EARLY PROPHYLACTIC EXTERNAL CEPHALIC VERSION

by

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This is a retrospective study of 241 cases of breech presentation noted in the antenatal examinations at my private clinic; 9, out of the 250 cases collected, were excluded as there was not enough detail available for them. There were 59 + 1 (excluded) primiparae and 182 + 8 (excluded) multiparae.

mistake in diagnosis or a reason for not turning was present.

In 18 cases, spontaneous version occurred, two between 25 and 27 weeks, 12 between 29 and 32 weeks, one between 33 and 34 weeks, two between 36 and 37 weeks, one between 30 and 41 weeks.

Six cases delivered as breech be-

TABLE I Summary of Cases

Primi	parae		Multiparae
No. of cases	Percentage	No. of cases	Percentage
6	10%	4	3% delivered as breech
18	31%	28 ,	16% Spontaneous ver- sion occurred
35	59%	150	81% Version performed
59	in the same of the	182	and the state of t
. 1	ter w (1)	8 exclud	led
60		190 total	250

Actually 90% of the primiparae and 97% of multiparae delivered as vertex after spontaneous version or external cephalic version performed by me. However, the cases who delivered as breech were cases who came late or where I either made a

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cause they were mistaken for head presentation or seen too late to turn. In one of the six cases version was not done because of toxaemia. Only one of these cases had a caesarean section, the others were delivered as breech.

Thus, in the multiparae 69% of the cases were turned by 31 weeks, 78% by 32 weeks, 90% by 34 weeks, 4% at 35, 2% at 36 and 4% between 37 and 40 weeks. Thirty-three of the 150 patients had repeated versions i.e. only 22%, 24 patients had version twice. Six patients had version three

TABLE II
Time of Performing External Cephalic Version in 35 Primiparae

- JANSIE			dine";	sta Alexan		Repeat vers	ion
24-25 weeks			3	y:		1	
26-28 weeks			6			3	
29-31 weeks			15		4 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3	
32 weeks			6				
			-	85.5%		 1	Name and P.
33 weeks		192.	1	. ,			66.6%
34 weeks			1				ν*
			-	91,5%		2.	
35 weeks			. 2		the state of the s	. 1 .	
36 weeks			1				
				8.5%		, 1	
38 weeks			_	7.04		•	33.3%
			- ,-		The state of the s	 	
T	otal		35)	 . 12	

		in Multiparae	
	version	th Mattparae	
24	& 25 weeks	8	
26	& 27 weeks	20	*
28	to 31 weeks	75	
			- 69%
32	weeks	- 14	
			- 78%
33	weeks	9	
34	weeks	9	
		-	- 90%
35	weeks	6	#
36	weeks	3	
			- 96%
37	wecks	2	
38	weeks	2	
39	weeks	. 1	
40	weeks	1	
			- 4%
		150	

times, one had version four times, one five times and one case had version six times.

In 28 cases version occurred spontaneously.

Four cases delivered as breech, in 3 the diagnosis was made too late to be able to turn and in one case there was hydramnios and version was not attempted; one case had caesarean,

	18	TABLE I	V		
				4000	
24-26 weeks					1
26-27 weeks					4
28-32 weeks		* *			12
29-33 weeks	. 4				3
32-34 weeks					6
32-36 weeks					1
30-41 weeks					1
***		-			

the others delivered as breech.

At this stage, I may briefly state the usual manner in which I deal with these cases.

As mentioned in my paper on prevention of pre-eclampsia, I examine ante-natal cases once a fortnight from the time they come up, up to six months and once a week from this time up to labour.

During these examinations, I carefully watch the presentation of the child. If there is a serious doubt about the presentation after an abdominal and vaginal examination an x-ray examination is done to diagnose the presentation.

If a diagnosis of breech presentation is made, whenever I feel that the child is not moving about easily in the uterus, I try to do version at the out-door. If this is not possible, the patient is called to the hospital the next day. She is put in a Trendelenburg position with the foot end raised about fifteen inches. In a fair number of cases, this itself changes the presentation. In most of the others, the version is much easier just a few hours after putting the patient in this position; occasionally the patient has to be kept longer and version is attempted repeatedly during the stay.

I have not attempted version under anaesthesia in any case after following the present regime. I feel very strongly that if we accept the policy that version should be done, to change the presentation to one which will be less harmful to the child and the mother, then one should turn the child earlier and if we do so, we will be able to turn the child in almost every case except when there may be such complications as twins, bad malformations of the uterus etc.

We may here briefly review the literature on *perinatal mortality and morbidity* as well as the success rate and dangers of version.

The gross mortality is 10-15% going up to 33.8% in some. By correcting for all types of abnormalities, excluding premature and all possible causes of death and in many cases, though not in all, by a high caesarean section rate, the corrected mortality is shown as 1% in some cases. Boyson and Simpson claim corrected mortality of 1% with only 0.7% caesareans.

Rubin and Grimm have 1.5% corrected mortality with 4.8% caesareans. Wright suggests routine caesareans.

rean at 35 weeks or more for breech presentation.

The morbidity, often of a serious nature, ranges between 2.2-6.7%, except Kian 0.5% and David Hay, one in 218. Where comparable figures are available breech mortality is at least three times, sometimes 9 times or higher as compared with cephalic presentations. Prematurity rate is 15-39% except David Hay 4%.

Hagemann comments on the late cerebral lesions after breech presentation.

Churchill says in a group of 92 epileptics with diffuse abnormality in electroencephalograms 19.6% had delivered by breech in contrast to 3.4% in general population no such discrepancy was found in patients with localised electroencephalogram changes.

Table VII shows the success rate of version at different periods of pregnancy as reported by Dalley (version without anaesthesia) Neely, Peel and Cayton (version under anaesthesia). In the last column James White's figures for the percentage of spontaneous versions at the different periods of pregnancy are shown.

Peel and Clayton quote about 10 authors and give a success rate of 80% in 385 primiparae and 94% in 785 multiparae. G. Dalley reports on 330 breech deliveries, 121 turned spontaneously i.e. 36%. In 162 version was attempted, it failed in 28 cases—success rate 82.7%.

In the addendum G. Dalley states that in the first 6 months of this year (1962), there were only 5 breech deliveries in booked cases out of 576 deliveries — one of these was in twins and 2 first attended at the 36th week.

TABLE V

Perinatal Mortality, Caesarean Incidence and Prematurity in Breech

	Date 2	No. of Cases	Gross	Corrected	Caesarean Incidence	Prematurity 7
	The second secon					
	1926–40 Uncomplicated mature	1657 Multies 919@ Primis 738*	1	@ 22%-23.2% Average 9.8% * 5.3%-13.4% 29.0% in one Average 11.3%	1	
	1929-43	1	I,	2.7%-12.8% One 0.80%	2.66% in	14% Non-viable Morta- lity 100%.
311	1934-44	. 408	31%	4.5% in 352 mature uncomplicated	598 Viable	25% Premature Morta- lity 39%.
	1922-51	480	10-31%	1.3-12.8%	0.5-20%	
	1928-53	473	5.7% 4 Lbs. or more	2.11%	19.0%	1.48% 28-32 weeks. 14.0% 32-38 weeks.
in suns of T	1938-47	888 495 full-term Uncomplicated	15.0% Frank Single footling (42 cases) Double footling	3.21% Vaginal 14.93% delivery only	0.4%	
-	1936-56	5274 252 Above 4½ Lbs.	. 11	0.68 Primis 4.98 Both Average 2.4 Both 1.6%	%0.6	
-						

Y PRO	PHYLACTIO	C EXTER	NAL CEPH	IALIC VER	SION		
7	8.6% Non-viable Morta-lity 97%. 12.6% Premature Morta-lity 29%.	25% Below 5½ Lbs.	20% Premature. Stresses importance of version to reduce it.	12% Non-vjable Morta- lity nearly 100%. 20.6% Premature Morta- lity 40%.		22.0%	
Incidence 6	11.0% 5.5% General	6.6%	3.9% Same as overalf	8.0%	31.0%	8.7%	18.0% Overall. 25.0% In Primi.
Corrected 5	1.0%	3.0% in full-term uncomplicated	9.0%	2.7% in 478 mature uncomplicated 1-9.3%	1.1% Ward 1.5% Private 0.3% Caesarean 0.8% both	11.0% Over 22 Kgms. 6.3%	2.9% Malformations and be- low 2 Kgms. excluded
Gross	15.2%	13.1%	22.4% Premature: 39.3% Mature: 4.2% (Uncomplicated)	28.8%	3.4%	13.8%	1
No. of Cases	1031 -351 excluded	498 235 Full-term uncomplicated	388	1142	1006 Mature	189 Primis	303
Date 2	1935-56	1942-50	1949-53	1945-56	1949-59	1955-58	1958-62
Author 1	Tancer	Doren Daley et al.	Ward et al.	Potter and Heaton Quote 20 authors.	Todd and Steers	Jackson	R. Rouchy
	Date No. of Cases Gross Corrected Incidence 7	Author 2 3 Gross Corrected Incidence 7 5 6 11.0% 8.6% Non-viable Morta351 excluded 15.2% General lity 97%. 11.6% Premature Morta- lity 29%.	1935-56 1031 15.2% Corrected Incidence 7 5 6 6 1031 15.2% 1.0% 11.0% 8.6% Non-viable Mortanschuded 13.1% 3.0% in full-term 6.6% 25% Below 5½ Lbs. uncomplicated uncomplicated	1935-56 1031 15.2% 1.0% 11.0% 8.6% Non-viable Mortange 1942-50 498 13.1% 3.0% in full-term 6.6% 25% Below 5½ Lbs. 1949-53 386 22.4% 9.0% 5.3% 20% Premature: 39.3% 3.9% 20% Premature: 4.2% 2.2	1935-56 1031 15.2% 1.0% 11.0% 8.6% Non-viable Morta- 1942-50 498 13.1% 3.0% in full-term 6.6% 25% Below 5‡ Lbs. 1949-53 386 22.4% 9.0% 3.3% 20% Premature 39.3% 1945-56 1142 28.8% 2.7% in 478 mature 8.0% 12% Non-viable Morta- 1945-56 1142 28.8% 2.7% in 478 mature 8.0% 12% Non-viable Morta- 1945-6 1142 28.8% 2.7% in 478 mature 8.0% 12% Non-viable Morta- 11945-6 1142 28.8% 2.7% in 478 mature 8.0% 12% Non-viable Morta- 11945-76 1144 1190% 12% Premature Morta- 11946-76 11946 12% Premature 11946 12%	1935-56 1031 15.2% 1.0% 11.0% 8.6% Non-viable Mortanexcluded 13.1% 3.0% in full-term 6.6% 25% General 18.7% 11.0% 11	Author 1935-56 1031 15.2% Corrected Incidence 7 5 6 6 6 6 7 6 6 6 7 7 6 6 6 7 7 6 6 6 7 7 6 7 6 6 7 7 6 7 7 6 7 7 6 7 7 7 7 7 1 10.0% Over 22.8% Over 22.8% Over 22.8% Over 23.9% Over 24.9% Over 25.9% Over 25.8% Over 25.9% Over 25.8% Over 25.8

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				BREECH		Mortality in	Caesarean Incidence	Incidence	
Author	Date	No. of Cases	Mort	Mortality	Morhidity	Cephalic or all	Breech	General	Prematurity
4			Gross	Corrected	Carrier Total	Programme and the second			
Cieckmann Quotes 16 authors	1931-45		5.3-33.8%	1.7-12.6%	I	1	1	1	i
Their own	1941-45	662 (400 gms+) 524 (2500 gms+)	3.8%	1.7%	2.1%	1	10.5%	1	Mortality:
									Below I Kgm 100% 1 to 1.5 Kgm 39% 1.5 to 2.5 Kgm 26%
Schmitz	1930-52	1544	12.12%	4.12%	2.27%	-	1	1	•
Pomerance and Daichman	1939-48	716 Full-term p	716 5.1% 4.2% Full-term primis. Vaginal deliveries.	42% deliveries.	3.7% Permanent and serious.	Uncorrected 1.4% All foetuses over 5 Lbs.	13.3%	1	1
Dickmann and Harod	. 1945-52	1001	9.8%	0.92% in 754 mature	2.2%	I	11.9%	í	25% below 2.5 Kgms.
Quotes Calkins		Corrected	1	2.2-5%		0.5-1.3%	I	1	1
		Uncorrected	2.3-7.5%			0.6-1.8%			
David Hay Quotes 11 authors	1951-59			*0.9-5.8%@ @Wei *Above 2.5 Kgms. cified.	@Weight not spe-		8.1-20.4%	1	-1
His own	1954-58	218-53 = 165		1.2 over 3 Lbs. 10 oz.	Only one fracture clavicle in 218	**	16.0%	1	All 9 prematur died. Weight below
					* Prior Care				3 Lbs. & 5 ozs. One 3 Lbs. 1
									ozs. Only 4% prema ture excluded.
Hall and Kohl	1950-54	. Above 2.5 Kgms. 1-2.5 Kgms.	14.4% 6.5% 32.5%	4.6% 2.6% 9.2%	11	1.0% Other 13.0% presentations uncorrected	10.7%		30.5% 1-2.5 Kgms. 2½ times the in cidence as in th clinic as a whole
Rubin and Grimm	1950-56	471	3.7% 1.59 2.5 Kgms, & over.	1.5% . & over.	6.7% .51% in Cephalic.	1	4.8%	1	25%. Hospital rate: 9.0%.

EARL	Y PRO	PHYLACTIC	CEXTER	NAL CEPH	HALIC VER	RSION		
Prematurity		8.6% Non-viable Mortality 97%. 12.6% Premature Mortality 29%.	25% Below 5½ Lbs.	20% Premature. Stresses importance of version to reduce it.	12% Non-viable Mortality nearly 100%. 20.6% Premature Mortality 40%.	1	22.0%	
Caecarean	Incidence	11.0% 5.5% General	%9.9	3.9% Same as overall	8.0%	20.0%	8.7%	18.0% Overall. 25.0% In Primi.
Mortality	Corrected 5	1.0%	3.0% in full-term uncomplicated	9.0%	2.7% in 478 mature uncomplicated 1-9.3%	1.1% Ward 1.5% Private 0.3% Caesarean 0.8% both	11.0% Over 2.2 Kgms. 6.3%	2.9% Malformations and be- low 2 Kgms. excluded
M	Gross	15.2%	13.1%	22.4% Premature: 39.3% Mature: 4.2% (Uncomplicated)	28.8%	3.4%	13.8%	
No of Coope	33	1031 -351 excluded	498 235 Full-term uncomplicated	388	1142	1006 Mature	189 Primis	303
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A	1	Tancer	Doren Daley et al.	Ward et al.	Potter and Heaton Quote 20 authors.	Todd and Steers	Jackson	R. Rouchy

TABLE VI Perinatal Mortality, Morbidity and Caesarean Incidence in Breech and Other Presentations and Prematurity Rate in Breech

				BREECH		Montolites in	Caesarean Incidence	Incidence	
Author	Date	No. of Cases	Mor	Mortality	Morbidity	Cephalic or all	Broach	General	Prematurity
45			Gross	Corrected	Carrie Cont	programment			
Lieckmann Quotes 16 authors	1931-45		5.3-33.8%	1.7-12.6%	7 1	1	1	1	1
Their own	1941-45	662 (400 gms+) 524 (2500 gms+)	3.8%	1.7%	2.1%	1	10.5%	1	Mortality:
									1 to 1.5 Kgm 39% 1.5 to 2.5 Kgm 26%
Schmitz	1930-52	1544	12.12%	4.12%	2.27%	1	ı	1	1
Pomerance and Daichman	1939-48	716 5 Full-term primis.		4.2% Vaginal deliveries.	3.7% Permanent and serious.	Uncorrected 1.4% All foetuses over 5 Lbs.	13.3%	1 .	'i'
Dickmann and : :	: 1945-52	1001	9.8%	0.92% in 754 mature	2.2%	I	11.9%	ï	25% below 2.5 Kgms.
Quotes Calkins		Corrected	1	2.2-5%		0.5-1.3%		1	1
		Uncorrected	2.3-7.5%			0.6-1.8%			
David Hay Quotes 11 authors	1951-59			*0.9-5.8%@ @Wei *Above 2.5 Kgms. cified.	@Weight not spe-	. T	8.1-20.4%	1	1
His own	1954-58	218—53 = 165		1.2 over 3 Lbs. 10 oz.	Only one fracture clavicle in 218		16.0%	1	All 9 prematur
					cases.				Weight below 3 Lbs. & 5 ozs. One 3 Lbs. 1
									ozs. Only 4% prema ture excluded.
Hall and Kohl	1950-54	. 1456 Above 2.5 Kgms. 1-2.5 Kgms.	14.4% 6.5% 32.5%	4.6% 2.6% 9.2%	11	1.0% Other 13.0% presenta- tions un- corrected	10.7%		30.5% 1-2.5 Kgms. 2½ times the in cidence as in the clinic as a whole
Rubin and Grimm 1950-56	1950-56	471	3.7% 2.5 Kgms	1% 1.5% 2.5 Kgms, & over.	6.7% .51% in Cephalic.	1	4.8%	1	25%. Hospital rate: 9.0%.

Varner 1851-60 228 Primits 215% 228% 0.28%			-								
Compared and 1961-60 1167 18.4% 3.85% Compared and and a convention of thirds 2.89% Compared and a convention of the conve	Varner	1951-60	Above 2.5 Kems.	3.1% In 211 vaging	2.9%	5.7% Only one of 7 with	0.33%	7.45%	2.98%	1	
Believe and 1985-96 1767 184% 3.85% CSee 2-10 years				11000	activation.	cerebral damage	deliveries.				ATT
Design and 1961-60 1767 16.4% 3.65% 2.64% Uncorrected at 11.17% 6.26% Redding			2			7 2					and the same
Suppose and 1852-56 Above 25 Kgms. 418.7% 34.7% 1.0.7%	Duggan and Redding	1951-60	1767	16.4%	3.65%	2.64%	3.5% Uncorrected all reportable births	11.71%	6.26%		
Sabin 1982-56 244 Prints 1987 73% — 49% — 186% Reischer and Sicher and Townsend Isseher and Townsend Complicated 200% 224 21/19% — 11/4% — 49% — 186% Townsend Townsend Complicated 38% 200% — 11/4% — 36 of 48 Deat complicated 200% — 37% below 200% 37% below 200% 27% below 200% 2	Boyson and Simpson	1952-56	412 Below 2.5 Kgms. Above 2.5 Kgms.	14.3% 40.8% 3.4%	3.4% 9.2% 1.0%	1		0.7%	1	29%	in clini
Baischer and 1956-57 Complicated 30,9% Cophalic. Cophalic. Cophalic S.8% Cophalic. Cophalic S.8% Complicated S.8% Cophalic C	Sabin	1952-56	244 Primis. Premature Mature	9.8% 19.5% 6.6%	7.3% 17.4% 5.0%	1	ı	4.9%	1	18.6	%
Kien 1955-60 791 Excluding non-viable only 4.5% 0.5% - 3.5% - 37% below 22	Beischer and Townsend	1956-57	234 Complicated Uncomplicated	21.79% 30.9% 3.8%	1	I	1.6% Cephalic.	1	1	36 of 48 L complicate prematuri	beaths is did due t
Trapl. 1954-61 648 Mature 18.9% 1.58% - 1.01%*-0.33%@ - -	Kien	1955-60		22.5% g non-viable		. 0.5%	1	3.5%	1	37% below	v 2250
Trapl. 1954-61 648 Mature 4.3% 1.56%		- RIII	Mature Premature In 611 vag	18.9% 35.0% ginal deliveries	only.						
Changehung	Trapl.	. 1954-61	648 Mature Premature	4.3% 26.27%	1.56%	11	1.01%*-0.33%@ 25%-14.54% * Uncorrected; @ Corrected.	11.48%	3.0%	21.3% Pre	mature.
Trolle	Changchung	1	1	5 Lbs. over	3-8 times that in cephalic.	ı					
Ajit Mehta — 3.24% in 185 ver— 50% in breec tex presentations ful version in tex; previous 12.63% and respectively.	•	1.	Above 2.5 Kgms.		35 times vertex.	1		1	1	1	
ful version in tex; previous 12.63% and respectively.	,	1	1-2 Agms.	36.6%	11	1	16% Vertex. 3.24% in 185 vertex tex presentations	-1-	1	50% in b	reech.
										ful version tex; previ 12.63% au respective	ously ad 4.0%

TABLE VII
Percentage of Success in Version
Primiparae

	Dally ¹⁵	With ana	aesthesia		M = 6 4-
Weeks	without anaesthesia	Neely ³⁶	Peel & Clayton ³⁷ All	With extended legs	% of sponta neous version James White
32	93	80	100	100	4
33	100	66	}	100	
34	84	50	86	73	42
35	83	66	}	.0	27
36	57	40	75	59	15
37	57	57	}	33	12
38	55	50	73	1 2 2	4
39	75	33	}		
40					
41					
42			21		
		Multip	arae		
32	100	100	}		
33	100	100	}		
34	91	100	80	80	36
35	100	80	}		18
36	78	66	93	87	16
37	80	80	}	01	15
38	100	100	77		10
39	100	100)	112	5
40	66	75			
41					
42					

Beischer and Townsend have shown that by external cephelic version, the incidence of breech can be reduced from 43 per thousand to 27 to 34 per thousand. The incidence of uncomplicated breech is reduced from 20 per thousand to 7-10 per thousand. The incidence of complicated breech (i.e. with prematurity, placenta praevia, contracted pelvis or foetal death in utero) is not altered.

Ikle' in 620 primiparae and multiparae claims to have reduced the incidence of breech to 0.64% from the usual 3%, when version is not attempted. The risk to the foetus and/or to the mother was negligible. Repeated external version following the

technique of Stevenson at weekly or shorter intervals are preferred to the use of anaesthesia.

There is a significant note in the article of Chamanlal and Ajit Mehta that in 1941 all external versions before 32nd. week were successful while 25% of these which were attempted after 32 weeks were unsuccessful.

In a way all authors accept this when they say that though versions earlier would be more successful they would again turn quite often.

Most authors also agree that breech with extended legs particularly in a primipara is difficult to turn.

Though I have no experience. Kulshreshtha's suggestion of trying to flex the child before attempting version deserves careful consideration.

I humbly submit that some of the cases, in which we would find the child not so freely movable, are likely to have extended legs or those with some minor uterine abnormalities. By waiting for the rigid rule of 32 weeks or longer, we take them into the category of the 3-4%, which will not turn and remain as breech.

On a perusal of text books, one finds that with the very notable exception of Eastman and of Tenney most authors agree that gentle attempts at version should be done. Mudaliar and Solomons advise it in primiparae but not in multiparae. Many of the authors are against version under anaesthesia.

Browne, Chasser Moir, Drew Smythe, Beck and Rosenthal, Titus, Atlee, Cavanagh, Robert Wilson, Clay, Gibberd, Douglas G. Wilson Clyne. Douglas and Stromme, Greenhill, Queen Charlotte's, Gustafson recommend version. I again repeat that turning a child, when we find it no longer moves very freely inside the uterus, makes manipulations easy and more gentle. Besides, it obviates the need for giving anaesthesia.

Even if it recurs, the chances of being successful in the second attempt are great as pointed out by Chamanlal and Ajit Mehta and seen from our figures. Besides in the recurrences in Chamanlal and Ajit Mehta's series 12 occurred at 35 weeks and over so that the chances of recurrence are there even at that stage.

Another very important reason is pointed out by Chamanlal and Ajit Mehta. By doing version, in the successful cases, the prematurity rate dropped from 12.63% in breech to 4% in those that became vertex. Ward and Parson point out that routine version may reduce prematurity.

Jackson also states a higher incidence of premature fragile babies exists with breech than with vertex presentation.

If this is correct, it is very wrong, as Chamanlal and Ajit Mehta point out, to exclude premature infants in calculating mortality due to breech. Besides, it is a very strong argument in favour of early version, prematurity is encountered in from 15.39% of breech cases. Please see Tables V. and VI.

Danger of External Version

Peel and Clayton give 1.7% foetal mortality in their 236 cases of version under anaesthesia, which include 2 definite and 2 uncertain cases, the remaining 10 cases were: 3 gross congenital anomalies, 3 cases of tentorial

tears in the subsequent labour, 1 case where foetal heart was heard for 6 weeks after version and during 48 hours of a long first stage of labour, one case of hemolytic disease, one case of asphyxia during breech delivery and one case where foetal heart was heard for several weeks after version and no abnormality of the placenta or cord was found at birth. The definite deaths due to version were due to prolapse of the cord, one case, and compound presentation feet and head. All were difficult cases of version, where version without anaesthesia had failed.

He makes a special comment on Wrigley's description of 13% still-births which give no details of the cases.

He quotes Siegal and McNally (1934) Thornhill 1936, Bartholomew, 1927, Gibberd 1927, McGuiness 1928, Macafee and McClure 1937, Ryder 1943, Trubkowitch and Archengelsky Newell 1941, total 1851 cases with 32 deaths. If we exclude Newell's 785 cases with 24 deaths, there remain 1066 cases with 7 deaths or 0.7% foetal mortality.

Hay quotes Macafee and McClure who give 0.74% for their figures, 2% for Gibberd, nil for Allen 2.2% for Sloan Hospital for Women and 5% for White, all versions without anaesthesia.

For version under anaesthesia, they give Peel and Clayton's mortality 1.7% with a correction to 3.8% to include infants lost afterwards in labour. This is very difficult to understand (see Peel himself quoted above). They give Wrigley's 13%, for Freeth and Mac Vine they give 1.4% corrected to 2.3% and for

Newton 2.6% corrected to 7.1%.

Guyer and Heaton also state that a carefully performed version is not associated with any foetal mortality.

Chamanlal and Ajit Mehta say that in no instance of external cephalic version was vaginal bleeding, rupture of membranes or death of foetus in utero noted.

When they compared loops of cord round the neck, and knots in the cord in cases of vertex presentations with those in which version was performed, they found the percentage to be 17.4% in vertex and 11.35% in cases who had version and delivered as vertex.

Though we do not claim to have records, our impression confirms the observations of Chamanlal and Ajit Mehta.

The opponents of external cephalic version suggest that the perinatal mortality of breech in a good teaching hospital with facilities including preferably two senior residents, and a good neonatal paediatrician, is not higher than vertex.

Tables V and VI show that this is not true. It is also argued that if all breech cases are turned, the obstetrician would lose the art of delivering a case as breech.

I submit that recent trends with caesarean section rates, soaring up to 10-20%. show that we are not developing the art of breech but yielding to the temptation of using the now much safer abdominal delivery. However, no one has yet been able to bring abdominal delivery in so far as mortality, morbidity and future obstetric career is concerned to the safety of normal vaginal delivery.

Besides the comparisons are often

so strange. So many factors are taken to exclude foetal deaths in breech and even with a very high caesarean rate. That corrected foetal mortality is compared to the more or less gross foetal mortality of all infants sometimes of infants presenting by vertex. A perusal of the figures just presented will convince anyone that breech presentation is, even in the best hands, associated with a much higher (1) foetal mortality, (2) morbidity and (3) prematurity rate.

Before excluding prematurity, one must disprove the contention of Chamanlal and Ajit Mehta that breech cases when turned to vertex have a reduced prematurity rate at delivery. It is not fair to exclude cases of prolapse of the cord as it is known to be more frequent in breech than in vertex. If congenital malformations and other conditions are to be excluded, they should be excluded in vertex presentations also.

One must remember that in breech, there is an inherent difficulty.

As the head descends into the pelvis in breech, the base of the skull which cannot mould comes first. In vertex, the vault which can mould descends first. Besides whatever moulding has to occur, must occur in 10-12 minutes. Thus, with any minor degree of disproportion, whether it be in a primipara or a multipara the head has no chance to mould and come out as it might in vertex presentation. Any obstetrician will grant that, with increasing weight of the baby, even a multipara may exhibit minor degree of disproportion which may not have occurred in a previous labour. We force all these cases of minor disproportion to undergo a caesarean by continuing them as breech.

By turning them early, we turn them easily, more definitely and without any need of anaesthesia. If we are losing the art of craniotomy, decapitation, perhaps even internal version, the day may come when losing the art of delivering a breech case may not be a great loss as these cases will be very few.

In backward countries where women often insist on delivering in smaller villages, on traditional grounds of delivering with their parents, the reduction of breech deliveries will mean a great advantage.

To prove his contentions of not turning, a conscientious obstetrician must conduct a sufficiently large number of breech deliveries, without excluding premature labour and cases of cord prolapse and without performing more caesareans than in his practice he does for vertex presentation. He must submit his results after observing the infants long enough to ensure there is no cerebral damage due to child-bearing, nor any serious injury in any part of the child's body. He must also prove that this art can be handed down to his pupils in sufficient numbers.

In its absence, we must do a version. If we agree to do it, I feel the data presented do suggest that we should do it early enough to succeed in at least 95%, if not 100%. Besides, this will make it more easy, more gentle and therefore, absolutely harmless.

Addendum

From the papers just presented it will be noticed that the perinatal

mortality in our country is much This is evidently due to lesser employment of caesarean section and higher incidence of neglected The corrected and gross mortalities are Das 5.3% and 18.5%, Kirloskar 6% and 20% Rajratnam 6.3% and 35.7%, Lahiri 8.4% and 37.5%, Masani and Kohiyar 8.7% and 31.8%, Nagen Roy Chodhari 9.06% (gross for vaginal delivery), Mukherjee 9.3% and 40.4%, Sumitra Rathi corrected primipara 9.9% and multipara 14.1%, Rajani and Phatak 11% and 40%. Ramani Shivraman 13% and 22.78%.

It must be remembered that in all figures Indian and western, the mortality need not necessarily speak for the efficiency of the author and his team because apart from varying frequencies of neglected cases, there is the factor of varying methods of correction applied to arrive at a corrected perinatal mortality and varying incidence of caesarean section.

Summary

A retrospective study of 241 cases of breech presentation from the author's private clinic is presented. In 59 primiparae 6 delivered as breech 18 had spontaneous versions and in 35 external cephalic version was done 85.5% between 24-32 weeks, 6% between 32 and 34 weeks and 8.5% between 35 and 36 weeks, 12 patients had version again 66.6% before 32 weeks and only 33.3% between 35 and 38 weeks.

In 182 multiparas 4 delivered as breech, 28 had spontaneous version and 150 had version performed; in 78% before 32 weeks, 90% before 34 weeks, 96% before 36 weeks and only

4% from 37-40 weeks. 33 of the 150 had repeated versions i.e. only 22%, 85% of the versions done twice and 66% of the versions done three times were before 32 weeks.

The periods at which spontaneous versions occurred are specified.

Only those who came late, or where there was a mistake in diagnosis or who were not turned because of toxaemia or hydramnios, delivered as breech.

A review of perinatal mortality and morbidity and successes and dangers of external cephalic version are given.

A plea is made for early external cephalic version, when it is more easy, more gentle and more safe, in view of the ralatively much higher foetal mortality, morbidity and also greater occurrance of prematurity in breech cases, if a fair and proper assessment is made. Caesareans should not be used to hide the foetal mortality after leaving breech cases as such.

Every obstetric patient should be seen once a fortnight up to six months, once a week from then till she delivers. External cephalic version should be done whenever the child does not move about easily and very freely inside the uterus, without waiting for a specified 32 to 34 weeks and then finding it impossible to turn. In the vast majority it is advisable to turn before this period.

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