THE OCCIPITO-POSTERIOR POSITION

A REVIEW OF 415 CASES

BY

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The problem of the occipito-posterior position and its influence upon delivery is one of the hardy annuals of obstetric discussion and literature. The excuse for this addition to the many articles upon the subject is that the figures vary materially from most of those published. The gloomy assessment of the results of this complication of labour presented by Douglas Miller in 1930, and endorsed by Chassar Moir in his address at the Annual Meeting of the British Medical Association in 1938, is not, in the experience of our New Zealand clinic, justified. It may be that we are fortunate in the type of well-nourished hard-working women who constitute the great majority of our patients, and also by the fact that over 80 per cent. of deliveries in New Zealand are conducted in public or private hospitals.

This review is of 3,700 deliveries which resulted in 3,743 infants. Among these were 415 cases of occipito-posterior positions. By this is meant orthodox occipito-posterior positions and not those better designated as occipito-lateral, in which the sagittal suture lies in the transverse diameter of the pelvis. These are always recorded, and they have been omitted from this survey. The terminations of the deliveries are placed in three groups which together comprise the total number. There have also been several cases complicated by disproportion, which were dealt with by abdominal delivery; these are not included.

Group 1.—Cases delivered spontaneously or with the assistance of forceps without rotation and with the face to pubes.

Group 2.—Those which rotated spontaneously to the occipito-anterior position and were delivered spontaneously or with the assistance of forceps.

Group 3.—Those which required manual rotation. All but two of these were delivered with forceps; the two exceptions delivered themselves spontaneously after prompt descent on to the perineum. Included in this group are two cases of rotation with forceps after the method of Scanzoni.

It has been suggested that a factor in the persistence of the occipito-posterior position is the size of the child and of the pelvis: a small child or a large pelvis tends to hinder rotation of the occiput, because of the slight impingement of the head upon the pelvic floor. The average weight of the children in my series does not substantiate this, as there is no material difference in the weights in the three groups. The average weight of the infants born face to pubes was 7 lb. 4 oz., of those which rotated spontaneously 7 lb. 9 oz., and of those manually rotated 7 lb. 5 oz. It is difficult to believe that the addition of 5 oz. could determine a spontaneous rotation of the occiput. The dangers associated with non-rotation of the head were tabulated by Miller in 1930 as follows:

	Termination	
	Spontaneous Forward Rotation	Failure to Rotate
Maternal mortality	Nil	2.0%
Foetal mortality	2.7%	22.3%
Puerperal morbidity	6.5%	22.3%

Results in the Present Series

The results have been arranged in a number of tables which indicate the salient features and therefore need little comment.

TABLE I.—*Mode of Delivery*

	No.	Primiparae	Multiparae
Face to pubes	121 (30%)	33 (27%)	88 (73%)
Spontaneous rotation	209 (50%)	63 (30%)	146 (70%)
Manual rotation and forceps	85 (20%)	45 (53%)	40 (47%)
	415	141	274

The spontaneous rotation rate of 50 per cent. is lower than that usually claimed, and is offset by the higher face-to-pubes rate of 30 per cent. Parity appears to play little part in the aetiology of the first two groups, as the incidence of primiparae is very similar, and the predominance of multiparae in both groups does not support the contention that laxity of the pelvic floor may adversely influence the rotation of the occiput. The primiparous and multiparous components of the third group are approximately equal—a finding that suggests a common factor such as the anthropoid and android pelvises described by Caldwell and Molloy. This, however, is disproved by the fact that the obstetric histories of the multiparae do not show any tendency to repeated occipito-posterior positions.

TABLE II.—*Forceps Delivery*

	No.	Forceps
Face to pubes	121	18 (14.9%)
Spontaneous rotation	209	29 (13.9%)
Manual rotation	85	83 (97.7%)

Groups 1 and 2 show little difference in forceps rates, but they are approximately 100 per cent. higher than the rate for the whole series of 3,700 deliveries, which is 8.5 per cent. This is in some part due to the fact that labour was terminated artificially to prevent undue exhaustion to the mother or hazard to the child. As already mentioned, it is our practice to augment manual rotation with immediate delivery with forceps.

TABLE III.—*Maternal Mortality and Morbidity
(B.M.A. Standard)*

	No.	Maternal Mortality	Maternal Morbidity
Face to pubes	121	Nil	1 (0.8%)
Spontaneous rotation	209	Nil	3 (1.4%)
Manual rotation	85	1 (1.2%)	1 (1.2%)

For the whole series of 3,700 deliveries the figures are: maternal mortality 8 (0.21%); maternal morbidity, 38 (1.03%).

The maternal mortality and morbidity rates show little difference from those of the series of 3,700 cases. The one maternal death was only indirectly due to the delivery. This patient suffered a post-partum haemorrhage for which she was, after its control, ordered a transfusion. Although this was carried out with all the usual care of direct and indirect blood typing the patient died suddenly, with all the phenomena of incompatibility of blood. The morbidity figures may appear unusually low, but our experience of puerperal morbidity generally has been very fortunate, and is reflected by the fact that for some years the puerperal sepsis death rate of New Zealand has been the lowest in the world. The system of notification is thorough and comprehensive, and the Department of Health's report for 1938 reveals that, for the twelve months covered, the sepsis death rate was 0.54 per thousand live births. It is of

interest to notice that the intervention occasioned by manual rotation did not result in any material increase in morbidity.

TABLE IV.—*Infantile Mortality*

	No.	Stillborn	Neonatal Deaths	Total
Face to pubes . . .	121	4	4	8 (6.6%)
Spontaneous rotation . .	209	6	2	8 (3.8%)
Manual rotation . . .	85	3	1	4 (4.7%)

The series of 3,700 deliveries yielded 3,743 infants, including 108 stillborn and 47 neonatal deaths: total, 155 (4.2%).

The infantile mortality compares favourably with the average for the whole series of 3,700 deliveries; in fact, it is slightly better of infants that spontaneously rotated. Taking the face-to-pubes group and the manual-rotated group—that is, all cases that failed to rotate spontaneously—the infantile death rate is 5.8 per cent. It is difficult therefore to understand Miller's figure of 22.3 per cent. in similar types of cases.

TABLE V.—*Average Duration of Labour (Hours and Minutes)*

	Average for Occipito-anterior Deliveries		Face to Pubes		Spontaneous Rotation		Manual Rotation	
	Stage 1	Stage 2	Stage 1	Stage 2	Stage 1	Stage 2	Stage 1	Stage 2*
Primiparae . .	13 0	1 57	21 0	3 0	14 12	2 27	18 4	4 0
Multiparae . .	6 50	0 42	6 6	1 0	8 06	0 50	9 8	2 0

* Before forceps.

The average duration of labour in primiparae shows an expected increase in both the first and second stages, but there is little difference in the multiparae except in those that required manual rotation of the head.

Management of Occipito-posterior Positions

Years ago when I became especially interested in obstetrics I asked an old and experienced colleague how he treated occipito-posterior cases. He replied, "I give them morphia," and "What then?" I asked. "I give them more morphia," was the reply. Further persistence evoked the same response, "More morphia." In this axiomatic advice there is much if not the entire truth. The moral is that these cases should be left alone as long as the condition of the mother and foetus permits or until a careful examination reveals that the progress of labour is definitely at a standstill.

It will be seen that in our experience 80 per cent. of cases either rotate spontaneously into the occipito-anterior position or are delivered face to pubes without undue risk to mother or child. The remaining 20 per cent. require manual assistance to rotate or to complete a rotation which is checked by impingement upon the ischial spines. Cases classified at the onset of labour as occipito-lateral may come to a standstill because of the arrest of the head by the ischial spines and with the sagittal suture still in the transverse diameter of the pelvis; but there is no doubt that the head may, at the onset of labour, be definitely in the occipito-posterior position and its attempt to rotate be checked in the transverse diameter of the lower strait of the pelvis. The principal factor causing this is imperfect flexion of the head, which not only throws a longer diameter of the head across the pelvis but also results in a presentation the plane of which is a long oval instead of the usual circle. Careful examination of those cases in which arrest occurs will invariably reveal the fact that

the anterior fontanelle can be readily palpated, and that therefore a cephalic diameter, the occipito-frontal, of four and a half inches is engaged. Confirmation can be obtained by tracing the sagittal suture directly or obliquely backwards to the posterior fontanelle and by palpation of an ear.

It is not, as a rule, difficult to rotate the head so as to bring the occiput to the front, but there are two points in the procedure which are important. The head must be initially disengaged by pushing it upwards and the hand so applied that after rotation it is apposed to the left side of the pelvis, where it should remain until the left blade of the forceps is applied. This last manœuvre prevents a swing back of the head which may occur as the result of torsion of the neck. The rotation should always be assisted by manipulation of the body, by the unoccupied hand, through the abdominal wall. Occasionally it may be necessary to pass the hand beyond the head and actually rotate the child's body by pressure on the shoulder.

Trepidation when faced by an occipito-posterior case becomes steadily less with experience, which permits delay within the limits of safety—a period not easily determined by the inexperienced, who, through their lack of knowledge, are led to intervene too soon.

REFERENCES

- Miller, D. (1930). *British Medical Journal*, 1, 1036.
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REPORT ON A CASE OF PSITTACOSIS

BY

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This report deals with a case admitted to hospital with the diagnosis of lobar pneumonia. The history and the clinical findings on admission were most suggestive of typhoid fever, a conclusion which was not supported bacteriologically. After other causes for the pyrexia had been excluded, psittacosis or miliary tuberculosis alone remained. Blood tests confirmed the diagnosis of psittacosis. The following is a clinical report of the patient's progress until his discharge from hospital.

Case Report

The patient, a man aged 69, stated that his illness began suddenly on November 6, 1939. He described it as an attack of "the shivers," and thought it was a recurrence of malaria, which he had had thirty-six years previously. He remained in bed, slightly delirious, until November 9, when he got up feeling better, but still indefinitely unwell. A dry cough then developed and his appetite disappeared, and on November 16 he was forced to bed again. Mild diarrhoea began on the 22nd and lasted till the 26th, when he was sent to hospital. He had no other complaints, but stated that he had lost weight. There was no feature of note in his personal or social history.

On examination he appeared ill and listless, but answered questions intelligently. He had a dry skin, dry furred tongue, clean throat, dry cough, and was slightly cyanosed. The temperature was 100° F., respirations 28, and pulse 100. There was no skin rash. His heart sounds were pure, poor in volume, regular, with occasional extrasystoles, and the blood pressure was 110/70. His breathing was free, but there was dullness on percussion over the right apex, with a diminished bronchial respiratory murmur accompanied by fine crepitations. Elsewhere his lungs appeared normal. His abdomen was doughy and distended, but no other abnormality