PRENATAL DIAGNOSIS OF CEPHALO-THORACO-PAGUS (CONJOINED TWIN) BY ULTRASOUND

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INTRODUCTION

Conjoined twins are obstetric rarities, with an incidence of from 1 in 50,000 to 1 in 100,000 deliveries. Of these, most are joined at the chest, and thus have individual heads and limbs.

Our case had a single head but four separate arms and four separate lower limbs.

Conjoined twins, if undiagnosed can cause obstructed labour and a ruptured uterus. Prenatal diagnosis is therefore very important and all cases of multiple pregnancy should be scanned to exclude this.

CASE REPORT

L.C.N., a 20 year old primigravida was referred by her general practitioner as a "large for dates" pregnancy at 24 weeks of amenorrhoea. The amount of liquor was not excessive and the clinical diagnosis was "Breech with wrong dates".

Ultrasound scanning was performed with a Roche Superscan 50 linear array Real Time machine and also a Technicare AutoSector Mechanical Real Time Scanner using a 3.5 MHz. transducer when a wider field was required.

The ultrasound findings were as follows:

(i) 4 lower limbs were seen presenting with the knees horizontally apposed at the same level. (Photo 1). In the picture the penis of one fetus was identified with markers.

(ii) Both were male fetuses (Photo 2).

(iii) There was only 1 thick rectangular trunk. 2 definite spines were present. (Photo 3).

(iv) Two adjacent but separate hearts were seen. (Photo 4).

(v) Only 1 head was found in the fundus of the uterus and one pair of eyes was sseen. (Photo 5). The midline echo was absent and the posterior fossa appeared empty. The "biparietal diameter was 10.5 cm.

A diagnosis of cephalo-thoraco-pagus was made and the patient was advised that the twins were surgically inseparable, and in view of the findings in the brain, also non-viable.

It was decided to terminate the pregnancy and an elective Lower Segment Caesarean Section was performed a week later. The fetus (Photo 6) was a fresh stillbirth. Permission for autopsy or other investigation was not granted by the father. The placenta appeared normal and only 1 cord was present.

PHOTO 2: MALE GENITALIA

PHOTO 1: 4 LEGS WITH KNEES APPOSED PENIS IDENTIFED (MARKERS)

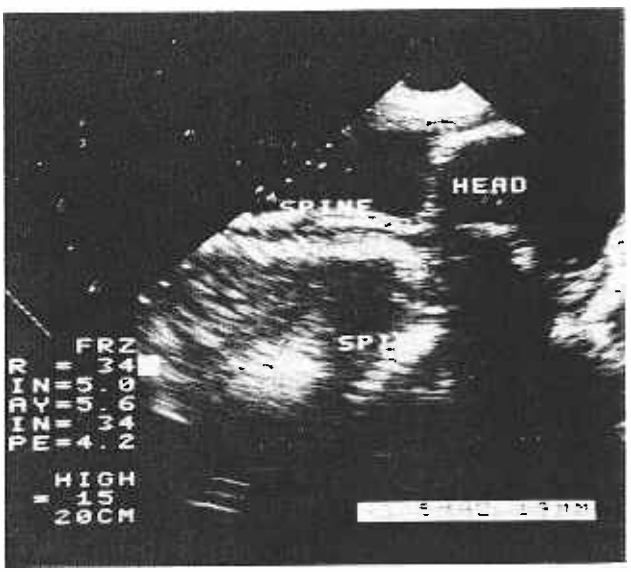

PHOTO 3: SECTOR SCAN : 2 CONVERGENT SPINES.

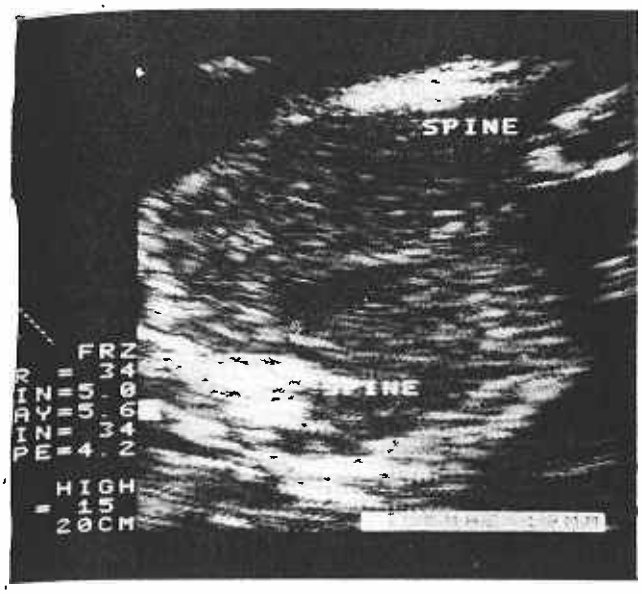

PHOTO 4: TRANSVERSE SECTION : RECTANGULAR SHAPED THORAX; 2 SPINES.

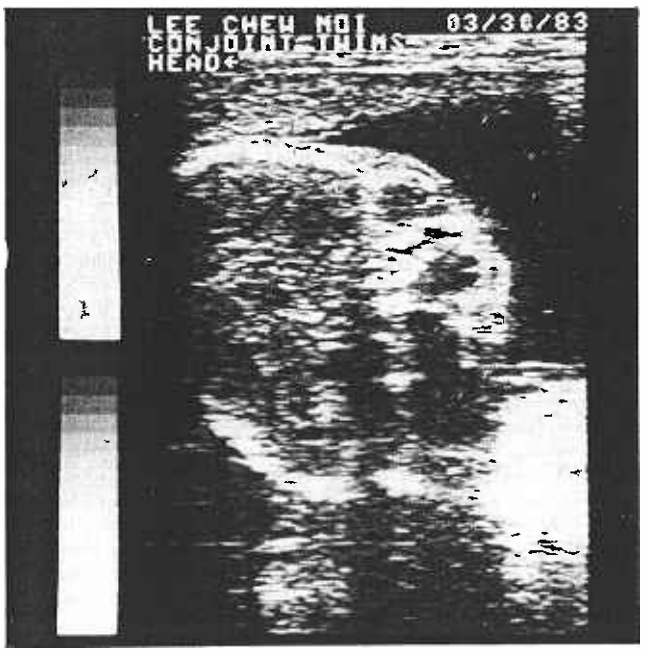

PHOTO 5: HEAD WITH 1 PAIR OF EYES.

PHOTO 6: FETUS AS PREDICTED.

DISCUSSION

In the past, prenatal diagnosis of conjoined twins was rarely possible. Using X-Rays, one employed Grey's Criteria to attempt the diagnosis.

An analysis by Rudolph (1) in 1967 showed how difficult it was. A more recent review of a 20 year practice by Compton (2) showed that 80% of casses were only diagnosed at the second stage of labour.

The first case of conjoined twins diagnosed by ultrasound was reported by Wilson (3) in 1976 at 37 weeks of gestation. Fagan reported another at 32 weeks in 1977 (4).

The first account of a conjoined twin at 23 weeks was in 1978 by Morgan (5) and recently by Chatterjee in 1983 (6).

Where the conjoined twins are found to be surgically inseparable and non viable termination is totally justifiable. If very early diagnosis is available, the pregnancy can be terminated per vaginam.

In our case, the fetal spines were markedly divergent, the head was unduly wide and the fetuses were presenting feet-first. It was felt that an attempt at vaginal termination carried an enormous risk of uterine rupture. On the other hand, allowing the pregnancy to continue might require a Classical Caesarean Section eventually; therefore a lower segment operation was performed as soon as the lower segment was sufficiently formed to allow this.

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