The danger of producing an amniotic-fluid embolus as a result of the greatly increased uterine contractions has been proved. Barno and Freeman (1959) discussed 15 cases of maternal death due to amniotic-fluid embolus. In seven of these pitocin had been administered, twice by intravenous drip and five times by intramuscular injection.

The use of intramuscular pitocin undiluted, in single or divided doses, for the induction or stimulation of labour should cease. If pitocin has to be used it should be given as an intravenous or intramuscular drip. Owing to the time and attention required by these drips it would seem unlikely that there is any place for them in domiciliary obstetrics. Whenever they are contemplated, it is worth while bearing in mind some of the following contraindications described by Greenhill (1945). Pitocin should never be administered where there is any possibility of obstructed labour, in malpresentation, or after a previous caesarean section. If it is given in labour it should only be for a true hypotonic inertia. It should be avoided in severe toxæmias and should never be used in a patient who has had more than four deliveries. Under no circumstances should a patient be left alone after the administration of pitocin. If contractions are prolonged or too frequent, or there is a change in the foetal heart rate, the administration of pitocin should be stopped, and it may be necessary to give a general anaesthetic in order to diminish the strength of the contractions.

The most recent condemnation of intramuscular pitocin took place at the British Congress of Obstetrics and Gynaecology in July, 1959. To quote Wrigley (1959): "This Congress would render no disservice to the community if it declared its complete condemnation of the practice of administration of pitocin by the method of repeated intramuscular injections."

Summary

A case is described of uterine rupture followed by maternal death. Rupture occurred shortly after a medical induction which included two intramuscular injections each of 2.5 units of "pitocin" (oxytocin). The dangers of such treatment are discussed and a plea is made for the abolition of single or spaced injections of pitocin for the induction of labour and for the stimulation of hypotonic inertia.

I am indebted to Mr. Gwilym Evans for permission to publish this case.

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Mr. JOHN DODD, as honorary secretary of the British Hospitals Contributory Schemes Association, has accepted invitations from a number of medical, social service, and public administration graduate schools in American universities, including Columbia, New York, and Cornell, to lecture on the survival of voluntary effort in Great Britain under State medicine. Mr. Dodd will take part in discussions on medical care with faculty members and students, and will address some leading Blue Cross organizations in the eastern States.

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IN VITRO INVESTIGATIONS OF TWO TYPES OF LUPUS ERYTHEMATOSUS PLASMA FACTOR

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Our previous experiments on dog and man confirmed the probable existence of two types of lupus erythematosus plasma factor, one transferable and one non-transferable (Bencze *et al.*, 1959). As proved by further studies, it is not the amount transfused which accounts for the incidence of the two types of lupus erythematosus plasma factor (Bencze *et al.*, 1960).

This paper reports on *in vitro* investigations with the lupus erythematosus (L.E.) cell. In comparative tests the patient's and a normal subject's leucocytes were added to plasma obtained from several patients with systemic lupus erythematosus (S.L.E.) in order to find out whether any difference could be detected *in vitro* between the two types of plasma factor.

Methods

S.L.E. Plasma + Patient's leucocytes.—Blood was taken under sterile conditions (with heparin added) from S.L.E. patients; the examination for L.E. cells was made by Zinkham and Conley's (1956) rotation method. This was used as the control test.

S.L.E. Plasma + a Normal Subject's Leucocytes.—A known amount of plasma obtained from S.L.E. patients was added to a normal subject's leucocytes (blood was taken from normal individuals under sterile conditions and heparin added, the layer of white blood cells being pipetted off). Examination for L.E. cells was by the rotation method of Zinkham and Conley.

S.L.E. Plasma Transfer Experiment.—By methods described in earlier publications, plasma from cases of S.L.E. was transfused into patients with neoplastic diseases and into dogs (Bencze *et al.*, 1958; Bencze and Ludányi, 1960).

Results

Examination for L.E. cells were made on several occasions and at different times with plasma obtained from 16 S.L.E. patients, adding to the plasma the patient's own or a normal subject's leucocytes. Many L.E. cells were observed in all 16 patients when their own leucocytes were used. The results of our *in vitro* L.E.-cell investigations are listed in the Table, and the results of *in vitro* and *in vivo* experiments are compared.

Discussion

Eight samples of S.L.E. plasma (non-transferable type) were treated *in vitro* with leucocytes of normal subjects. No L.E. cells were found when the plasma of three S.L.E. patients was treated with leucocytes of normal subjects; many L.E. cells, however, could be found in every case when the patient's own leucocytes were added to the plasma. With the other five samples of

Comparative L.E. Cell Investigations with Patient's own and Normal Subject's Leucocytes

Case No.	Initials	Lupus Erythematosus Cell <i>In vitro</i>						<i>In vivo</i> Plasma Transfer Experiment
		Patient's Own Leucocyte	Normal Subject's Leucocytes S.L.E. Plasma in ml.					
			0.25	0.5	1.0	2.0	3.0	
1	T.J.	+++++	0	0	0	0	0	N.T. (1)
2	K.E.	+++++	+++++	+++++	+++++	+++++	+++++	T. (2)
3	V.M.	+++++	0	0	±	±	±	N.T. (4)
4	M.K.	++	0	0	0	0	0	(0)
5	P.J.	+++++	0	0	0	±	±	N.T. (4)
6	K.L.	+++++	+++++	+++++	+++++	+++++	+++++	(0)
7	O.P.	+++++	+++++	+++++	+++++	+++++	+++++	T. (20)
8	B.I.	+++++	0	0	±	±	±	N.T. (8)
9	T.I.	+++++	+++++	+++++	+++++	+++++	+++++	T. (9)
10	K.K.	+++++	0	0	0	0	±	N.T. (3)
11	S.M.	+++	0	0	0	0	0	N.T. (2)
12	P.J.	+++++	0	0	0	0	0	(0)
13	K.F.	+++++	+++++	+++++	+++++	+++++	+++++	T. (4)
14	H.K.	+++	0	0	0	0	0	N.T. (2)
15	P.J.	+++++	+++++	+++++	+++++	+++++	+++++	T. (4)
16	P.F.	+++++	0	0	±	±	±	N.T. (4)

± = Examinations showed in some cases presence in others absence of L.E.-cell. T. = Transferable. N.T. = Not transferable. Figures in parentheses indicate number of experiments.

S.L.E. plasma of non-transferable type considerably fewer L.E. cells were seen when a normal subject's cells were added than when the patient's own leucocytes were added, even when more plasma (2 and 3 ml. respectively) was used. At the same time, we failed to produce L.E. cells with smaller amounts (0.25 and 0.5 ml.) of S.L.E. plasma. *In vitro* investigations were carried out at different times on several occasions with plasma of these five S.L.E. patients, but we failed to find L.E. cells in some cases when a normal subject's leucocytes were added—even when as much as 3 ml. of plasma was used.

The L.E.-cell phenomenon could not be produced with the plasma of five S.L.E. patients out of a total of 16 when a normal subject's leucocytes were added (no transfer experiment was completed with the plasma of two S.L.E. patients). Significantly fewer L.E. cells could be detected when the plasma of a further five S.L.E. patients was treated with a normal subject's cells than when the patient's own leucocytes were added. But when the plasma of five S.L.E. patients which proved to be transferable was treated *in vitro* with leucocytes from normal subjects (on several occasions and at different times) the L.E.-cell phenomenon was always observed—as it was in Case 6, in which no plasma transfer experiment has been completed. The number of L.E. cells produced (compared with the total number of leucocytes) was the same whether the patient's own or a normal subject's leucocytes were added *in vitro* to samples of plasma from these six S.L.E. patients. The L.E.-cell phenomenon came into being in all six cases when only as little as 0.25 ml. and 0.5 ml. of plasma was used.

Ten of the 16 S.L.E. patients were systematically observed by us for a period of years. L.E.-cell examinations were frequently made on different occasions—six times at least. In six of these 10 patients (Cases 1, 4, 5, 10, 14, and 16) no L.E. cells could be found by Zinkham and Conley's method on several occasions, even when the patient's own leucocytes were used. Plasma transfer experiments were completed on five of six S.L.E. patients; all five proved to be non-transferable. In the other four S.L.E. patients L.E. cells could always be found (Cases 6, 7, 9, and 13); in three of these four patients *in vivo* plasma transfer experiments were completed, and all three proved to be transferable. [We wish to make it clear that comparative *in vitro* investigations were made only in those

cases in which the L.E.-cell phenomenon could be produced with the patient's own leucocytes.]

Summary

Comparative *in vitro* investigations using the leucocytes of S.L.E. patients and of normal subjects provided evidence that a difference existed between the transferable and non-transferable type of L.E. plasma factor. In the latter type L.E. cells could be produced *in vitro* only when the patient's own leucocytes were used; they could not be produced—or could be produced only in very small numbers—with the leucocytes of normal subjects.

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Medical Memoranda

Case of Listeria Meningitis

Neonatal meningitis due to *Listeria monocytogenes* is rare enough to raise difficulties in diagnosis and treatment. Human listerial infection may be more common than generally supposed, and papers reporting cases from Great Britain support this view (Edmunds, Nicholson, and Douglas, 1957; Mair, Mair, Stirk, and Reid, 1957; Barrow and Pugh, 1958; Turner, Dawson, and Pryce-Jones, 1958).

CASE REPORT

The patient, a white male infant, was born by spontaneous vertex delivery after an uneventful full-term gestation. Birth weight was 6 lb. 14 oz. (3,120 g.). Progress was normal for the first 10 days; he then had loose bowel motions and became febrile. He was admitted to the 7510th U.S.A.F. Hospital, Wimpole Park, two days later.

On the day of admission he appeared lethargic and showed opisthotonos. The temperature was 100.4° F. (38° C.); there were no other physical signs. Lumbar puncture and blood culture were performed. The cerebrospinal fluid was turbid and contained 2,400 leucocytes per c.mm. (90% polymorphonuclear), the sugar was 26 mg. and protein 440 mg./100 ml. The Gram film showed a moderate number of