

QUADRUPLETS AND TWINS.

REPORT OF RECENT CASES ASSOCIATED WITH MATERNAL ALBUMINURIA
AND ECLAMPSIA.

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Read before the Kings County Medical Society.

In presenting this paper for your consideration, I wish to call your attention particularly to two main features, viz., the rarity of quadruplets, and the persistent maternal eclampsia preceding, during, and following the birth of twins.

In this country, statistics with reference to childbirth are valueless, due to the deplorable fact that physicians, as well as midwives, not infrequently fail to report births. It is estimated that as high as fifty per cent, of births are not reported—an inestimable injustice to the child, for it may find it necessary to establish (legally) its lineage, and to the statistician.

With the exception of Boston, there is, perhaps, no place in the United States where records of plural births are kept distinct and apart from the general records. It would be commendable if all health offices would adopt such a system.

In Europe, it is more easy to obtain statistics, because there are laws that are enforced; in consequence births are reported. Especially is this so in England, Sweden, Germany, and Italy.

Research leads me to believe that I and my associates have the privilege to be the first to report quadruple births at the Health Office of Brooklyn, and possibly the first in this city and county to deliver four babies at a single birth. Old practitioners and busy obstetricians inform me they are unaware of a precedent.

Playfair states that, "taking the average of a large number of cases collected by authors in various countries, we find that twins occur once in 87, triplets once in 7679, and quadruplets once in 555,083."*

Parvin of Philadelphia gives twins once in 90, triplets once in 7900, and quadruplets once in 370,000 cases.

* Taking as a basis for calculation his statement, citing France, Ireland, Mecklenburg-Schwerin, Prussia, Saxony, and Wurtemberg.

In 13,000,000 births investigated by G. Veit, he found that twins occurred once in 88, triplets once in 7910, and quadruplets once in 371,126 cases.

Quintuplets and sextuplets very rare. Kaltenbach states that there are twelve authentic cases of quintuplets. The London *Lancet* of October 20, 1880, gives the statement of Dr. Francisco Vassgalli, who reports the delivery of six fetuses by an Italian woman upon the 115th day of gestation, at Lugano, Italy.

Causes : Impregnation of two or more ova ; ovum containing double germ, and ova from both ovaries developed in a double uterus.

Heredity is a predisposing cause ; children of parents who have produced multiples are apt themselves to produce two or more babies at a birth. This is true in both cases here reported. In the case of the quadruplets, on the paternal side the grandmother had twins, and on the maternal side the grandmother had a brother who was the father of twins and a niece who also had twins.

In the case of the twins here reported, the father's mother had twins three times.

Simpson mentions a case of a mother who had quadruplets—three males and one female ; the female subsequently gave birth to triplets.

Parvin quotes a marvelous report. I include it because of its novelty and because credulity is invited. He says : "Sue mentions the case of a man whose wife gave birth to triplets seven times in seven years, then, seducing his servant girl, she gave birth to triplets." Nor is the case of the Russian peasant, Feodor Wassilief, to be omitted. It was quoted by Velpeau from Merriam.*

This peasant was married twice, and his first wife had quadruplets four times, triplets seven† times, and twins sixteen times—in all, sixty-nine children ; his second wife had triplets twice and twins six times, making her contribution only eighteen to the entire number of eighty-seven. Moreover, eighty-four of these children and the father, who was then seventy-five years old, were living at the time the English merchant, whose story Merriam publishes, visited Russia.

* Merriam apparently believed the story, for in quoting it from the *Gentleman's Magazine*, 1783, he also quotes the following : "The above relation, however astonishing, may be depended upon, as it came directly from an English merchant in St. Petersburg to his relations, who added that the peasant was to be introduced to the Empress."

† Parvin's *Work on Obstetrics*, page 162, edition of 1895, states three, but a letter from him states that number to be a typographical error, that seven is correct.

Age is also a predisposing cause, the older the primipara the more likely is she to multiple births ; in the multipara the tendency increases as she advances in fruitful years.

Playfair states that the relative frequency of sexes occur as follows : first, male and female ; next, female, and the least frequent, males.

Development is usually unequal—one fetus, by virtue of deriving a better blood supply than another, grows stronger, and in consequence the weakest one is handicapped. And, indeed, in some cases, after attaining a fair degree of development, it is deprived of its nutriment and retrogrades, resulting in complete atrophy, or the “fetus papyracæ.” This, without a doubt, occurs not infrequently. In the cases here reported this did not prevail.

It is estimated that mortality occurs in twins once in thirteen. In triplets it is rare that all survive, and in quadruplets death is almost certain.

CASES.

Mrs. L., æt. thirty-nine years ; German birth ; usual weight, 120 pounds ; never well nourished, and of feeble constitution ; married nineteen years. During the first twelve years of her married life she had five children ; no miscarriages. Then followed six years without conception, during which time she menstruated regularly. In September, 1894, there was a slight menstrual show ; in October she again menstruated, when the flow was apparently normal, though it lasted seven days. At about this time she became uncomfortable, and had some edema of feet. In January she felt fetal life, but very faint ; edema marked. A month later the edema became so great and the legs were swollen to such a degree that the skin was tense and shiny. This condition prevailed throughout the remainder of gestation. In March she was almost helpless ; sleep much disturbed in consequence of her sufferings ; every motion caused pain ; could get no rest in any position. This necessarily made her very restless and wished frequently to be moved from place to place, being helpless. This could only be accomplished with assistance. In addition to her physical distress, she suffered much mentally in consequence of her uncongenial marital relations, which were prominent factors in lowering her vitality, and the means of depriving her of medical care and advice, and gave no opportunity to test her urine, which was undoubtedly albuminous. Pressure against the diaphragm prevailed up to the day of confinement and interfered seriously with her respiration.

On May 11th, at about 8 A.M., labor began; at 9 o'clock the Rev. Dr. Pulvermacher was called, and reached the patient at about 9.20 A.M. He recognized that labor was progressing, and sent for me. Shortly afterward the membranes ruptured. Upon the report by the messenger that I was out, he dispatched for Dr. H. Nichols. Before either of us reached the patient a head presented, and a male child was born at 10.05 A.M. with the cord twice around its neck and under its right arm. At 11.30 a breech presented, and a second male child was born. At 12 o'clock, noon, I reached the bedside, and a few minutes later Dr. Nichols arrived. The patient was becoming exhausted; I gave her ergot and ammonia, which rallied her.

Dr. Pulvermacher called my attention to the fact that the uterus contained another fetus. Placing my hand upon the abdomen, I found that he was right, and that the uterus was contracting.

When the mother rallied sufficiently to proceed with the labor, I ruptured the membranes, applied forceps to another presenting head, and delivered a third male child. You may imagine our surprise when we recognized that there was still another fetus unborn; but alas! before it could be delivered the uterus relaxed in consequence of fatal exhaustion, hemorrhage at this time being slight. Notwithstanding the free administration hypodermically of brandy, ammonia, and ether, the heart continued to grow weaker and weaker until life was extinguished at 12.45 P.M. After the excitement of the family had subsided, I proceeded to empty the uterus. Introducing my hand, I found the remaining fetus high up, though the head was the most dependent part. After rupturing the membranes, I effected a version and brought down the feet, delivering a female child at 1.15 P.M. Each cord was tied upon the birth of each child.

There were four placentas with membranous connection, but no vascular communication from one to another. Each placenta had its independent sac. Their combined weight was three pounds.

The aggregate weight of the babies was sixteen pounds, as follows: first, $3\frac{3}{4}$ pounds; second, $4\frac{1}{4}$ pounds; third, $3\frac{3}{4}$ pounds; fourth, $4\frac{1}{4}$ pounds. Though small, all of them were perfectly formed. Respiration was readily established in the first one, but the second one required considerable and earnest effort to induce breathing. The third did not breathe at all, and of course the fourth was dead when delivered. The first born lived five days and died in consequence of asthenic diathesis. The second born

is still alive and thriving on milk it nurses from a mother whose babe was eight months old when it was placed at her breast.

This is the second case of quadruplets of which it has been my fortune to have intimate knowledge, the first having occurred in Baltimore. The mother in that case was delivered of four living babies; all lived one week, when one died; three were dead at the end of one month, when I lost trace and the subsequent history of the remaining child and mother.

CASE II.—Mrs. I., æt. twenty-one years; United States; primipara; previous physical condition good.

Examination at eight months' gestation showed an unusually large development, still I could detect but one fetus and but one fetal heart; feet and legs edematous; urine albuminous, but no casts. She voided four to five pints daily up to the evening of the 10th of April, when she complained of headache, and began to vomit. This condition continued throughout the night and until about 8 o'clock of the morning of the 11th, when she had a fall. I was notified, and upon arrival found her dazed. There was slight injection of the conjunctiva; ordered a purge, which she vomited. At noon I found her in convulsions; conjunctiva intensely injected and of very bright red color and the tissues of the orbicular region were decidedly ecchymosed, denoting marked brain disturbance; total suspension of urine. I ordered another purge and the bromides. At 5 P.M. convulsions were less frequent; no urine; no action of bowels; ordered enema and hot pack to back; 6 P.M. she voided $\frac{3}{4}$ iv of urine; bowels still inactive; temperature 104° F.; ordered ol. tigllii, spts. nit. eth. and mendereri; 6.30 P.M. she passed $\frac{3}{4}$ vii urine; 7 P.M. defecated; eclampsia decidedly less; fever abating; at 10 o'clock the bowels were acting freely; convulsions very slight; at 12 o'clock, midnight, there were no convulsions, but she was still comatose; characteristic labor pains appeared; upon examination, I found the os dilated to the size of a quarter of a dollar; pains continued at regular intervals until 1.45 A.M. April 12th, with head presenting; a male child weighing six pounds was delivered; at 2.40 A.M. (nearly one hour later) another head presented, and a girl, weighing $5\frac{1}{2}$ pounds, was born; both babies were perfectly formed and well nourished.

There was but one placenta, but there were two sacs; weight, about three pounds.

Throughout the birth of her babies the mother remained unconscious, though she had had no anesthetic. Catheterization

resulted in ξ ii urine, which was almost solid with albumin. Convulsions had ceased, but she remained in a state of coma until 3 o'clock in the afternoon, when she regained consciousness (though her mind was still clouded), and learned that she was the mother of twins. Up to this hour she was unaware of all that had transpired since the evening of the 10th—nearly two days. The babies were then put to the breast, took hold well, and have nursed regularly since.

It is particularly interesting to note the fact that this patient passed through a period of at least forty hours in a state of uremic coma, with convulsions and serious brain disturbance, and during this time gave birth to healthy twins, without any permanent pathological lesions. Her puerperium was natural, and ended, after the usual lying-in period, in excellent recovery.

The results indicate that the management in this case was entirely proper. I avoided opiates, for the reason that there was total inaction of the kidneys, and chloroform because of its tendency to induce *post-partum* hemorrhage.

DISCUSSION.

Dr. Charles Jewett : Dr. Henry can certainly claim the credit, Mr. President, of having presented two of the rarest obstetric experiences ever reported to the Society. He has gone over the ground of multiple pregnancy so completely that there is little more to be said. I would like to ask Dr. Henry if the cases were near term, and how near?

Dr. Henry : The case of twins did go to full term.

Dr. Jewett : And the quadruplets?

Dr. Henry : They apparently did.

Dr. Jewett : What was the condition of the children at birth—living or dead? viable or not?

Dr. Henry : There were two born alive and two born dead. One was born prior to the mother's death and the other after her death.

Dr. Jewett : This experience is of interest for the reason that it is stated by obstetric writers that only one-third of all cases of twins go to term. A larger proportion than that, however, judging from my experience, do reach term. It is claimed by good authorities that, in case of a larger number of children, three is the greatest number with which gestation ever reaches the period of viability. There are, however, other instances on record besides the one reported by Dr. Henry in which quadruplets have been born viable.

The occurrence of albuminuria in plural pregnancies is to be expected in a larger proportion at least than in ordinary cases. It is well known that with twins the occurrence of albuminuria is more frequent than in single fetation, and with a larger number of children still the tendency must be increased.

With reference to the frequency with which quadruple pregnancy occurs, the statistics, which the Doctor has given, correspond very nearly with those with which I am familiar. The largest number of figures probably is represented by the combined tables of four authorities, namely: Dessauer, Spengler-Ploss, Sickel, and Veit, amounting to nearly fifty million births, and in this total the number of quadruplets was about $2\frac{1}{2}$ to the million, which may be considered as near to the frequency as we can get of so rare an occurrence.

As to the influences that determine the occurrence of these multiple births or multiple pregnancies, race is one which has probably no very great influence; yet England claims the credit of a larger percentage of multiple births than other nations. The principal causes, undoubtedly, are multiparity and heredity. Especially on the maternal side does heredity tell, multiparity not being a very prominent cause. Every doctor, who has met with twins in his practice, has no doubt often received accounts of similar occurrences on the part of other members of the family. And this is true of multiple pregnancy in general. The mother, however, does not have entire control of the matter, evidently, as is shown in one of the instances the Doctor has reported. The case, possibly, is the same as one I have in mind, but the figures, as I recall them, are somewhat different from his. As I have heard the story of the Russian peasant, it runs to the effect that by two wives he had eighty-seven children. The first wife presented him with four quadruplets, seven triplets and sixteen twins; the second with triplets twice and twins six times. This looks as though the father had something to do with the super-fecundity.

Dr. Henry: With reference to the development of the babies, they seemed to be apparently fully, or very nearly fully developed, and I have no doubt but that the four were alive at the beginning of labor. They presented no indications other than two living children. The one remaining child which is living is, I understand, thriving very nicely.

In the case of the twins, they were well developed and well nourished at the time they were born, and since they have gained

quite rapidly, so that they weigh now nine and ten pounds, I am informed.

The report that Dr. Jewett speaks of undoubtedly is the same, but I took the quotation from Parvin's work, and that is where the difference arises. All the other features seem to be the same.