FLYING SQUAD SERVICE IN SOCIAL OBSTETRICS

by

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Introduction

This obstetric service first started in 1931 in U.K. at Bellshill. In the early sixties, it dawned upon the health department of the Municipal Corporation of Greater Bombay that timely intervention by expert medical personnel, there and then, could have averted the mortality or morbidity in a sizeable number of cases.

The association of medical women of India were the first to stress the need of emergency obstetric service. As far back as 1938, Dr. Jhirad (I.R.F.A. Health Bulletin) recommended such a service in Bombay.

In 1962 a paper titled "Study of Maternal death in emergency cases of LTMG Hospital" was read by Kanitkar. This triggered the Health Department of Bombay Municipal Corporation to start investigating the maternal deaths. Out of 200 maternal deaths, 91 were directly related to pregnancy and its complications. Of these 40 died as a result of haemorrhage complicating pregnancy and abortion.

Timely first aid resuscitation and blood transfusion would have helped all these cases.

It was revealed that the deaths are common in unbooked cases than booked.

The ignorance shown by the patients and relations in the antenatal period presented most of them in a precarious condition at the very end. The transport of the patients from her home or from peripheral hospitals to a better equipped hospital in a state of shock makes her condition worst and may hasten her death. Had these patients got expert medical help at their bed side their life may probably have been saved. Hence to reduce maternal mortality and morbidity it is therefore essential that first aid measures like blood transfusion must be provided at the bed side of the patient suffering from severe shock during pregnancy or labour. Flying squad is the solution for such problems.

Material and Methods

The squad consists of a team of doctors (1 Registrar, 2 House surgeons) and staff nurse specially trained for such emergencies. The team rushes to the bed side of

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the patient in a specially equipped van (given by Red Cross Society).

Here we present a study of Flying squad maternity service from 1969 to 1979 at LTMG Hospital, Sion.

TABLE I
No. of Calls Received and Attended

Year	No. of Calls Received	No. of Calls Attended
1969	104	104
1970	100	100
1971	81	76
1972	63	63
1973	58	49
1974	39	39
1975	69	67
1976	41	41
1977	27	25
1978	26	25

The above Table shows there is a great reduction in flying squad calls in later years, 29 on an average compared to the previous 10 years—72 per year. This is because of mushorooming of peripheral hospitals with the availability of experts, blood bank and transport facilities; thus very few patients requiring the help of flying squad services.

TABLE II
No. of Calls Received from Various Places from 1969-1978

Year	Municipal Hospitals	Private Hospitals	Resi-dences
1969-73	274	95	37
1974-78	104	94	4
Total	378	189	41

There has been not only an appreciable decrease in the number of calls in the later years but also a reversal in the trend of calls. It can be seen that in the later years, the number of calls from peripheral municipal hospitals have considerably reduced due to easy availability of experts medical aid (Table II).

In this 10 years service, the flying squad received 608 calls. Most of the calls were attended and only a few were left unattended due to lack of facilities.

Reasons for not attending the calls:

Van out of order	12 calls
Blood not available	2 calls
Patient transferred before Flying Squad could start	3 cases
Patient expired before Flying Squad could start	1 case
Difficulty in finding the Hospital	1 case

TABLE III
Conditions for Which the Squad Was Called and Maternal Salvage

	No. of Cases	Morta-lity
P.P.H.	227	19
Obstetric shock	58	11
Accidental haemorrhage	93	8
Placenta praevia	26	
Retained placenta	22	
Abortion	47	2
Ectopic pregnancy	9	
Vesicular mole	1	
Pre-eclampsia Eclampsia	23	2
Rupture uterus	16	1
Inversion of uterus	6	2
Prolonged Labour	11	
Malpresentations and cord complications	12	3
Chorioamnionitis and septicaemia	7	
Anaemia	6	
Jaundice	4	
Miscellaneous (Other Medical & Gynaec. Causes)	40	2

Fifty per cent of the calls were for complications of the third stage of labour.

The other haemorrhages of pregnancy, besides 3rd stage complication, either abortions or APH, form the second largest number of calls (19%).

Most of the calls came only when the patient started bleeding profusely, i.e. atleast 1½ hours after the delivery of the baby. By the time the squad reached the patient was already collapsed from bleeding and the attempts at expulsion of the placenta by local attendants. Shock was most severe when haemorrhage occurs in addition to retention of placenta. M.R.P.s were done on few occasions, at the calling hospitals under sedation as the patients were bleeding profusely, but usually they were resuscitated and transferred to our hospital, where operative procedures were undertaken.

Maternal Mortality

We had lost 50 out of 608 patients treated by Flying squad giving a maternal mortality of 8.2% which is much less compared to the previous records of 22% in 1966.

TABLE V

Number of Blood Transfusions Given by the the Flying Squad

Year	2 & Less than 2	More than 2	No Transfusion
10 years (1969-78)	375	100	133

Of these 50, 44 patients (88%) died within 24 hours of transferring to our hospital. Shock and P.P.H. comprised 50% of cases who succumbed within first 24 hours. This shows the seriousness of the patient's condition when the Flying Squad was summoned.

Blood Transfusion

As many as 79% patients required blood transfusion on the spot. Immediate availability of blood transfusion with expert assistance in managing the cases was provided by Flying Squad.

Of the 608 patients treated by the Flying Squad, 589 patients were transferred to LTMG Hospital for further manage-

TABLE IV

Pathological Causes for Maternal Mortality in Relation to Time Interval Between the Resuscitation and Death

Pathological causes For Maternal Mortality	Total No. of cases	Time interval between the resuscitation and death			
		0-24 Hrs.	2-3 days	4-7 days	More than 7 days
Anaemia	-	-	-	-	-
Toxaemia	2	2	-	-	-
A.P.H.	8	8	-	-	-
Prolonged and Obstructed labour	-	-	-	-	-
Malpresentation & Cord prolapse	3	3	-	-	-
Ruptured uterus	1	1	-	-	-
P.P.H.	19	15	-	1	3
Inversion of Ut.	2	2	-	-	-
Obstet. shock	11	9	1	-	1
Abortion	2	2	-	-	-
Micellaneous	2	2	-	-	-

ment. The remaining patients were treated by the Flying Squad and left behind in the parent hospital after the condition of the patients stabilised and a follow up of these patients was kept. The parent hospital was then instructed to summon the squad again if required.

Comments

After reviewing the work done by the Flying Squad, there is no doubt that it has rendered and is rendering a Yeoman's service to the obstetrical practice in Greater Bombay. The calls which the squad receives are of dire emergencies as amply shown by the high mortality among the cases whom the Squad attended in the last 15 years. The maternal mortality rate including abortions for the 10 years period (1969-78) in our hospital was 6.1 per 1000 births and the maternal mortality rate in the same above mentioned period on Flying Squad is 8.2%. Timely arrival of the Squad with its blood transfusion and specific medical facilities play a decisive role in reducing maternal mortality. The service also serves an excellent training centre for medical students and nurses in emergency obstetrical practice.

In a country like ours, the Flying Squad can play a vital role in reducing the maternal mortality and morbidity. Lest we forget, the most efficient Flying Squad is only a partial guard against the dangers of unpredictable complications. A good maternity hospital is the safest place for a woman to have her baby and ideally every woman should be delivered in a hospital.

Widening the scope of antenatal care, good facilities for blood transfusion, anaesthesia, transport, better education in obstetrics and increasing the number of beds for prenatal wards will help to reduce maternal and foetal mortality and morbidity.

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Reference

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