



## Wellcome Film Project

### **The Management of Twins in Pregnancy and Labour**

**Presented by The Wellcome Foundation Film Unit, 1958.**

**Made in collaboration with Professor WCW Nixon and WG MacGregor, FRCS, MRCOG and the staff of the Obstetric Hospital, University College Hospital, London.**

**Colour**

**Duration: 00:19:10:00**

**00:00:00:00**

**<Opening credits over shot of woman pushing a pram>**

**<Unnamed narrator over shot of woman pushing a pram, then shown leaning down to fuss over twin babies in the pram>**

The incidence of twins in Great Britain is about 1 in 80 pregnancies. Twinning in the human female is an abnormality which is liable to be associated with abnormality and for this reason it is imperative that the mother is booked for confinement in hospital where facilities are immediately available to deal with any difficulties associated with delivery.

Twins may result from the simultaneous fertilisation of two ova and are then referred to as *<shots of twin babies>* dizygotic twins. Alternatively a single fertilised ovum may divide into two and thus produce monozygotic twins in which case the twins are identical and are, of course, always of the same sex.

**<Narrator over animated illustration of twins in the womb>**

Monozygotic foetuses have separate amniotic sacks but they frequently share a common chorion. In a number of monozygotic twins, however, division proceeds to

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the bichorionic stage when two amnions and two chorions may be demonstrated, and in a number of cases this may lead to their being mistaken for dizygotic twins like-sex. *<shot of woman holding twin babies>* These are dizygotic twins, they are not identical and in this case are of different sexes. In fact these twins belong to different blood groups. One child needed exchange blood transfusion as a result of rhesus incompatibility. The other child was unaffected. *<back to animated illustration>* Dizygotic twins are a result of double ovulation, examination will usually reveal two amnions, two chorions and two placentae. *<shot of anatomical illustration of dizygotic twins in the womb>* It is interesting to note that this representation of dizygotic twins appears in a treatise first published in 1752 on the theory and practice of midwifery by William Smellie *<portrait of Smellie>* who was described by Herbert Spencer of University College Hospital as “the master of British midwifery.” *<shot of Guttmacher’s treatise>* Dr Alan Guttmacher of New York states: “the dizygotic multiple birth is influenced by heredity, parity, age and race. “

### **<Narrator over shots of pregnant female in hospital bed>**

Thus a family history of twins may prove a valuable aid to diagnosis. If twins are present, diagnosis should be made by the 28th week. It should be noted, however, that a common source of error is mistaken dates and for this reason menstrual history should be carefully checked with regard to cycle, amount and duration of loss. *<shots of calendar>* Ovulation normally takes place 14 days prior to the onset of the next menstrual period. Migration of the zygote to the cavity of the uterus usually takes 10-12 days and implantation of the zygote will therefore occur at about the time when the next menstrual period was expected. Any bleeding associated with implantation may thus be mistaken for the menstrual period and in these circumstances the pregnancy will be 1 month further advanced than the records imply.

*<back to pregnant woman in hospital bed, now examined by doctor>* If this error can be ruled out, greater enlargement of the uterus than is usual for the period of amenorrhoea may be considered significant. Palpation may reveal an unusual number of foetal parts, or two heads or two breeches may be determined. It may

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occasionally be possible to auscultate two foetal hearts; this however is not normally reliable unless two observers can be present. If diagnosis remains doubtful, *<x-rays shown>* an x-ray will give confirmation; it will also reveal any foetal abnormality. The most common abnormality is anencephaly which is associated with hydramnios, the other important condition in a differential diagnosis of twins. *<animated diagram of skulls shown>* The greatest risk with twin pregnancy is premature onset of labour. Prematurity alone accounts for about 90% of the foetal death rate following twin births.

### **<Narrator over pregnant female in hospital bed on ward>**

The critical period for prematurity is between the 30th and 36th weeks and the mother should be admitted to hospital during the 30th week for complete bed rest; this will help to stave off premature labour and will also minimise abdominal discomfort and shortness of breath which may be pronounced in twin pregnancies. During this period of rest, a good diet should be maintained, *<tray of hospital food shown>* together with administration of vitamins and iron in a suitable form. It is important to guard against anaemia.

*<back to pregnant female in hospital bed having blood pressure taken and being weighed>* The second most important risk is a greater liability to toxæmia of pregnancy and one of the first signs may be a significant increase in blood pressure. Patients should be weighed routinely and sudden excessive weight gain accompanied or followed by oedema may be considered significant. The later appearance of albuminuria serves to confirm diagnosis.

**00:04:59:22**

### **<Narrator over animated illustrations of twins in womb>**

In twin pregnancies, the enlarged or occasionally double placenta will cover a larger area of the uterus. It is probably for this reason that placenta prævia tends to be more common. Presentation is as two vertices in 40% of pregnancies and in these

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circumstances delivery may be uncomplicated. About 20% will present with a first child as a vertex, the second as a breech. In a further 20%, while the first child presents as a breech, the second child may present as either vertex or breech with about equal incidence. Less frequently while one of the twins presents as a vertex or a breech, the other may lie transversely. After birth of the first twin, the second foetus may adopt a transverse line and in these circumstances there is risk of shoulder presentation. In all cases of twins there is danger of cord prolapse, particularly with the second child because the cervix is fully dilated and the presenting part may not be at the lower segment of the uterus.

### <Narrator over shots of preparation of perineum for labour, then delivery of twins and placenta>

At the onset of labour, both external and vaginal examination should be made to verify presentation. As the first stage progresses, labour pains may become distressing. In an intramuscular injection 100 mg of pethidine is administered.

<shots of medical staff> Twin labour is an abnormal labour and is managed by the obstetrician, the house surgeon and the anaesthetist.

<close shot of female genitals, injection given and episiotomy performed> When labour has progressed to the second stage and prior to delivery, the perineum is infiltrated with a local anaesthetic and right mediolateral episiotomy performed using Mayo scissors. This is necessary since the foetuses are small and premature and thus more liable to intracranial injuries.

<the first twin is delivered> On delivery of the first child, the umbilical cord is clamped twice and severed between the clamps since there may be a common foetal circulation. <examination of abdomen and preparation for birth of second twin> During the period between first and second births a further external examination is made to determine the lie of the second foetus. The foetal heart is auscultated. Any malpresentation should be rectified by external version; the house surgeon ruptures the membranes without delay and keeps his fingers in the vagina until the presenting

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part of the second twin is engaged. This is important and must be treated by immediate delivery. The foetal heart is auscultated and in the event of foetal distress, forceps delivery or breech extraction is indicated.

*<delivery of second twin and placenta>* With suitable presentation, however, and not too long a period between births, delivery of the second child is often uncomplicated. The cervix is usually adequately dilated so there is no repetition of the first stage of labour unless the second twin is the larger of the two. Simultaneously with the delivery of the head of the second twin, 0.5 mg of ergometrine maleate is administered intravenously. This is advisable since there is a 3-fold tendency for post-partum haemorrhage after delivery of twins.

*<close shot of placenta being examined>* The placenta must be carefully examined, first from the maternal surface to confirm that no cotyledons are missing. On the foetal surface, the cord and its vessels are inspected to make sure that none run off to a gap in the membranes indicating a retained succenturiate lobe. Examination will also reveal whether the twins are monochorionic or dichorionic, in this case they are dichorionic. Two amnions are also present. It is possible to separate the four membranes.

**00:11:42:14**

### **<Narrator over shots of foetal twin abnormalities>**

Certain foetal abnormalities are found only in association with twins. Among these are the foetus papyraceous or blighted twin which is due to developmental failure of one foetus in a monozygotic pair. It is attributed to circulatory failure. A further twin abnormality is acardius acephalus; this is thought to be due to a circulatory anomaly which permits the heart of one foetus to supply the circulatory requirements of the other. The head, usually the arms, thorax, heart and large vessels fail to develop.

### **<Narrator over shots of various abnormal twin births>**

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Presentation and delivery, particularly in the case of the second twin are not infrequently abnormal to some degree as in this case when the second foetus was delivered after a delay of 20 minutes with the occiput persistently posterior.

Uterine inertia is occasionally a complicating factor; it may not always respond adequately to administration of an oxytocin infusion. In these circumstances, the delivery should be effected with forceps. The patient is anaesthetised, the vaginal examination is made to determine presentation of the first foetus, in this case a vertex. In order to minimise the risk of intracranial injury to the foetus, routine episiotomy is performed, local anaesthetic is of course unnecessary.

When the first child is safely delivered, the obstetrician ruptures the membranes of the second foetus and keeps his fingers in the vagina to guard against cord prolapse.

**00:14:56:12**

Again in this case, presentation of the second foetus is not normal, it is a shoulder presentation, internal version is necessary and the feet are brought down. If this foetus is larger than the first, the after-coming head may be arrested by the cervix and worse still may extend. It is therefore important to maintain the occiput anterior, with the head flexed, so that the suboccipitobregmatic, the smallest diameter of the head, engages. If the rim of the cervix holds up delivery, it may be necessary to expose the cervix with the aid of a Vertheim's[?] lateral vaginal retractor, and incise the cervix with long scissors.

With breech delivery of the second twin, an injection of ergometrine maleate is given when the head has entered the cavity of the pelvis.

**<Narrator over shots of sleeping babies, then brief shots recapping what has been shown previously>**

It is apparent that successful management of twins is dependent on a routine embodying four main points. 1. Early diagnosis of the condition – diagnosis is



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assisted by heredity factors, auscultation, x-ray. 2. Early hospitalisation of the patient to guard against prematurity, to ensure adequate diet, to treat toxæmia. 3. Delivery of the children in hospital where facilities are immediately available to deal with complications of labour. 4. The routine use of ergometrine to minimise post-partum hæmorrhage. And if these conditions are fulfilled, the general postnatal requirements of mothers of twins should be no different from a woman with a single child.

**<End credits>**