TABLE X.—TOTAL LIVERPOOL SERIES. INCIDENCE OF PUERPERAL THROMBOEMBOLISM IN RELATION TO AGE AND PARITY REGARDLESS OF LACTATION AND MODE OF DELIVERY PER 1,000 DELIVERIES IN EACH CATEGORY

Age in years	Parity			Total
	1	2 and 3	4 and more	
<25	1.1	0.7	1.1	1.0
25–34	1.8 } 2.5	1.6 } 2.0	1.4 } 2.6	1.6 } 2.3
35+	7.3 }	4.0 }	5.3 }	5.1 }
Total	1.6	1.5	2.5	1.7
	1.6			

thromboembolism. Indeed, for women who have spontaneous delivery, inhibition of lactation by administering a moderate dose of ethinyloestradiol does not increase the incidence of thromboembolism if they are less than 25 years of age, and only doubles it if they are older. Our evidence suggests that any dramatic increase in the occurrence of thromboembolic disorders is related to the severity of any operative intervention and also to age. It may well be that major surgery and advancing years often underlie both the decision to inhibit lactation and the associated increased risk of thromboembolism. The same may well be true of obesity, but the weights of the patients in these series were not studied.

Apart from the fact that the findings reported here reveal an interplay of several probably more important factors, there are some general considerations which raise serious doubts about any direct effect of inhibition of lactation, or of administering oestrogens for the purpose, in determining puerperal thromboembolism. Though the *Reports on Confidential Enquiries into Maternal Deaths in England and Wales* (Ministry of Health, 1957, 1960, 1963, 1966) show that venous thrombosis and embolism constitute a leading cause of death, the actual number of deaths per annum from this cause did not increase during the period 1952–63 despite a rising number of births. Indeed, the number of fatal puerperal cases showed a fall over the years, the total figure being kept constant by a gradual rise in the number of fatal episodes occurring during pregnancy. The national decrease in the number of fatal puerperal cases occurred despite a general trend away from breast-feeding.[2]

Between 1951 and 1957, and in England and Wales, the proportion of women who attempted breast-feeding fell from 85% to approximately 78%, varying a little as between domiciliary and hospital deliveries and from one part of the country to another (Ministry of Health, 1957a; Dykes, 1957; Burns, 1957). Since then the percentage has fallen but the extent is unknown. Reports from the Simpson Memorial Pavilion of Edinburgh Royal Infirmary (1965) indicate that the incidence of breast-feeding among mothers at the time of discharge from that hospital fell from 70% in 1955 to 26% in 1965. At the Royal Maternity Hospital, Glasgow, during the years 1962 and 1963 the percentage of breast-feeders varied from 6.2% for "grand" multiparae subjected to caesarean section to 42% for primiparae having a normal delivery (Garrey, Paterson, and Evans, 1964). Throughout Scotland as a whole, and in 1965, only 31% of mothers ever attempted breast-feeding (Arneil, 1967).

Whether Scottish practice is a measure of the trend in England and Wales as a whole is uncertain. But lactation habits certainly changed among the women delivered in the two hospitals on which this study is based. Up to 1959 and 1960 the incidence of lactation on the seventh day of the puerperium among the control women was 80–90%. After 1960 the incidence fell progressively to approximately 60%. Yet the annual incidence of thromboembolism remained static throughout the whole period. The number of cases did not significantly rise despite the fact that ultimately 40% of all puerperal women received ethinyloestradiol and did not breast-feed. So far as can be ascertained

[2] Comments in the reports suggest that during the years under review there had been no significant increase in the use of anticoagulants to explain fewer puerperal deaths.