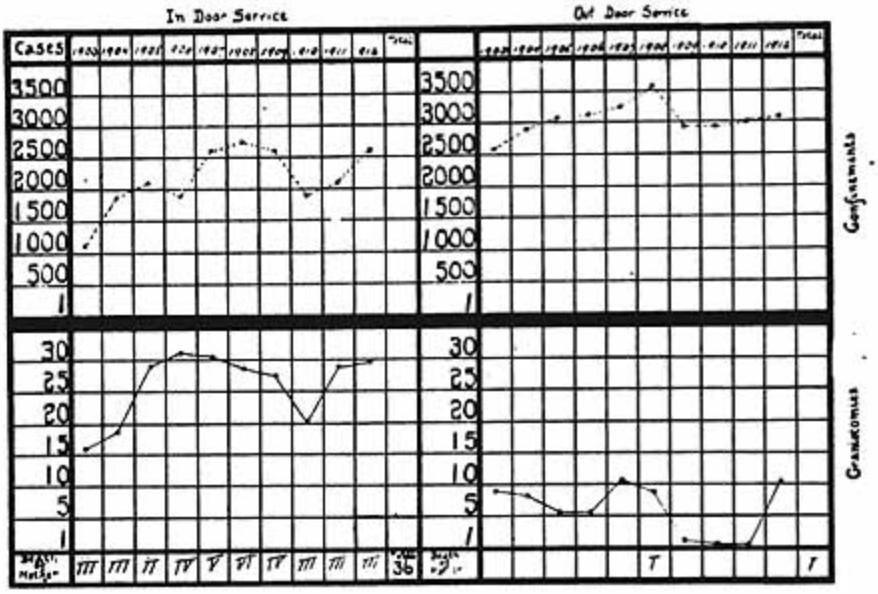
A REVIEW OF THE CRANIOTOMIES DONE IN THE HOSPITAL, FROM 1903 TO 1913.

By EDWARD S. GUSHEE, M.D.
Attending Surgeon.

For the past ten years or from 1903 to 1913, there were delivered in the two services of the hospital, the Out-Door and the In-Door Department, 52,133 patients.

In the Out-Door Service there were 30,549 deliveries and among this number there were 64 craniotomies, that is about one fifth of one per cent of the deliveries. In the hospital proper, during this period



Showing number of craniotomies in proportion to the number of confinements in the In-Door and Out-Door Departments of the Hospital.

there were delivered 21,584 cases. In 258 of these craniotomy was performed, or in about one per cent of the patients delivered.

The marked discrepancy shown in the figures between the two services will readily be appreciated when one takes into consideration that in the Out-Door Service with five exceptions, the cases were entirely under the observation of the hospital staff, whereas in the hospital proper over one-half of the cases in which a craniotomy was done were emergencies. They numbered one hundred and sixty-seven, and the majority or one hundred and twenty-five cases, had had unsuccessful attempts at delivery by physicians or midwives. This leaves 91 cases of craniotomy

which occurred directly under the care of the hospital, which is about two fifths of one per cent of the 21,584 deliveries in the hospital service. Of these 91 craniotomies, there were 21 cases of eclampsia with premature dead babies, and 7 cases of placenta previa with premature dead babies. In the most of these cases the after coming head was perforated to insure rapid delivery and to prevent severe cervical lacerations.

In 29 cases craniotomy was performed for the following reasons: hydrocephalus 6 cases, chondrodystrophia 1, impacted face 5, brow 2, tuberculosis with premature dead fetus 1, diabetes mellitus and toxemia 1, endocarditis and chronic nephritis 1, eclampsia with dead baby 2, placenta previa with dead baby 3, prolapsed cord with dead baby 8.

The remaining 23 were either border line cases, where there was a question as to the relation of the head to the pelvis and attempts at forceps or version were made or they were of such a nature that in the judgment of the operator a destructive operation was the only course to pursue.

In the foregoing statement it is to be understood that although the fetal heart was heard at the time of the attempted delivery, from one cause or another the fetal heart had ceased before the actual destructive operation was resorted to. In some instances this was due to pressure and prolonged attempts at forceps delivery, in others from pressure due to failure to extract the aftercoming head.

It is interesting to note that in the hospital during the last 5 years, although there was an increase of about 4,000 deliveries, there was a decrease of 2 per cent. in the craniotomies over the previous 5 years.

In the tenements although the increase of deliveries was very slight, in the past 5 years there was a decrease of about 20 per cent in the craniotomies over the previous 5 years.

The indications for craniotomy in the two services were:

	In-Door	Out-Door.
Contracted pelves	85	36
Fetal death	218	45
Hydrocephalus	10	4
Cervical contractions, (noted especially in premature cases)	31	3
Tonic contraction of uterus	5	1
Cases of rapid delivery in interest of mother		
Placenta previa	3	1
Eclampsia	2	0

It may be of interest to note the various methods employed in performing the operation of craniotomy in the hospital.

In 101 cases, craniotomy of the after-coming head was done.

Of the remaining 157 cases the basiotribe was used in 65, the cephalotribe in 43, the cranioclast in 32. In the remaining 17 there was no note as

to the instrument used. It will be seen that the basiotribe is the instrument most frequently employed, however the selection of the instrument used is entirely one for the operator's judgment.

It is worthy of note that among the 258 craniotomies in the hospital, there were 119 primiparae, 137 multiparae and 3 were not described. It will be seen that about one-half of the cases, where a destructive operation was done were primiparae.

The multiparae ranged from para ii to para xiv as follows:

Para ii, 43; para iii, 22; para iv, 23; para v, 12; para vi, 15; para vii, 7; para viii, 5; para ix, 5; para x, 4; para xi, 1; para xii, 1; para xiv 1.

The presentations noted were as follows:

Vertex 198, including 85 L. O. A., 25 R. O. A.; 16 L. O. P.; 30 R. O. P.

Face presentations, 13, of which 8 were mentum posterior, brow presentations, 6; breech and footling, 17; transverse, 16. In 28 cases the presentation was not recorded.

It will thus be seen that over two thirds were vertex presentations.

The marked difference shown in the maternal mortality between the two services is very striking.

The number of deaths of mothers in the hospital were 35 or 10 per cent. of the number of cases where craniotomy was performed, or one-tenth of one per cent. of the deliveries.

Of the cases in the tenements on the other hand, there was only one death of mother and in this instance a midwife had been in attendance for some 48 hours before the Hospital was notified.

Of the 36 deaths in the Hospital 30 were among the emergency cases, in the remaining six, the cause of death was as follows: 2 eclampsia, 1 diabetes mellitus and toxemia, 1 shock following hysterectomy for ruptured uterus, 1 endocarditis and chronic nephritis, 1 placenta previa.

Of the 30 deaths in the emergency cases, 18 died from shock or hemorrhage, 9 from sepsis and 3 from eclampsia.

The conclusions to be drawn from the foregoing observations may be briefly stated as follows:

That the percentage of craniotomies in the In-Door service is rather large but, it must be remembered that in a hospital such as this where every type of case at any state of labor is admitted and especially cases which have been tampered with outside, this is rather to be expected.

That the percentage of craniotomies in the Out-Door Department is low because a large number of the cases are seen early enough so that where a craniotomy would otherwise be inevitable, the patient is transferred to the hospital in time to perform a successful Cesarean section. There were 54 Cesarean operations performed on cases sent from the Out-Door Department. Of the 54 cases there were four deaths of mothers and three deaths of children.

That in many instances, especially in the emergency cases, destructive operations might have been avoided had the condition of the child or that of the mother warranted.

That the operation of itself is not necessarily responsible for the death of the patient but rather the state of shock to which she has been subjected or some complicating condition.

Finally, taking all things into consideration, the maternal death rate is low, especially in the Out-Door service where the death rate is practically nill.