SOME ASPECTS OF AN ANALYSIS OF 8,701 OBSTETRIC CASES FROM A TRANSKEI HOSPITAL

DON. P. SKINNER M.B., CH.B. (CAPE TOWN)

Department of Obstetrics and Gynaecology, King Edward VII Hospital, Durban

There appear to be no obstetric figures available from the Bantu reserves of South Africa and, as these reserves have their own peculiarities of population distribution, agriculture, and economic and social factors, and primitive ideas about health, disease and childbirth, it was decided to analyse a series of obstetric cases from a Transkei hospital.

Certain aspects of a broad analysis of 8,701 obstetric cases over a period of 9½ years are now presented from the Sir Henry Elliot Hospital, Umtata.

Let it be said at the outset that many of the statistics disclosed by this analysis are far from ideal, and would probably be considered appalling for any urban area; but in the Reserves, with their many problems, one probably sees a good deal more abnormal obstetrics than in any other part of the country.

The cases have come from every district in the Transkei. There has been no functioning antenatal clinic at this hospital and, as far as we know, no provincial hospital in the Transkei

provides a modern antenatal service. If such provision were made, the peri-natal and maternal mortality would undoubtedly decrease, but it would probably still be higher than normally accepted figures, for such reasons as the scattered nature of the population, the relative deficiency of transport and communications, and unwillingness on the part of some of the mothers to be confined in hospital. The vast majority of Xosa women have their babies at home; the more enlightened ones, and those in trouble, come to hospital.

These maternity patients present themselves for admission when in labour, or when they are in labour difficulties, whether they live 5 or 70 miles away. Thus a woman in labour with some difficulty or other has to consult her husband or relatives about going to hospital, and perhaps also a witch-doctor. The relative then has to go to the nearest trading station to telephone for a very overworked ambulance to fetch the patient. Thus there is often a considerable delay before the ambulance eventually arrives at the hospital with the patient, after traversing some very 'secondary' roads. Thus mothers are often admitted after having been in labour for 3 or 4 days.

Material. From the period January 1950 to July 1959, 8,701 expectant mothers, delivered of 9,150 babies, were admitted to the 18-bed obstetrical ward of the Sir Henry Elliot Hospital, Umtata. They were all emergency admissions. It is not known how many of them had antenatal care from private doctors or mission hospitals. All the 8,701 patients, except 186 Coloured were Bantu, chiefly of the Xosa tribe.

Normal labours. The patients who were delivered normally and had live babies numbered 6,040, i.e. 69·4%.

STILLBIRTHS AND OTHER PERINATAL MORTALITY

There were 1,104 perinatal deaths, a rate of 120·7 per 1,000 live births and stillbirths. Of these, 838 or 91·6 per 1,000, were stillborn. In a Cape Town series given by Resnick,[1] the stillbirth rate for non-Europeans was 50·5 per 1,000.

No foetal heart sounds were heard on admission in 473 of the stillbirth cases, i.e. 56·4%. 220 stillbirths were premature (26·3%).

The stillbirths are classified in Table I, from which it can be seen that 578 (69·4%) were due to mechanical stresses or hazards of labour. This is in contrast with 38·3% in Resnick's series,[1] which is to be expected under the widely differing conditions. The obvious inference here is that

TABLE I. ANALYSIS OF STILLBIRTHS

Group A. Hazards of Labour, including umbilical-cord complications, forceps extractions, ruptured uterus, Caesarean section, destructive operations, precipitate labour and abnormal presentations.	578 (69·4%)
Group B. Unknown Causes, including macerated (68) and fresh (54) stillbirths.	122 (14·8%)
Group C. Maternal Conditions during Pregnancy, including antepartum haemorrhage, pre-eclamptic toxaemia, eclampsia, syphilis and diabetes.	90 (10·8%)
Group D. Foetal Malformations, including hydrocephalics, anencephalics and others.	31 (3·7%)
Group E. Miscellaneous, including 6 extra-uterine pregnancies and 5 post-mature (?) cases.	11 (1·3%)
Total Stillbirths	832

these are *preventable* foetal deaths. Lawson and Lister[2] show a 5-times greater, and Resnick[1] a 6-times greater, stillbirth loss in emergency admissions, than in 'booked' cases. In the present series, cord complications, transverse lie, prolonged and difficult labour and forceps delivery accounted for the majority of Group-A stillbirths.

The stillbirths in Group C are less than would be expected, for there is a high incidence of chronic malnutrition in the pregnant Xosa women in the reserves; this observation applies, too, to the relatively low prematurity stillbirth rate. Possibly a fair proportion of Group B belongs to Group C. As Rh typing and Wassermann tests have not been done throughout, the number of stillbirths due to these factors is unknown. Zoutendyk[3] has shown that haemolytic disease of the newborn is uncommon in the Bantu.

The incidence of stillbirths from foetal malformations (Group D) is comparatively low (3·7%). Baird *et al.*[4] found a proportion of 15·6% in Aberdeen, and in Resnick's series[1] the incidence (2·9%) in Cape Town is low. The figure in this series would be higher, were it not for the large proportion in Group A.

There are many unexplained stillbirths, i.e. the 'fresh' stillbirths in group B ('unknown causes') where, in many instances, the foetal heart sounds are good before delivery but, a few minutes later, delivery of a dead baby is the end-result of a perfectly normal labour. This finding is also mentioned by Lister[5] in Nigeria.

MATERNAL MORTALITY

There were 51 maternal deaths, an incidence of 5·9 per 1,000 parturients. Corrected for 18 cases admitted moribund, the incidence is 3·8 per 1,000. An analysis of the maternal deaths is given in Table II. It can be seen that one-half

TABLE II. CAUSES OF MATERNAL MORTALITY

Ruptured uterus	17 (33·3%)
Obstetric shock (prolonged labour)	9 (17·6%)
Toxaemia	5 (9·8%)
Anaesthesia	3 (5·9%)
Caesarian section	3 (5·9%)
Haemorrhage	3 (5·9%)
Pulmonary embolus	2 (3·9%)
Puerperal sepsis	2 (3·9%)
Diverse *	7 (13·7%)
Total maternal deaths	51

* Congestive cardiac failure 1, volvulus of caecum 1, paralytic ileus 2, pneumonia 1, acute yellow atrophy 1, burst abdominal wound and shock 1.

of the total is due to prolonged labour and its associated hazards, one-third of the total being due to uterine rupture alone. Eclampsia accounted for only 10% of the deaths in this series. Simpson Wells[6] gives the annual non-European maternal mortality for the City of Cape Town over the 10 years 1948 - 57 as 1·15 per 1,000 total births, of which 29% are due to toxaemias of pregnancy and the puerperium.

MULTIPLE PREGNANCY

The incidence of twin pregnancy is generally accepted as 1 in 80, and the incidence of triplets as 1 in 6,000 or more. These figures certainly do not apply to the African women delivered in the Sir Henry Elliot Hospital. In this series there were 423 twin births (an incidence of 1 in 21), and 13 triplet births (an incidence of 1 in 669).

Lavery[7] reports 180 twin births in 4,625 cases, mostly Natives, at Baragwanath Hospital, Johannesburg, an incidence of 1 in 26. Lawson and Lister,[2] in Ibadan, quote an incidence of 1 in 24. However, Nixon *et al.*[8] found no signifi-

cant difference in the incidence of twin pregnancy amongst Africans as compared to a European group in an urban area in Northern Rhodesia.

In the present series, 62 of the twin pregnancies were mothers admitted with a retained twin. Excluding these cases, the incidence still works out to 1 in 24. An analysis of the twin pregnancies is given in Table III. It can be seen that 87·8% of the cases were multiparous women, and

TABLE III. ANALYSIS OF MULTIPLE PREGNANCIES

Twins	423 (1 in 21)
Triplets	13 (1 in 669)
Total multiple pregnancies	436 (1 in 20)
Eclampsia	3 } (4·4%)
Pre-eclampsia	16 }
Multiparae	383 (87·8%)
Stillbirths	126 (28·9%)
Admitted with retained twin	62 (14·2%)
Maternal mortality	5 (11·5 per 1,000 parturients)
Extra-uterine pregnancy	1 (0·23%)

that in only 4·4% of cases was there recognizable eclampsia or toxaemia. The latter figure is perhaps not a true reflection, as will be indicated later. There does not appear to be any explanation for the seemingly higher incidence of multiple pregnancy in these Africans; the incidence of infertility in the reserves appeared to be high.

OBSTETRICAL OPERATIONS

Caesarean Section

There were 640 Caesarean sections performed over the 9½-year period, an incidence of 7·4%. Nixon *et al.*[8] record the wonderfully low incidence of 0·33% in their series of 10,000 African deliveries in a well conducted clinic in Northern Rhodesia. Montgomery[9] found an incidence varying between 2·7% and 7·3% in a rural area in Southern Rhodesia, and van Dongen[10] records an incidence of 2·03% over a 10-year period in a European group in Johannesburg.

The vast majority of Caesarean sections in this series were of the lower-uterine-segment type. The indications and their frequency are listed in Table IV. Cephalo-pelvic disproportion accounted for 67% of sections performed, but quite a number in this category were done for combined reasons with disproportion as the common basic factor. Disproportion appears to be very common in the Xosa.

TABLE IV. ANALYSIS OF INDICATIONS FOR CAESAREAN SECTION

Disproportion	429 (67·0%)
Placenta praevia	52 (8·1%)
Foetal distress	47 (7·3%)
Abnormal presentation	23 (3·6%)
Previous Caesarean section	20 (3·1%)
Cervical and vaginal pathology (not VVF)	15 (2·3%)
Incoordinate uterine action	12 (1·9%)
Antepartum haemorrhage	9 (1·4%)
Vesicovaginal fistula	6 (0·9%)
Pre-eclamptic toxaemia	4 (0·6%)
Uterine prolapse	4 (0·6%)
Diverse indications *	19 (3·0%)
Total Caesarean sections	640

* Constriction ring 3, bad obstetrical history 3, foetal abnormality 3, maternal disease 3, impending uterine rupture 2, elderly primipara 2, cord presentation 2, maternal distress 1.

The group classified under abnormal presentation included brow presentation and transverse lie with a tonically contracted uterus.

Forceps Delivery

There were 521 forceps deliveries over the 9½-year period, an incidence of 6·0%.

Destructive Operations

There were 48 destructive operations performed, an incidence of 1 in every 181 labours. This is very high, but a considerable number of patients are admitted after having been in labour for 48 hours or more with an obstructed vertex presentation, or with a transverse lie and dead foetus The incidence given here is probably at least 3 times as high as any comparable European group in this country. Montgomery[9] found an incidence of 45 destructive operations in 3,275 deliveries in a Rhodesian rural area, an incidence of 1 in 73 labours. Present-day tendency appears to favour Caesarean section as being far less dangerous to the mother than the well-known hazards of certain destructive operations. In the present series, 4 ruptured uteri were discovered after destructive operations and 7 after internal podalic version. These destructive operations are one of the unfortunate aspects of obstetrics in rural areas such as this, where patients come from miles away when in difficulty with their labours.

ECLAMPSIA AND PRE-ECLAMPTIC TOXAEMIA

In an area where the vast majority of pregnant women receive little or no antenatal care one would expect a high incidence of the toxaemias of pregnancy. It is generally accepted in this country that the incidence of pre-eclamptic toxaemia is lower in the Bantu than in the Coloured or European races; however, there appear to be no comparative figures to make this perfectly clear. It is also known in this country that there are apparent geographical differences in the incidence of toxaemia and eclampsia. These two features are not explained by F. J. Browne's theory[11] of the aetiology of pre-eclampsia and eclampsia; viz. that placental ischaemia results in failure of placental oxygen-sensitive oxidases to inactivate the pressor hormones from the hyperactive adrenal cortex of pregnancy. Browne[11] states that toxaemia and eclampsia appear to be commoner in certain areas of the USA where pellagra is endemic, and suggests that deficiency of vitamin B complex is a factor in the production of toxaemia and eclampsia. Yet in the Transkei where deficiency of vitamin B complex is practically endemic, and pellagra very common, the incidence *appears* to be lower than that encountered in the European races.

In this series, there were 18 cases of eclampsia in 8,701 cases, an incidence of 1 in 483 or 0·2%, a comparatively low figure in an area where properly supervised antenatal care is minimal. There were 67 cases (0·77%) classified as pre-eclamptic toxaemia, i.e. with systolic pressure over 140 mm. Hg and/or diastolic pressure over 90, and/or albuminuria. The incidence by parity (as between primiparae

TABLE V. ECLAMPSIA AND PRE-ECLAMPSIA

	Primiparae	*Multiparae*
No. of cases	3351	5350
Eclampsia	13 (0·39%)	5 (0·09%)
Pre-eclamptic toxaemia	35 (1·04%)	32 (0·60%)

and multiparae) is shown in Table V. Unfortunately, the figures for pre-eclamptic toxaemia in this series cannot be regarded as a true reflection, for 2 reasons, viz.: (1) As there is no antenatal or follow-up clinic, and laboratory

facilities have not been available till comparatively recently, it is not known how many of these patients were cases of nephritis or of essential hypertension. (2) Case records were often incomplete, blood-pressure readings and results of urinalysis being omitted in many instances.

At Baragwanath Hospital, Johannesburg, in 4,625 cases Lavery[7] reports 16 eclamptics (0·34%) and 408 pre-eclamptics (8·8%). Is it possible that the incidence of the late toxaemias of pregnancy is lower in the rural Bantu than in the urbanized Bantu?

ABNORMAL PRESENTATIONS

In the 8,265 cases in the series (exclusive of the 436 cases of multiple pregnancy) there were 484 with abnormal presentations (5·9%). They are classified in Table VI.

TABLE VI. ABNORMAL PRESENTATIONS

Breech presentation	139	1 in 59
Persistent occipito-posterior	131	1 in 63
Transverse lie	97	1 in 85
Face	12	1 in 689
Brow	13	1 in 636
Compound presentation	13	1 in 636
Cord prolapse	79	1 in 105
Total abnormal presentations	486	

Breech presentation occurred in 139 cases, an incidence of 1 in 59 (1·7%). Of these, 32 were admitted with the breech half born, and there was a total of 68 stillbirths a corrected mortality of 25·9% (36 in 139 cases).

Persistent occipito-posterior presentation occurred in 131 cases, or 1 in 63 (1.6%). Excluding the cases that terminated in forceps delivery, there were 4 stillbirths.

Transverse lie or shoulder presentation was seen in 97 cases, an incidence of 1 in 85 (1·2%). The usual incidence is stated to be 1 in 150 - 200 deliveries.[12] As might be expected under the conditions prevailing in this area, with no satisfactory antenatal care, the stillbirth rate from this complication is exceedingly high, there being no less than 73 stillbirths (75%)—of which 8 cases were associated with uterine rupture—directly or indirectly due to usually neglected shoulder presentations. Of these 73 foetuses 28 were macerated, and in the great majority no foetal heart sounds were audible on admission.

Face and brow. There were 12 face and 13 brow presentations, an incidence of 1 in 689 and 1 in 636 respectively. Excluding the cases admitted with no foetal heart sounds audible, the corrected stillbirths rate were 25% and 15% respectively.

Compound presentation. The 13 compound presentations (1 in 636) were as follows: Arm or hand with head 11, hand and breech 1, vertex, hand, foot and cord 1. They included 8 stillbirths, and 3 prolapsed cords.

Prolapsed cord. The incidence of this accident is stated to be about 1 in 200 deliveries.[12] As might be expected, in this series the incidence is high, there being 79 cases of prolapsed cord, or 1 in 105. In 36 cases the cord was prolapsed on admission, and altogether there were 64 stillbirths resulting from this complication, the corrected foetal mortality being 36%. (The foetal mortality from this complication is quoted at between 25 and 40%.) The presentations associated with the prolapse were as follows: Vertex 47 (59·5%), breech 12 (15·2%), transverse lie 16 (20·3%), face and brow 1 (1·3%), compound 3 (3·8%).

ANTEPARTUM HAEMORRHAGE

The cases classified under this heading numbered 130.

Placenta Praevia

There were 80 cases of this condition. Unfortunately the type was not always stated, and so it was not possible to analyse the various grades of placenta praevia. Caesarean section was performed in 52 cases, and the remaining 28 were treated conservatively, by forceps delivery, version or rupture of the membranes. There were 29 stillbirths including triplets (35) attributable to this condition. In a series of cases with antepartum haemorrhage from the Cape Town institutions reported by Louw,[13] there were 48 stillbirths in 224 cases (21%).

One mother (grav. 3) with placenta praevia died, but on admission she had a blood pressure of 200/130 mm. Hg and was bleeding freely. As well as a type 1 or 2 placenta praevia, a large retroplacental haematoma was found, and she had a massive postpartum haemorrhage. She died with oliguria 4 days after delivery.

Accidental Haemorrhage

In the 50 cases of accidental haemorrhage, 34 of the infants (68%) were stillborn. This high figure is only to be expected where antenatal supervision has been minimal or non-existent, and where there is a chronic shortage of beds. The accidental haemorrhage was attributed to toxaemia of pregnancy or hypertension in 7 cases (14%), and in one case it followed external cephalic version. In 42 cases (84%) the cause of the haemorrhage was unknown. An interesting feature is that 43 (86%) of these cases of accidental haemorrhage were multigravidae.

Maternal Deaths

Two mothers died as the result of haemorrhage. One case has already been described under 'placenta praevia'. The other was a patient who had an accidental haemorrhage as part of a generalized bleeding tendency manifest as haematuria, bleeding gums, and postpartum haemorrhage following delivery. The cause of death was certified as puerperal sepsis. This case may well have been one of fibrinogenopenia, of which, however, the incidence in this series is unknown.

RUPTURED UTERUS

Rupture of the uterus seems to occur far oftener in the African than in the European. Harris and Angawa[14] (Kenya) reported an incidence of 1 in 117 births; Lavery[15,16] (Baragwanath, Johannesburg), 1 in 137 deliveries and 1 in 219 deliveries in 2 separate series; and Montgomery[9] (Rhodesia) 1 in 300 deliveries.

In the present series there were 57 cases of ruptured uterus, an incidence of 1 in 153 deliveries (Table VII); and 17 maternal deaths were attributable to this accident, a maternal mortality of 29·8%. In 51 cases the rupture was associated with a stillbirth (89·5%). The parity of the 57 cases ranged from 5 primiparae to 1 para 10. The bulk of the ruptures occurred in women between para 1 and para 5, the largest number (13) falling in para 3. The ages ranged between 20 and 44 years, the quinquennial age-group with the most cases (25) being 25 - 30. In 26 cases the uterus was ruptured before admission.

Rupture through scar. Twelve cases were associated with dehiscence of the scar of a previous Caesarean section (4 classical, 8 lower uterine segment). As far as could be

TABLE VII. RUPTURED UTERUS

Total Ruptures	57		
Rupture through scar	12	Classical	4
		Lower segment	8
Spontaneous	31		
		Transverse lie	6
		Disproportion	18
		Unknown	7
Associated with obstetric interference	14	Destructive operation	4
		Internal version	7
		Forceps	3
Maternal Deaths	17		
Following repair	7		
Following hysterectomy	7		
Before surgical treatment	3		
Associated with scar rupture	0		
Stillbirths	51		
Live Births	6		
Surgical Treatment	54		
Repair of uterus	37		
Hysterectomy	17		
Average Parity of Cases		3·4 pregnancies	
Average Age of Cases		28·8 years	

ascertained, these were mostly complete ruptures, involving endometrium, muscle and peritoneum, but this was not always stated. In 2 cases of rupture of a lower-segment scar, the bladder was ruptured as well. One of these (which I saw) showed a tear of the postero-superior surface of the bladder where it had been in close relationship to the lower-segment scar. The whole interior of the bladder and trigone were clearly visible. Both of these cases did very well with bladder repair and continuous suction drainage for 3 weeks. (In 2 other cases, not associated with scar rupture, but with rupture due to neglected shoulder presentation, the bladder was similarly torn.) Feeny and Barry[17] comment on this accident to the bladder in rupture of a lower-segment scar, and found 2 similar cases out of a total of 16 scar ruptures (both classical and lower segment). They point out that excessive or vigorous 'wiping down' or 'mobilization' of the bladder and the lower utero-vesical flap during lower-segment Caesarean section results in the formation of scar tissue from the organization of clot in this area of loose cellular tissue. Thus the posterior wall of the bladder becomes adherent to the transverse incision in the lower segment of the uterus, and coincidental violent rupture of both organs is likely to occur if splitting or tearing should begin in the uterine scar in a subsequent pregnancy or labour. These authors therefore advise that downward dissection of the bladder is both unnecessary and inadvisable in lower-segment Caesarean section.

Rupture associated with obstetric manipulation. The series included 14 ruptures discovered after an obstetrical manœuvre or operation. Of these, 4 followed destructive operations, 7 internal version, and 3 forceps delivery.

Spontaneous rupture. There were 31 spontaneous ruptures, as follows:

Transverse lie: 6 cases. These were all multiparous patients. (There were actually 13 cases in which transverse lie had been the presentation, but version had been done in 7 and rupture was only discovered after version.)

Disproportion: 18 cases. This group included 5 primiparae who had been in labour for 2 days or more with an inadequate pelvis (3 vertex, 1 breech, 1 brow). In 1 case the foetus was hydrocephalic.

Unknown causes: 7 cases, ranging between grav. 5 and grav. 10. Of these, 3 gave a history of normal previous labours.

Duration of labour. In many of these cases of ruptured uterus the duration of labour had been shorter than one would have expected, but the history of duration is often very unreliable in the Xosa. Nevertheless, one gains the impression that the uterus ruptures more easily in the Bantu than in the European. Gillman *et al.*[18] have produced experimental evidence that rats fed on certain deficiency diets become more liable to uterine rupture, and they think that deficient diet may be of some importance in the production of ruptured uterus in the Bantu.

Surgical treatment of ruptures. The policy throughout seems to have been conservation of the uterus wherever possible. The uterus was repaired in 37 cases (65%), but it was not always indicated whether the patient had been sterilized. Hysterectomy was carried out in 17 cases (30%). In 3 cases the patient died before operation. It is interesting to note that none of the scar ruptures resulted in a maternal death. This has also been the finding in other series; Lavery[16] reported no maternal deaths from 25 scar ruptures, and Feeny and Barry[17] 1 maternal death out of 15 scar ruptures. Excluding the scar ruptures in this series, the uncorrected maternal mortality rate from ruptured uterus is 37·7%.

LATE INTRA-ABDOMINAL PREGNANCY

There were 7 near-term extra-uterine pregnancies in the series, including 1 set of twins. There was only 1 foetal survivor from the 7 cases.

VESICOVAGINAL FISTULA

'Time was when a vesicovaginal fistula all too commonly followed a prolonged or difficult labour.' This statement by Chassar Moir[19] sounds very ironical when applied to our Bantu reserves, for that time still applies in these and other similar regions. In the present series a vesicovaginal fistula was found in 38 patients, 6 before delivery (these were delivered by Caesarean section) and 32 demonstrable after a difficult or prolonged labour; an incidence of 1 in 229 cases. As the majority of mothers—even after a prolonged labour—are discharged on the 3rd postpartum day to vacate a bed, the actual number is probably far higher. One of the commonest obstetrical complications met with here is in the young primipara with an obstructed labour due to an inadequate pelvis. One sees a patient who has been in labour for 2 days or more (some give a history of having had the head on the perineum for 3 days!); she is somewhat distressed and has a secondary inertia; there is usually a very full bladder, and a caput of deceiving appearance appearing at the very oedematous vulva; there is usually no foetal heart audible. Of the vesicovaginal fistulae in this series, 23 were in primiparae. All the cases had a prolonged, obstructed labour. Forceps delivery was done in 13 cases; and craniotomy in 3 cases. In 2 cases the uterus was ruptured.

DISCUSSION

It is possibly unjustifiable to leap to conclusions from figures given by one individual, particularly in this series of obstetric cases which is probably only 1/50th of the total number of maternity cases in the Transkei over the same period, and is not a random selection in that all the patients had come into hospital, mainly in emergency. Nevertheless, this small representation of the total maternal and foetal mortality, and the accidents of labour, from one hospital, shows that there is vast room for improvements. These improvements must undoubtedly take the form of many more maternity beds, better antenatal facilities, and education in matters concerning childbirth and the care of the neonate. The maternity services of any given area must surely be as good as its antenatal services. The majority of the mission hospitals in the Transkei have good antenatal clinics, but these are a drop in the ocean. In the Umtata district only, there are antenatal clinics under the Department of Public Health, but there appears to be no collaboration with the hospitals.

One of the main problems appears to be the distribution of the population. It is felt that possible methods of improvement would be as follows: (1) Three or more large antenatal clinics should be provided at the bigger centres where there are hospitals that can deal with maternity cases. (2) Smaller clinics should be provided in all the smaller towns and villages in the Transkei. They should be established either by the provincial authorities or the central government and, besides giving antenatal services, should each have about 6 beds for immediate emergencies. These subsidiary clinics should be managed by one or two full-time midwives under the supervision of either the local district surgeon or other interested practitioner in the village concerned. (3) Flying squads should be established in conjunction with the provincial hospitals in the Transkei, independent of the usual ambulance services and staffed by trained midwives, who should be instructed in the technique of intravenous therapy for use while the patient is being transferred to hospital. Such flying squads have been established in rural areas of Rhodesia[9] with some measure of success.

SUMMARY AND CONCLUSIONS

1. Some aspects of a survey of 8,701 non-booked obstetric cases are presented from a Transkei hospital, and some of the problems of maternity services in the reserves are discussed.

2. The maternal and perinatal mortality is high and, in the main, preventable.

3. The incidence of multiple pregnancy (1 in 24 for twins, corrected) is high.

4. All the admissions being of an emergency nature, the incidence of obstetrical operations (Caesarean section, forceps delivery and destructive operations) is higher than in urban areas.

5. The incidence of eclampsia and pre-eclamptic toxaemia, notwithstanding the lack of antenatal care, appears to be lower than in the European, although the figures given are possibly not a true reflection for indicated reasons.

6. The incidence of abnormal presentations generally appears to be higher than in institutions where mainly booked cases are admitted. This applies, too, to the large number of cases of ruptured uterus (57) in the series. The foetal mortality from these complications is exceedingly high. Vesicovaginal fistula due to prolonged obstructed labour is commonly seen.

7. Suggestions are made for improvements in the maternity services in the reserves.

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