THE PROPHYLACTIC 'SILASTIC' VACUUM CUP EXTRACTION

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SUMMARY

Prophylactic application of the 'Silastic' vacuum cup was studied in 100 primigravid women and comparison made with a 100 normal deliveries and another 100 outlet forceps applications. No second stage was allowed to last more than 45 minutes. Fewer mothers were found to be exhausted in the second stage which did not last more than 45 minutes. Maternal and foetal complications were less where the 'Silastic' cup was used, as compared to the outlet forceps. The 'Silastic' cup was found to be easy to use, safe and a versatile instrument.

Introduction

It was DeLee (1920) who warned against the ill-effects of the prolonged second stage of labour and advocated the practice of the prophylactic forceps. We have now extended it to the 'Silastic' cup.

It has been a known fact that, longer the second stage of labour increased are the chances of maternal exhaustion and the infant being born hypoxic. The old rule that the second stage of labour be terminated in a primigravida after two hours no longer holds true. No second stage is now allowed to last more than one hour.

Material and Methods

At the Nowrosjee Wadia Maternity Hospital, a prophylactic 'Silastic' cup extraction was performed in hundred primigravida. Its maternal and foetal effects were then compared to hundred primigravid normal deliveries and to another hundred primigravid outlet forceps.

The 'Silastic' vacuum cup was applied at full dilatation and when the foetal scalp was visible at the introitus. The instrument was sterilized by immersing it in chlorhexidine gluconate solution (Savlon) in 1 in 30 dilution, 20 minutes prior to its use. Negative pressure was created rapidly upto 0.8 kg/cm^2 with an electric suction, and effective traction was given during pains and the patient made to bear down. Majority of the babies were delivered in the next one to two traction pulls.

Results

In 38 mothers, delivered spontaneously the second stage lasted beyond 45 minutes. Four babies amongst those where the second stage lasted longer had low apgar scores. No second stage was allow-

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TABLE I
Mode of Delivery and Duration of Second Stage Correlate

	Second Stage Duration <45 min.	>45 min.
Silastic cup	100	—
Spontaneous delivery	62	38*

* 4 babies had low Apgar scores.

ed to exceed 45 minutes where the Silastic cup was used.

The chignon too, formed by the silastic cup disappeared quickly; only in 28 babies did the chignon persist beyond 12 hours; none beyond 24 hours.

Discussion

Mothers become exhausted beyond 45 minutes of bearing down, and hypoxia effects come to operate on the foetus (Stewart, 1984). Cardozo *et al* (1982) also have stated that when the second stage lasted beyond 50 minutes the intubation rate for babies was high, 45 minutes is therefore suggested to be a reasonable upper limit of the second stage.

TABLE II
Complications Amongst Normal Deliveries, Outlet Forceps and Silastic Cup

	Normal deliveries	% Incidence Outlet forceps	Silastic cup
(A) MATERNAL:			
Extension of episiotomy wound	3	12	4
Vaginal lacerations and tears	4	11	5
Cervical tears	0	4	0
(B) FOETAL			
Instrumentation marks	0	10	0
Ecchymosis	0	0	6
Cephal haematoma	1	4	2
Intracranial haemorrhage	0	0	0

Extension of episiotomy wounds, vaginal lacerations and cervical tears occurred less frequently as compared with outlet forceps deliveries. In the group where the 'Silastic cup' was applied fewer mothers showed signs of exhaustion.

Amongst foetal complications 6 babies had scalp ecchymosis where the silastic cup was utilized; however it bore to no significant neonatal morbidity later.

TABLE III
Persistence of Chignon

Hours	Per cent
Upto 6	67
Upto 12	28
Upto 24	0

Overall maternal and foetal complications were slightly less with the silastic cup as compared to the outlet forceps, so also was the finding of Lange (1964) who found slightly lower maternal and foetal morbidity with the metal vacuum cup as compared to the outlet forceps delivery.

A low 'Silastic' cup extraction lift out alleviates the stress and duration of second stage of labour. It no doubt reduces the apprehension of both and

avoids over stretching of the perineum. It also saves maternal bearing down efforts; and spares the foetal head from pounding in the perineum.

The 'Silastic' cup is safe, easy to use and is a versatile instrument. It takes up no room in the restricted space of the pelvis, small amounts of rotation can be assisted and its application requires no elaborate sterilization or extra analgesia.

Rejerences

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