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SYMPHYSIOTOMY: A RE-APPRAISAL

J. A. HOFMEYR,† *Cape Town**

This is an account of a personal re-discovery of symphysiotomy, and more especially a plea for wider instruction in the role of symphysiotomy and its *limitations* in obstetrics, in order to help others.

The teaching in some medical schools recently was that 'symphysiotomy is a procedure only mentioned to be condemned'. Pubiotomy was referred to as preferable, but needed special instruments. About both, warnings were uttered about chronic sacro-iliac strain and waddling gait as sequelae.

It is necessary first to describe the circumstances in which a district medical officer may find himself in an African territory. It is in this context that the theme is tendered.

The district in question is several hundred square miles in extent; ranging from one to several thousand feet above sea level. The population is estimated to be several score thousand Africans and a negligible percentage of Whites. The nearest proper Government hospital is several score miles away over gravel roads which are often impassable in the rainy season. There are two hospitals: one, a mission hospital having its own doctor, the nearest colleague, is nearly 30 miles away. There is a daily bus service to all main villages, and a rural 'party-line' telephone system.

The local hospital of 50 beds has the part-time services of the district medical officer for several hours daily. It is staffed by a few White and African State-registered nurses, (who are also registered midwives), assistant nurses, and student nurses. There is an ambulance and a theatre equipped to cope with most emergencies, from amputations to a ruptured ectopic pregnancy.

In the absence of either an assistant or anaesthetist, extensive use is made of local and regional anaesthesia. Major operations are therefore only performed in an emergency.

At the local hospital the medical officer sees only those obstetric patients beyond the scope of the midwives. These are nearly all patients with failed trials of labour brought in late by ambulance from some witch-doctor in the hills.

During the last 2 years, during which period the symphysiotomies were done, there was a total of 550 deliveries including 6 caesarean sections, 12 forceps deliveries, and 17 symphysiotomies.

The first symphysiotomy was performed on a patient who had been in labour for 10 hours in the second stage when I was called to see her. The head had been visible at the vulva for 8 hours. There was foetal and maternal distress. The head was so tightly impacted that forceps could not be applied to the narrow outlet. The patient was febrile. With some hesitation arising from knowledge of the condemnation of the procedure, a symphysiotomy seemed the only possible course to adopt. With great caution I started to translate the word 'symphysiotomy', my only knowledge of the procedure, into action. Under infiltration with a little local anaesthetic the symphysis was literally cut, using what appeared to be the safest instrument, a solid-bladed scalpel. The incision was $\frac{1}{4}$ inch long, vertically downwards from just below the upper border of the symphysis. Progress was palpated with the left little finger in the wound from time to time. The patient had been placed in the lithotomy position with the stirrup supports turned inwards to prevent too sudden or too wide a separation, which I feared might affect the sacro-iliac joints. (At that stage I was not aware of the much more real and immediate danger to the bladder and urethra.) When sufficient had been cut, the symphysis was gently levered open to 2 cm.

It then opened to 4 cm. on its own when the inert uterus immediately resumed regular contractions to deliver the living child, without forceps.

It appeared to be too easy and simple a procedure. The contraindications and dangers were learnt later. The standard textbooks on midwifery in my possession were not very helpful, nor were my colleagues, whose telephoned advice was unenthusiastic.

The accompanying Table (Table I) calls for special comment upon a few of the cases, and general remarks follow where appropriate.

Case 3

This patient with brim disproportion needed forceps to effect delivery of the 9-lb. baby. In the process the symphyseal gap widened suddenly beyond the safe 3 - 4 cm. to 6.5 cm., resulting in a rending of the arcuate ligaments and a lateral tear of the bladder. Immediate repair was done and an indwelling catheter inserted for 14 days.

Pubic mobility necessitated belt-strapping of the pelvis. A padded leather strap was effective. The patient was discharged well, after a month, and had no complaints on follow-up 6 months and a year later.

After this the next few patients were strapped and confined to bed for 3 weeks, but this was ignored as unnecessary by those patients whose gap had opened to 4 cm. or less. They had loosened their straps and were up within a week without any ill-effects.

On all but a few, a late follow-up was done at 6-monthly intervals by using the good offices of the authority of the Assistant Commissioner to persuade the patients to attend for examination. Where necessary their fares were paid. They were examined for backache, stress incontinence, and their ability to walk, run, and jump. The symphysis was palpated and the degree of movement was estimated clinically by observing them

* Previously: District Surgeon, Nkandhla, Zululand.
† Member of the College of General Practitioners.

TABLE I. SEVENTEEN SYMPHYSIOTOMIES, ALL PERFORMED IN FAILED TRIALS OF LABOUR. (CLINICAL PELVIMETRY IN CM.)

Case	*Inter-cristal*	*Inter-spinous*	*Ex. conj.*	*True conj.*	*Outlet*	*Birth weight lb.*	*oz.*	*Indication*	*Width symphyseal gap opened in cm.*	*Complications*	*End result*
1	23	19·5	18·5	9·5	Small	7	12	Outlet delay	4	Nil	Good
2	24·5	21·5	19	10	Average	6	8	P. occipito-post.	2·5	Nil	Good
3	25	21	17·5	+ 7·5	Small	9	—	High head. Brim disproportion	6·5	Vestibular tear and torn bladder satisfactorily repaired	Good
4	24·5	21·5	18	9	Average	6 5	— 8	Mat. distress. Twins dead, undelivered	2·5	Twins died owing to prolapsed cords	Mother fine
5	24	23·5	17·5	+ 7·5	Small	7	8	Brim and outlet delay	4	Nil	Good
6	23·5	21	17·5	+ 7·5	Small	7	—	Brim and outlet delay	4	Nil	Good
7	23·5	21·5	19	10	Small	6	12	Outlet delay	3	Nil	Good
8	22	21	20	11	Small	6	12	Distress and outlet delay	2·5	Nil	Good
9	23·5	19	17·5	+ 7·5	Average	6	12	High head	4·5	Nil	Good
10	24·5	23·5	19	10	Small	6	8	High head and outlet delay	6·5	Vestibular tear, gross haemorrhage	Good
11	23·5	22	17·5	+ 7·5	Very small	7	—	Extreme eclampsia	6·5	Temporary unstable pubic symphysis	Good
12	24	21·5	18·5	9·5	Small	6	12	P. occipito-post.	4	Nil	Good
13	24	22	17·5	+ 7·5	Very small	6	8	High head	7·5	Vestibular tear and tear of bladder. Unstable pubic symphysis	Vesico-vaginal fistula
14	23·5	21·5	17·5	+ 7·5	Small	7	—	Outlet delay	4	Nil	Good
15	25·5	23	19	10	Average	10	12	Previous caesarean	5·5	Nil	Good
16	25	23·5	20·5	11·5	Average	6	8	Breech	2·5	Nil	Good
17	24	22	17·5	+ 7·5	Small	10	—	P. occipito-post.	4·5	Nil	Good

whilst climbing a few steps. No differences were found that were not present in a similar group of normal mothers also examined.

Case 10

This patient had only 1 cm. difference between her intercristal and interspinous diameters. She also had a small outlet. There was gross maternal distress after many hours of delay in the second stage, and the foetal heart was *not* heard; forceps were therefore also used. Unfortunately the arcuate ligaments tore with the widening of the gap, resulting in gross haemorrhage from a vestibular tear. However, the baby *was alive*, and both mother and child did very well.

Case 11

This eclamptic patient was brought in by ambulance from about 30 miles away. She was unconscious and had fits every 2 minutes. The blood pressure was 185/140 mm. Hg between the fits. A catheter specimen of urine was loaded with albumin. There was no consent for operation and it would have taken another hour to prepare for a caesarean section. She was a small woman, only 4 ft. 8 inches tall. A symphysiotomy permitted the foetal head to engage and live delivery was effected by forceps within minutes of her arrival. In spite of adequate strapping it was 6 weeks before her pelvis was stable enough for her to walk normally. The hypertension and albuminuria became normal within 2 weeks of delivery on appropriate treatment. Late follow-up was normal. This patient was simply lucky to escape serious trauma and in retrospect should have had a caesarean section.

Case 13

This is the only really unfortunate maternal case of the series. The patient went into trial labour in hospital. Her

small outlet, especially, was known beforehand. The head remained high after prolonged labour, but consent for interference was withheld until there was maternal distress. A symphysiotomy was then done and the gap opened at first to about 3 cm. and spontaneous delivery was expected. However, there was no progress for hours when increasing distress necessitated further action. Fundal pressure advanced the head sufficiently for mid-forceps, which were used gently, but during a satisfactory advance, a sudden contraction widened the gap to over 7·5 cm. with a tear of the ligaments extending along the right antero-lateral aspect of the bladder for about 2·5 cm. The baby was fine. Immediate repair was done and an indwelling catheter inserted. After a few days the catheter came adrift, but I was not available to replace it until the bladder had become distended and the sutures had given way. An attempt at further repair failed on account of friable tissue and a low-grade infection, despite antibiotics. There was great mobility of the pubes, but this slowly returned to normal after about 3 months. The vesico-vaginal fistula was closed later by a urological and gynaecological team at a larger centre.

It was only at this stage that I was able to obtain copies of Greig's[1] splendid review of the subject, and Zarate's[2] booklet.

It appears that I had empirically arrived at the same degree of cut that Zarate advises, by using the method described above, dividing the cartilage but leaving most extra-capsular structures intact. In essence Greig effected much the same, but he employed a rather more elaborate surgical approach and also usually used spinal anaesthesia in his own series. Being alone I purposely tried to avoid spinal anaesthesia and caesarean section wherever possible. However, whenever caesarean section became absolutely necessary the patients were given spinal anaesthesia, except for 2 or 3 very shocked patients who had sedation and local infiltration only.

The double fall in blood pressure when spinal anaesthesia is used in obstetrics is too well-founded to be ignored, even when used with prophylactic hypertensives.

The last 4 patients had the benefit of my 'reading-up' the subject, but it was not until treating cases 16 and 17 that I had the courage to use the 'blind' method of Zarate — the 'subcutaneous partial symphysiotomy'. I can, however, recommend it as entirely satisfactory, and the simplest of all techniques.

DISCUSSION

From this small series it has become evident that symphysiotomy is a procedure in its own right with its own special indications and limitations. It appears to be a substitute for neither caesarean section nor forceps, and it seems in retrospect that a case was badly selected if forceps became necessary. It is certainly not easy to select the ideal case. Symphysiotomy should be contraindicated when more than very minor degrees of brim disproportion are present.

It is an ideal procedure in cases of small outlet in an otherwise fair pelvis, and in cases of malrotation (especially failed manual rotation).

There is no doubt that the procedure can be life-saving, and in the above series the only mortality was the loss of twins caused by prolapsed cords unrelated to the symphysiotomy procedure. From the Table it will be noticed that the symphyseal gap opened too widely chiefly in those cases where the true conjugate was less than normal; hence I would suggest an absolute lower limit of, say, 8·5 - 9 cm. for the true conjugate.

SUMMARY

The necessity for symphysiotomy in remote rural obstetric practice is evaluated as an essential and sometimes life-saving procedure.

A small series of 17 cases is reviewed with special comment upon a few of them.

Certain conclusions are drawn and set out above, especially with reference to the lower limit of the true conjugate for the procedure.

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