

ADMINISTRATION OF METRONIDAZOLE (METROGYL) INTRA-PERITONEALLY IN CASES OF OBSTRUCT LABOUR AND RUPTURE UTERUS DURING OPERATION

(A Study of 146 Cases)

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Anaerobic infections in obstetric cases still causes high morbidity and mortality. Role of metronidazole in anaerobic infections is well established (Willis *et al* 1977). According to Ingham 1977, it is also of value in the treatment of mixed infections, who also found that obligate anaerobes are relatively resistant to phagocytosis and are able to protect other bacteria from the process. Once anaerobes have been eliminated by Metronidazole, phagocytosis of aerobes might proceed unimpeded. Therefore, it certainly helps in conditions like post operative wound infections, peritonitis, septicaemia, puerperal sepsis, pelvic abscess, pelvic peritonitis and cellulitis. The route of administration upto now chosen is however oral or intravenous. The following trial was taken to see its value, when administered intraperitoneally in cases of obstructed labour and rupture uterus during operation.

Material and Methods

One hundred and forty-six patients admitted at M.L.B. Medical College Jhansi

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as cases of obstructed labour and ruptur-

ed uterus were taken for this study. Out of these 128 cases were of obstructed labour and 18 cases were of rupture uterus. After taking vaginal swabs for culture and sensitivity, lower segment caesarean section or subtotal caesarean hysterectomy was done, as needed. Uterus was stitched with interrupted sutures. At the end of the operation, 500 mg (100 ml) or metronidazole (Metrogyl) was poured into the abdomen and abdomen was closed in layers after securing complete haemostasis.

On first 3 days crystalline pencillin 10 lacs I/M 6 hourly was given along with Streptomycin $\frac{1}{2}$ gm I/M B.D. AST, then appropriate antibiotics were given according to the report of vaginal swab. Blood transfusion, haemacaeie, steroids and stimulants were given whenever needed. Self retaining catheter was left in for 10 days. The post operative phase of these was compared with 50 cases, 40 of Obstr. labour and of rupture uterus in whom intraperitoneal instillation of metrogyl was not done.

Observation and Results

Fever occurred in 20.5%; shock in 18.5; stitch line abscess in 10.3%, gaped wound in 2.1% cases when metrogyl, in-

TABLE I
Complications in Cases Who Were Given Intraperitoneal Metrogyl at the Time of Operation With Cases Who Were Not Given

Complication	STUDY GROUP		CONTROL GROUP	
	Metrogyl given		Metrogyl not given	
	No.	%	No.	%
1. Fever	30	20.5	27	54.0
2. Shock	27	18.5	27	54.0
3. Stitch line abscess	15	10.3	33	66.0
4. Gaped wound	3	2.1	12	24.0
5. Burst abdomen	—	—	3	6.0
6. Paralytic ileus	—	—	6	12.0
7. Pelvic peritonitis	—	—	—	—
8. Generalized peritonitis	—	—	3	6.0
LATE COMPLICATIONS				
1. Pelvic abscess	—	—	3	6.0
2. Pelvic inflammation	6	4.1	24	48.0
MATERNAL DEATHS				
	4	2.7	4	8.0

traperitoneal was given in contrast to these same complications in 54%, 54%, 66.0%, 24.0% respectively in study group.

Similarly, burst abdomen, paralytic ileus, pelvic peritonitis and generalised peritonitis was seen in less cases who were given metrogyl during operation and incidence of these was 1.3%, 1.3%, 0.7% 0.7% respectively, but these same complications occurred in 6.0%, 12.0%, 6.0% 6% cases respectively in control group.

Pelvic inflammation occurred in 4.1% of study group cases and 48% of control group cases 1-2 months after the operation.

Pelvic abscess occurred in 6% of control group cases but none of the cases developed this in the study group.

Maternal death occurred in 2.7% of study group cases and 8% of control group cases. In the study group, 2 patients died on 1st + 2nd post-operative day due to irreversible shock and 1 on the 4th post-operative day due to pulmonary embolism. In the control group, 1 patient died on 1st post-operative day due to shock which did

not improve, 2 died due to peritonitis on 6th and 7th post operative day and 1 due to pulmonary embolism on 3rd post-operative day.

Discussion

From the preceding observations it can be inferred that all complications like fever shock, stitch line abscess, gaping of wound, pelvic inflammation were less in the study group than in control group. Complications like burst abdomen, paralytic ileus, peritonitis general pelvic abscess were also seen less frequently in the study group. Maternal deaths were also less when this drug was used.

This suggests that even intraperitoneal usage of this drug is quite effective in decreasing infection and therefore complications. The reason is probably its bactericidal action and action on anaerobic organisms when used locally. Metronidazole has been found to be effective in the treatment of septicaemia caused by

anaerobic gram negative bacilli including strains resistant to chloromyhenicol and chlindamycin (Galgiani *et al*).

found to be less in the study group.

Conclusion

Intraperitoneal instillation of Metronidazole (Metrogyl) was done after operations i.e. caesarean section or subtotal caesarean hysterectomy done in cases of obstructed labour and rupture uterus and complications in this group compared to those in patients who were not given this drug. Complications and maternal deaths were

References

1. Galgiani, J. N., Bursch, D. F., Brass, C. J., Mangels, M. A. and Stevens, D. A.: *Am. J. Medicine*, 65: 284, 1978.
2. Ingham, H. R., Sisson, R., Penelope, Tharagonnet Danke, Selkon, J. B. and Codd, A. A.: *Lancet*, 2: 1252, 1977.
3. Wills, A. T., Fergusson, I. R., Jones, P. H., Phillips, K. D., Tearle, P. V., Fiddian, R. V., Graham, D. F. and Harland, D. H. C.: *Brit. Med. J. I*: 607, 1977