and the woman was admitted to an intensive care unit. In one case, liver rupture occurred and the woman received a portocaval shunt before dying of fulminant liver failure.

Acute fatty liver is an unpredictable complication with a high mortality and is very difficult to prevent or treat. In one of the cases in this triennium, the anaesthetic care was considered substandard because, although a specialist registrar provided good care, a consultant anaesthetist did not attend the caesarean section or help in the early postoperative assessment. It is unlikely, however, that this would have affected the outcome.

Genital tract trauma

Genital tract trauma accounted for one death, compared with two in 1997–99 and five in 1994–96. In this case, a woman who had an induction of labour with prostaglandins had a precipitate labour and a forceps delivery. She collapsed within a few hours of delivery. At laparotomy, a uterine tear was found and hysterectomy was carried out. She died after several days in the intensive care unit.

Such cases require urgent, skilled intervention and hospitals need to have this readily available. Cases are now rare and a UK consultant obstetrician is likely to have limited experience of dealing with life-threatening haemorrhage from genital tract trauma. The consultant should not hesitate to call a colleague.

Bowel perforation

Four *Direct* deaths and one *Late* death were due to bowel perforation. This compares to one death in 1997–99 and none in 1994–96. All five deaths followed caesarean section. The rising caesarean section rate may be a factor in the increasing number of deaths from this cause. The other feature common to all cases was delay in making the diagnosis and, in most cases, there was substandard postoperative care.

In all four *Direct* deaths, abdominal distension occurred a few days after caesarean section. Three of these deaths were due to Ogilvie's syndrome and the other was due to perforation of the sigmoid colon. Ogilvie's syndrome involves bowel pseudo-obstruction with distension leading ultimately to bowel perforation¹ and is not associated with any bowel perforation occurring at the time of operation. In one of the three cases in this triennium, death occurred without bowel perforation, probably due to biochemically induced arrhythmia.

In one case, the woman had been discharged home and was not readmitted to hospital despite marked intestinal dilatation, which must have been evident before death but

which was noted only at autopsy. Nowadays, midwives may have no general nursing training and, with a caesarean section rate of around 20%, attention must be paid to education of midwives in postoperative management.

The other three *Direct* deaths had strikingly similar case histories. When abdominal distension occurred, the women were reviewed by junior doctors from the obstetric and general surgical teams and the initial diagnosis was paralytic ileus. There was delay in diagnosing bowel perforation and further delay in carrying out laparotomy and bowel resection. In one case, the woman initially refused laparotomy. In each case death occurred weeks later in the intensive care unit.

Recurrent features of substandard care were lack of continuity during postoperative care and lack of consultant input. For example, a woman who initially refused laparotomy should have had the chance to discuss her management with a consultant.

The one *Late* death is counted in Chapter 15. In this case, a woman had suffered dehiscence of a low transverse incision after caesarean section. It was re-sutured and healed well. Some months later she developed diarrhoea, vomiting and abdominal pain, which continued for several days until she was admitted to hospital, where she suffered cardiac arrest. Autopsy revealed small bowel volvulus, with bowel adherent to the abdominal scar.

This is a very rare complication and it is not surprising that the GP failed to diagnose it. Trainees are now taught not to suture the parietal peritoneum at caesarean section: it is not yet known whether there has been a change in the incidence of wound dehiscence, which is very unusual in a low transverse incision.

Other *Direct* deaths: learning points

- The management of genital tract trauma requires urgent and skilled intervention. A surgical team needs to be readily available. More than one consultant may be needed.
- Ileus after caesarean section may be fatal. Bowel perforation may not be easy to recognise. Signs of peritonism are difficult to detect in the puerperium and young women can tolerate peritonitis until it is well advanced.

References

1. Ogilvie H. Large intestinal colic due to sympathetic deprivation. A new clinical syndrome. *BMJ* 1948; ii: 671–3.