

Editorial

MANUAL VACUUM ASPIRATION (MVA)

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Conventional management of early abortions by D and C under general anesthesia on inpatient basis is over a hundred years old. Use of a metal curette, sharp or blunt, causes much blood loss and carries a risk of perforation of the uterus. This notwithstanding, D and C continued to be used by some even for voluntary termination of pregnancy (MTP or Medical Termination of Pregnancy under MTP Act of 1971) till the seventies. Universal acceptance of vacuum aspiration of uterine contents has revolutionized the management of incomplete abortion and also the technique of MTP. The simplicity of vacuum aspiration under local infiltration of anesthetic agent, with or without sedation, introduced outpatient management in place of inpatient one. Suction evacuation using metal canulae under local anesthesia coupled with sedation and on outpatient basis is the most widely employed method of MTP in our country.

In early seventies, International Projects Assistance Services (Ipas) manufactured and promoted Manual Vacuum Aspiration system (MVA) consisting of a plastic syringe with a valve that could create a negative pressure for suction in the syringe and maintain it till its use to aspirate, the uterine contents employing soft flexible plastic canulae, the Karman canulae, of 4,5 and 6 mm size. This was promoted as menstrual regulation (MR) method till six weeks of amenorrhoea. In reality, MR was a subtle way of achieving voluntary abortion bypassing prohibitive government laws and hoodwinking religious diktats. Neither of these two considerations really mattered in India. MR did not find much acceptance in our country possibly because women waited for clinical confirmation of pregnancy and even thereafter hesitated to undergo MTP. Gynecologists too were not enamoured by MR fearing that termination of pregnancy by six weeks carried a greater failure rate than the one done at eight weeks. The Karman canulae though much safer could not replace the metal canulae mainly due to their recurring cost. To make matters worse, some manufacturers marketed poor quality MR systems leading to higher failure rates

than expected. Ultimately MR did not last more than a few years.

For more than a decade IPAS has made available a far superior 60 ml syringe with double valve and better Karman canulae of sizes ranging from 4 to 12 mm. High density polypropylene is used for manufacturing the syringe barrel, the plunger bush and the canulae, achieving much better quality and longer durability than the MR system. The syringe can be reused 60-75 times and the canulae 10-12 times. The vacuum generated in this syringe is identical to that produced by electrical suction apparatus viz 26 inches or 660 mm of mercury. It has a water displacement capacity of 50 ml (i.e. 80% of the syringe capacity) in less than a second. This (MVA) system can very safely and efficiently be used for MTP of upto 12 weeks size. Studies have proved the great efficacy and safety of MVA in treating incomplete abortion¹ and also for carrying out voluntary or elective termination of pregnancy^{2,3}. Greenslade et al⁴ reviewed more than 5000 women undergoing early abortion by MVA and found 98% success rate. This matches the success rate achieved by electrical suction for vacuum aspiration. Initial evaluation of 926 procedures in an ongoing FOGSI- Ipas multicentric study in our country involving women undergoing first trimester MTP reported 98.6% success rate and confirmed the efficacy and safety of MVA. 94.8% of these procedures were performed under paracervical block with or without sedation.

The MVA has proved successful and is accepted in USA, Mexico, Canada, South Africa, Kenya, Zambia, Turkey and Bangladesh. Besides being as efficient as electrical vacuum aspiration (EVA) MVA has many advantages over EVA. It is very simple, portable, cheap, noiseless and needs a simple procedure for its sterilisation. The syringe need not even be sterilised. If the uterus gets perforated—a very rare recurrence—sucking in of the bowels is avoided since the vacuum very quickly drops to 10 mm of mercury unlike in EVA where vacuum creation continues till the system is switched off. Its nondependence on electricity is a

great asset in developing countries especially in rural areas.

Although induced abortions are legalised in India 30 years back, criminal, illegal and unsafe abortions are still rampant mainly because of lack of services in our vast rural areas. Government of India has accepted MVA for use upto eight weeks of pregnancy by non-specialist medical officers in primary health centres (PHCs). This is the focus of a pilot project being conducted by a collaborative partnership of the Ministry of Health and Family Welfare, Government of India, FOGSI (Federation of Obstetric and Gynecological Societies of India) and WHO in eight states. If successful, this will promote safe abortion on a very wide scale.

In the hands of specialists MVA is safe upto 12 weeks of pregnancy. In urban areas prone to failures of electricity, MVA makes an ideal back up equipment. For those who detest the interruption for re-creation of vacuum in the syringe during the procedure, keeping an additional syringe with preloaded vacuum on the instrument trolley is an easy solution. Although displacement of EVA by MVA is not expected MVA is sure to gain wider acceptance with time. It may be added that MVA serves as a very excellent back up procedure when medical methods of pregnancy termination end up in incomplete abortion. Spontaneous incomplete abortions too can obviously be treated by MVA. Endometrial biopsy and endometrial aspiration cytology are other applications of MVA.

The simplicity and safety of MVA should not lull one into complacency. It is not free from usual

complications like missing an ectopic pregnancy, hemorrhage, uterine perforation, failure of the procedure, infection etc. Meticulous attention to sterilisation of the equipment, use of no touch technique during the procedure, a vigilant eye on blood loss, looking out for uterine perforation, inspection of the material sucked out from the uterus and adequate follow up are absolutely mandatory and cannot be dispensed with. MVA is the single most promising procedure that can generate a vast access to safe abortion for women in need throughout the developing world.

References

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