VASICINE HYDROCHLORIDE
A NEW DRUG FOR INTERRUPTION OF PREGNANCY

(Preliminary Report)

by

R. L. WAKHLOO,* M.D.

DEVKUMARI WAKHLOO,** M.D.

O. P. GUPTA,*** M.Sc.

and

C. K. ATAL,† Ph.D.

Introduction

Vasicine, an alkaloid derived from Adhatoda Vasica (Vasaka) has been shown to possess various pharmacological actions including marked uterine stimulant and abortifacient activity in rabbits, (Gupta *et al* 1978). In vitro studies carried out on the action of vasicine on human myometrial strips, obtained from pregnant uteri at various periods of gestation, showed that it either initiated rhythmic movements on the quiescent tissue or increased the tone or amplitude or both of the contractions already present (Gupta *et al* 1979). The toxicity and teratogenic studies carried out so far have revealed that the agent is free from any deleterious side effects and the therepeutic ratio is high (Gupta *et al* 1978).

With this experimental background vasicine hydrochloride was tried for interruption of pregnancy in the humans. This preliminary report deals with the studies being conducted for interruption of mid-trimester pregnancy by intra-amniotic instillation of the drug in this institution.

Material and Methods

Twenty-five cases of mid-trimester pregnancy between 14th to 20th week of gestation were included in this study. Intra-amniotic injection of 10 to 80 mgm of vasicine hydrochloride in aqueous solution was given in a single dose. The method was considered to be successful if the patient aborted within 120 hours. In case of failure some other method was employed for the interruption of pregnancy. Abortion was labelled as incomplete if the placenta was not expelled spontaneously within 2 hours of the expulsion of the foetus and had to be removed surgically. The amount of blood loss and the clinical course of the patients was monitored carefully.

Results

Table I shows that the failure rate was

*Professor & Head, Obstetrics & Gynaecology, Medical College, Jammu 180 001, India.

**Lecturer in Obstetrics & Gynaecology, Medical College, Jammu.

***Head, Pharmacology Division, Regional Research Laboratory, Jammu.

†Director, Regional Research Laboratory, Jammu.

Accepted for publication on 4-4-1979.

TABLE I

Dose Related Response

Dose of Vasicine employed	No. of cases	Successful	Failure
10 mgm.	4	1	3
20 mgm.	3	2	1
40 mgm.	6	5	1
60 mgm.	10	10	Nil.
80 mgm.	2	2	Nil.
TOTAL:	25	20	5

high when doses of less than 60 mgm were used. With the increase of dose to over 60 mgm in 12 patients studied so far, all the patents aborted. However, the instillation-abortion time is still over 48 hours and it is presumed that this time will be cut short by increasing the dosage. The number of incomplete abortions has also been found to be directly related to the dosage employed. The bleeding was not excessive, none of the patients needed blood transfusion and no untoward side effects have been observed so far.

Comments

The experimental data accumulated on the oxytocic activity of vasicine hydrochloride, an alkaloid derived from Vasaka (Adhatoda Vasica) combined with the abortifacient action noted in rabbits tempted the authors to try this drug for interruption of pregnancy in the humans. The drug is safe, without any untoward side effects and has not shown any teratogenic action in the animal studies. Doses upto 50 mgm per Kg. body weight intravenously have been given in dogs without any mortality. Such large doses have however been associated with hypotension and vomiting.

This preliminary report deals with the interruption of mid-trimester pregnancy by intra-amniotic instillation of the drug. So far it has been tried in 25 cases. Doses above 60 mgm were given in 12 cases and all of them aborted. The instillation-abortion time has been observed to be directly related to the dose of the drug employed. So far the time is over 48 hours and we are yet to determine the optimum dose required for intra-amniotic instillation. Abortions were complete and without much blood loss. There were no untoward side effects and the drug is safe and very cheap.

Further studies are in progress and it is likely that Vasicine Hydrochloride may be the answer for the safe interruption of mid-trimester pregnancy.

The authors are grateful for the help and assistance provided by the staff of the Department of Obstetrics & Gynaecology, Government Medical College and S.M.G.S. Hospital, Jammu, and the Regional Research Laboratory, Jammu. We wish to thank the Dean and Medical Superintendent of S.M.G.S. Hospital Jammu, for allowing us to publish the data from hospital records.

References

1. Gupta, O. P., Anand, K. K., Ray Ghatak, B. J. and Atal, C. K.: Ind. J. Exp. Biol. 1978 (Communicated).
2. Gupta, O. P., Wakhloo, R. L., Sharma, M. L. and Atal, C. K.: J. Obstet. & Gynec. India, 1979 (Communicated).
3. Gupta, O. P., Anand, K. K., Sharma, M. L., Singh, G. B. and Atal, C. K.: Ind. J. Med. Res. 1978 (Communicated).